

Incidence of paediatric inflammatory bowel disease continues to increase in Wessex

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Background- Incidence of paediatric inflammatory bowel disease (PIBD) has increased worldwide over the last 20 years. Crohn's disease incidence is increasing at a faster rate than ulcerative colitis and appears to be the main driver behind the overall increase in IBD incidence. The reasons underlying this apparent increase in disease are unclear but there appears to be an environmental role in genetically susceptible individuals. This study aimed to detail recent data from Wessex.

Methods- Data were collected from the prospective PIBD database at Southampton Children's hospital from January 2013 to December 2017, and combined with data from 2002-2012. At-risk population aged <17 years was determined by postcode-population data from the office of national statistics. Subclassification (gender and age of diagnosis) analysis was conducted directly from the data. Statistical analysis of the data were conducted using Pearson's χ^2 test for comparison of cohort data, Mann-Whitney U-test for comparison of age of diagnosis and by simple linear regression for analysis of incidence by year.

Conclusions- The incidence of PIBD continues to increase. Increasing population size and increased incidence translate to a significant increase in prevalence of PIBD. This has implications for delivery of paediatric gastroenterology services.

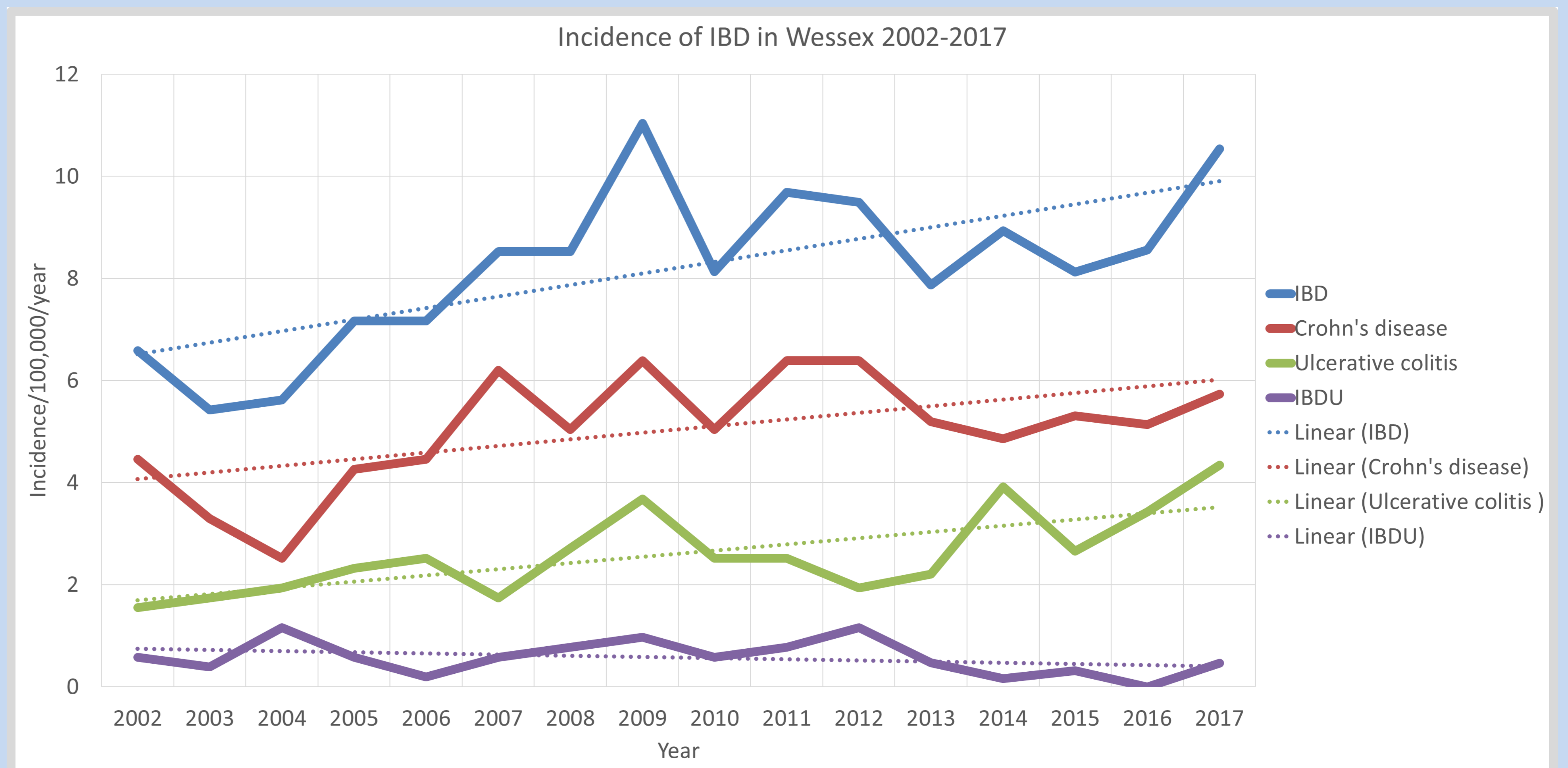


Figure 1- Incidence of paediatric inflammatory bowel disease in Wessex over a 16 year period (2002-2017). Data taken from Ashton JJ et al 2014 [1]. All PIBD ($R^2=0.464$, $p=0.004$), CD ($R^2=0.314$, $p=0.024$), UC ($R^2=0.490$, $p=0.003$), IBDU ($R^2=0.103$, $p=0.224$)

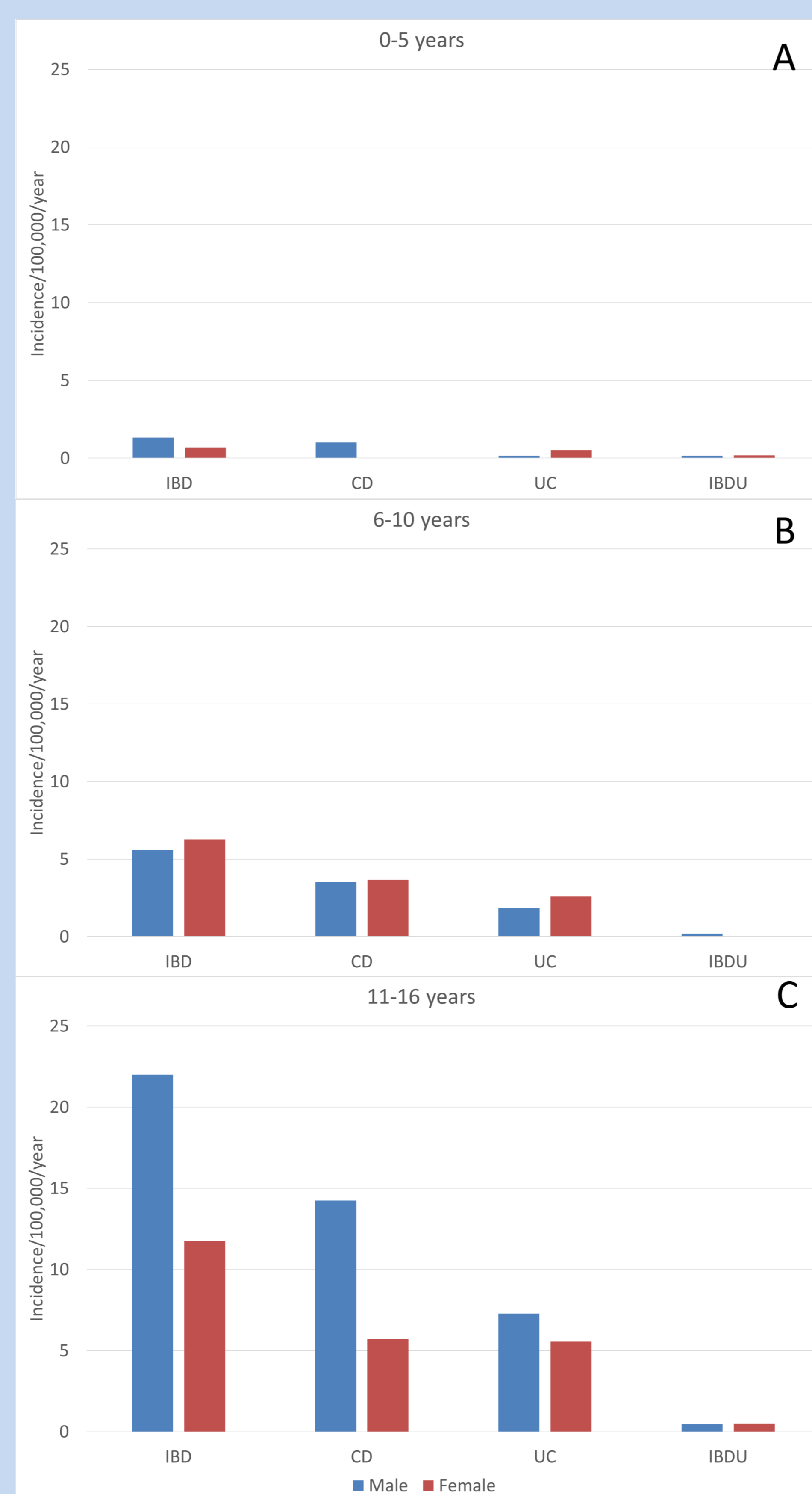


Figure 2- Incidence of paediatric inflammatory bowel disease by gender and age of onset from 2013-2017; A- 0-5 years, B- 6-10 years, C- 11-16 years.

Results- Incidence rose between 2002-2017 from 6.58/100,000/year (2002) to 7.71/100,000 (2013) to 10.54/100,000/year (2017) ($R^2=0.464$, $p=0.004$). Figure 1. Incidence of PIBD (2013-2017) averaged 8.80/100,000 per year, higher in males (10.84/100,000/year) versus females (6.63/100,000/year) ($p=0.0001$). Crohn's disease (5.25/100,000/year) was more common than ulcerative colitis (3.31/100,000/year) ($p=0.0002$). Incidence of PIBD was higher in older children- 11-16 years; males- 22.00/100,000/year and females; 11.75/100,000/year. This compared to an incidence of IBD in the 6-10 age group of 5.58/100,000/year in males and 6.27/100,000/year in females. In the 0-5 years age group incidence of IBD was 1.34/100,000/year in males and 0.7/100,000/year in females ($p>0.05$). Figure 2.