Introduction Patients with inflammatory bowel disease (IBD) are likely to undergo multiple lifetime endoscopic procedures which generate histopathological reports. Managing these patients requires clinicians to derive a phenotypic overview from numerous episodes and diverse sources which can be time consuming, incomplete and subjective. We set out to evaluate the potential for a computer to extract phenotypic parameters from a series of linked histopathology and endoscopy reports to characterise an IBD cohort.

Methods 118,108 lower GI endoscopic procedure reports (200–017) and 62,051 lower GI histology reports (200–017) from GRH were imported into an SQL database. Unique patient identification numbers from the merged dataset were replaced with 128 bit hexadecimal GUIDs and all patient identifiable information subsequently stripped from the data tables (Service Evaluation Project 8622).

Text processing was undertaken in Python pandas dataframes:

1) Import both datasets and separate all words by single space, convert to lower case, remove apostrophes
2) Correct spelling of key words using Levenshtein distance
3) Find regular expressions that match disease phenotypes
4) Exclude non–IBD colitis diagnoses
5) Exclude negated IBD diagnoses
6) Export tagged machine interpreted reports back to SQL database
7) Select 100 random reports for each IBD confirmed or negated diagnosis to validate against original text
8) Return to steps – to modify regular expression reference lists to improve sensitivity and specificity.

Results The following results were obtained after multiple validation cycles initially based on an empiric regular expression dataset.

<table>
<thead>
<tr>
<th>Procedure indication</th>
<th>Sensitivity</th>
<th>Specificity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Previously known IBD colitis</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Previously known Crohn’s disease</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Histopathological interpretation: IBD colitis</td>
<td>100%</td>
<td>98%</td>
</tr>
<tr>
<td>Histopathological interpretation: IBD Crohn’s</td>
<td>100%</td>
<td>98%</td>
</tr>
</tbody>
</table>

Some caution is required in interpretation of the specificity of the Crohn’s and ulcerative colitis histopathology reports. Many samples are described as showing features of both diseases and the final conclusion is given as a likelihood or unclassified. The specificities reported here are for all IBD and do not reflect a capacity to distinguish between the different types.

Conclusions The evolution of the disease characteristic regular expressions through repeated validation cycles has provided a powerful tool for the automated generation of IBD databases from text in semi-structured endoscopy and histology reports. The potential for the scheduling of surveillance and linkage to other systems, such as primary care prescribing, are obvious. Further development will include a more detailed phenotypic interpretation and computation of the histopathological certainty in distinguishing the types of IBD.
been referred to secondary care with two thirds being investigated or managed in primary care. iLFT has increased liver disease diagnosis, improved quality of care and reduced unnecessary secondary care referrals.

**OTU-23 INCREASING ATTENDANCE AND ENGAGEMENT OF SUBSTANCE MISUSE CLIENTS WITH HEPATITIS C**

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**Introduction** In June 2017, a hepatitis C (HCV) clinic was established in the local substance misuse service (SMS) as an outreach from the local district general hospital. The clinic initially operated one afternoon a month, but due to demand was increased to fortnightly in March 2018. The objective of the clinic was to provide HCV care (including work-up and treatment) to clients, who, because of their substance use, might not attend hospital clinics. The aim of this study was to review whether the SMS clinic improved attendance and engagement among these clients compared to the hospital setting.

**Methods** The outreach clinic database was used to identify all individuals who were offered an appointment in the outreach clinic between June 2017 and December 2018. The hospital electronic booking system was then used to review all historic appointments booked for each of these patients at the hospital. Attendance and engagement with the hospital clinic and the outreach clinic were compared.

**Results** 51 separate individuals were referred to the SMS clinic between June 2017 and December 2018. 31 of these (61%) had, at some point (dating as far back as the early 2000s), been referred to the hospital gastroenterology service for their HCV. Of those referred, 12 (39%) had never attended an appointment. 18 (58%) attended at least once but were subsequently lost to follow-up. 1 (3%) patient was started on HCV treatment at the hospital but transferred to the SMS clinic once it was established. By comparison, of the 51 referred to the SMS clinic, 17 (33%) never attended an appointment, 12 (24%) came at least once but were then lost to follow-up and 22 (43%) remained engaged with the SMS clinic. Of the 22 engaged in the service; 5 have places to start treatment in the next few weeks, 7 have completed treatment and 4 are currently on treatment. 1 patient, lost to follow-up in the SMS clinic, was later treated in prison.

**Conclusions** Our study shows that, compared to a hospital setting, an outreach clinic at an SMS substantially improves attendance and engagement with care in this cohort of clients with HCV infection. There are a number of factors that may have contributed to the increase in attendance and engagement with the SMS clinic. SMS-based clinics have been shown to reduce barriers to HCV care for SMS attendees (Harris, 2017). We also believe that as our SMS service is based in the centre of town it makes it more accessible for clients compared to the local hospital which is on the peripheries of the town. Finally, an increased awareness of the new, highly effective direct acting antiviral (DAAs) for treatment of HCV might have improved acceptance of testing and treatment in this cohort.