SHORT REPORT

Randomised trial of the effects of structuring clinic correspondence

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We performed a randomised controlled crossover trial of clinic letters. Structured letters were compared with conventional letters containing problem lists. There were 32 participants; 25 preferred the structured letter. Median rating and items identified were higher for the structured letter. Structured clinical correspondence with paragraph headings is strongly preferred and increases comprehension.

Effective correspondence is essential given the volume of mail reaching general practitioners (GPs) and the need for timely and accurate communication on complex cases. Past advice on clinical correspondence has been based on common sense, particularly “keep it short”.¹ Previous studies have examined GPs’ preference on letter structure. UK studies in paediatrics have established that GPs like problem lists² and some degree of structure.³ Structure in letters was also preferred in other studies.^{4,5} The consistent overall message is: structure the letter, and tailor content to your audience.

In a local questionnaire study of GPs we found they were action orientated, wanting rapid information on diagnosis, management, any actions for them, and patient/carer information. They were strategic readers, spending a median of 30 seconds on each correspondence item, concentrating on the first and last paragraphs. They expressed concern about “missing” important information hidden among a mass of irrelevant detail. Using these findings, we developed a proforma letter with problem list and subheadings. We hypothesised that this would improve letter comprehension compared with the traditional format.

METHODS

We designed two letters of similar length by adapting the contents of anonymised clinic letters. Each contained all relevant information, and was in Times Roman 12 point with single line spacing. Each letter was prepared in two formats: unstructured with problem list (conventional) and structured. Participants were randomised by concealed number to read the structured letter either first or second.

Participants read their first letter, noting the reading time in seconds. Next, we asked them to identify eight specific items of information using a checklist, as a measure of letter comprehension. They repeated the process for the second letter. They then rated each letter on a five point modified Likert scale (very poor, poor, average, good, excellent). Finally, they were asked which letter they preferred.

The format was piloted using 10 participants (seven GPs and three paramedical specialists). Using these results we estimated that 22 participants would be required to achieve 80% power with a two sided significance level of 5%. Subsequently, with the agreement of local GP tutors, the study

took place at the start of scheduled postgraduate GP education sessions. Non-GP principals were excluded from participation. Verbal consent was obtained from each participant.

The main outcome measures were the number of items correctly identified, the letter rating, letter preference, and the reading time. We analysed results using SPSS 9.0 for Windows, using within individual Wilcoxon ranks matched pairs test for comparisons.

RESULTS

All 32 participants eligible took part, 24 in first session and eight in the second. Five attendees who were not GP principals were excluded. Fourteen read unstructured letters first.

Median overall ratings were 3 (IQR 3–4) for unstructured letters and 4 (IQR 3–5) for structured letters, with a mean paired difference of 1 ($p < 0.02$ by Wilcoxon ranked sum with continuity correction). Twenty five preferred the structured letter, four the unstructured letter, and three had no preference.

Unstructured letters took a median of 65 seconds to read (range 30–300) and unstructured letters 63 seconds (range 35–300). Paired differences showed that the second letter was read quicker by an average of 21 seconds if the structured letter was presented first (88 v 109), and 8 seconds quicker if the unstructured letter was read first (57 v 65).

A median of six of eight items were identified in the structured letter, compared with five in the unstructured letter, with a median paired difference of 1 ($p < 0.02$ by Wilcoxon ranks matched pairs test). There was no correlation between reading time and items correctly identified.

DISCUSSION

We have shown that a structured letter takes no longer to read, is strongly preferred by GPs, and improves comprehension. It may also train the reader to read subsequent unstructured letters more effectively.

Our starting point was the structured letter format described by others.^{2,3} This consisted of a problem list, a management list, and free text, and was similar to our unstructured letter.

Psychological studies of reading have suggested that the process of language comprehension involves three brain “modules” interacting: an “orthographic module” interprets lines and curves as characters, a “semantic module” grammar, and a “phonological module” the spoken word.⁶ Our findings support the hypothesis that the structured letter enhanced strategic reading, possibly by improving semantic processing.

The range of reading times, without correlation to items identified, suggests that some GPs are more effective readers. We did not examine whether this was related to English being the mother tongue. Other variables, such as age, visual acuity, and motivation may also have played a part.

Abbreviations: GP, general practitioner; IQR, interquartile range

The findings of this small study are sufficient to warrant further investigation. Structured correspondence might reduce the likelihood of important omissions, by both the writer and the reader. Flexible computerised presentation tools hold the potential for considerable further enhancements.

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