Is the informational content of histopathological reports increasing?

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Abstract
Histopathology reports on 20 mastectomy and 20 colectomy specimens containing carcinomas were examined from the beginning of each decade for the period 1940-1990. The number of words and items of information in each report were recorded. There was a large (337%) increase in the number of words in reports of both types of specimen with a slightly smaller increase (273%) in the number of items of information. This increase may be due to clinician-led demand for more specific information or be related to the introduction of more detailed systems of pathological staging and prognostic assessment of breast and colonic tumours. The increase in data production and dissemination may not be reflected in workload measurement systems, such as Welcan, and must be considered when assessing the need for secretarial staff.

The workload of histopathological laboratories needs to be accurately measured so that resources can be used appropriately in a changing clinical environment. In histopathology the Welcan workload measurement system1 provides a more accurate assessment than the tally of the number of laboratory requests.23 The Welcan system takes account of the number of blocks, slides, and special techniques required to report a specimen but does not assess the amount of information produced in the report. If the amount of information in a report increases without an increase in the number of laboratory procedures then there could be an expansion in workload for histopathologists and secretarial staff without a concomitant rise in measured Welcan units. This study investigates whether there has been an increase in the length and informational content of histopathological reports over the past 50 years.

Methods
The diagnostic histopathological reports from a teaching hospital in Sheffield (The Royal Infirmary until 1977, then the Royal Hallamshire Hospital) were examined. During this period all reports were handwritten by pathologists and then typed by secretaries; no word-processing technology was used. The first 20 reports of both mastectomy and colectomy specimens containing carcinoma were studied for each decade from 1940 to 1990. The number of words in the pathological report was recorded together with the number of items of information. An item of information was taken to be a measurement, tumour type, tumour subtype, tumour grade, comment on vascular channel invasion, comment on lymph node state, comment on depth or extent of invasion, comment on background tissue, comment on completeness of excision, formal staging and prognostic indicators. The mean number of words and items for each type of specimen was calculated for each decade.

The Mann-Whitney U test was used to assess statistical significance because the distribution of results was platykurtic. The workload of the laboratories during this period was assessed using unweighted Korner requests (the information required to use the Welcan system was not available for the early years of the study).

Results
The main results are shown in figs 1 and 2. The increase in words and items between 1940 and
Increased PIVKA-II concentrations in patients with cystic fibrosis

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Abstract
Serum vitamin K concentrations and prothrombin induced by absence of vitamin K (PIVKA-II) concentrations were assayed in 43 patients with cystic fibrosis. Twenty nine showed normal PIVKA-II and vitamin K concentrations; 14 showed an increased PIVKA-II concentration, in one of whom serum vitamin K was decreased. Although their vitamin K concentrations were normal, some patients with cystic fibrosis still had an increase in PIVKA-II. This result was significant correlation between PIVKA-II concentrations and the administration of antibiotics, a factor which has not previously been considered responsible for an increase in PIVKA-II.