**Effective communication between ENT and primary care - a survey and analysis of outpatient correspondence structure**

Dr Alfred Bentsi Addison MBBS1

Mr Simon Watts FRCS-ORL2

Mr Jason Fleming MRCS DOHNS3

Worthing General Hospital – (1,2,3)

Lyndhurst Rd

Worthing

West Sussex

BN11 2DH

**Correspondence**

Dr Alfred Bentsi Addison

Worthing General Hospital

Lyndhurst Rd

Worthing

West Sussex

BN11 2DH

**Email: Alfred.addison@nhs.net**

**Abstract**

**Objective:** To improve the quality of outpatient clinic communication between Otolaryngology and primary care doctors.

**Design:** Three example outpatient letters with identical content were created using different structure styles - full prose, headline subheadings with full prose and full subheadings throughout. Electronic questionnaireswere sent out to 30 randomly selected General Practitioners in the area served by Western Sussex NHS Trust. The electronic mail study invite contained the initial GP referral, the three different letter formats and a link to the Sheffield Assessment for Letters (SAIL) questionnaire, which contained a 18-point checklist, 6 rating subheadings with a 10-point rating scale and a free text comment section. Study participants were asked to read the letters in the time usually afforded to outpatient letters in their routine practice, answer questions and then rate the letters.

**Results:** With a response rate of 66.7%, overall comparison of GP preferences demonstrated a significant variation between the three letter formats (Freidman p value = 0.0001). Post hoc multiple comparisons showed statistically significant preference for the headline subheading and prose letter compared to the full subheaded letter (p<0.05)***.*** In assessing the letters for readability, comprehension, usefulness, informativeness and helpfulness, analysis showed significant preference for both fully subheaded and headline subheaded with full prose structures compared to the full prose letter.

**Conclusion:** Although the headline subheadings and prose letter had the highest word count, it scored the highest in almost all the rating categories analyzed. This study is the first published work to study primary care physician’s preference for the structure of letters from secondary care. Prominent headline subheadings of diagnosis and management improve interpretation of content and comprehension, and are helpful to GPs for co-ordinating patient management. Lack of subheadings or conversely an excess of subheadings may be a hindrance to effective communication between healthcare professionals.

**Background**

Clinic letters remain the primary communication tool used by hospital specialists to relay management advice to General Practioners (GPs). These letters convey important information regarding diagnosis, planned investigations and suggested treatments, many of which requiring direct GP input and follow-up1. It is also a vital tool that indirectly reflects the diagnostic and communication skills, professionalism, and overall quality of care by the specialty team. Despite this very little is known about the impact of the style or format of letters written by hospital specialists and the preferences of GPs2, 3.

As the drive to improve communication efficiency between secondary and primary care takes shape, most hospitals have resulted to direct electronic communication with general practitioners hence most outpatient clinic letters are forwarded to GP electronically. This contibutes to the significant amount of data being received contemporaneously by GPs4,5,,6. With the multiple time pressures and constraints on primary care, it is estimated that over 80% of GPs spend less than one minute reading outpatient clinic letters7. GPs usually have seven and a half minute per consultation, leaving little time to extrapolate key information from a secondary care letter, yet most consultation letters contain minimal structure8, 9. Current research suggests that GPs generally prefer structured outpatient clinic letters7,8,9,10. This current evidence does not however address the quality of structuring required nor does it succeed in evaluating its efficiency and efficacy with regards to management of the patient. Addressing the issue of effective communication between our ENT department and GPs was therefore identified as an important area of study both locally and as a wider national interest study on effective written communication.

The Sheffield Assessment Instrument for Letters (SAIL) is an assessment tool that uses a consensus rating framework to examine written communication. It provides a feasible and reliable method of assessing the quality and content of outpatient clinic letters10. Various studies have demonstrated the applicability of the SAILs tool to provide feedback, as an educational tool, for appraisals and revalidation, and for providing an effective means for the quality improvement required by clinical governance11, 12. The SAILs tool has been validated in various studies to assess the effectiveness of written communication between various departments and has been found to be one of the best tools currently available10,11,12,

**Method**

Electronic questionnaires were sent out to 30 randomly selected General Practitioners in the area served by Western Sussex NHS Trust asking for their ratings on three structurally different letters. The first 30 GP surgeries to contact our emergency referral team between January 2014 and February 2014 were included in the survey. Based on a single fictitious GP referral, we designed three clinic outpatient letters of similar length and content by adapting pre-existing anonymized clinic letters. All relevant information was provided and formatting was standardized. The different letter formats included 1) full prose (conventional narrative) 2) headline subheadings with subsequent full prose and 3) full subheaded paragraphs throughout.

A SAIL questionnaire containing 18-point checklist on the factual content of the letters was adapted. A 10-point rating scale on subheadings of completeness, comprehension, usefulness, informativeness, general preference and helpfulness was also included and there was also an opportunity for participants to use free text to make comments in the questionnaire. .

Three letters were emailed to participating GPs by randomising the order in which the letters appeared to the GP together with a link to the SAIL online questionnaire. A short initial GP referral of a standardized 2-week-wait referral was also included to provide context for the scenario. Participants were asked to read the letters first at their usual pace for screening secondary care correspondence before completing the survey.

A power calculation performed using GraphPad StatMate (San Diego California, USA) 10 estimated that 15 participants would be required to demonstrate a large effect (two-tailed, alpha 0.05, 80% power). We subsequently emailed the letters and a link to the questionnaire to randomly selected GPs who use our ENT outpatient services. We performed a Friedman test to identify statistical difference between the matched groups. We then use the Dunn’s multiple comparison tests for post hoc analyses to ascertain the statistical difference between direct matched pairs. Statistical analysis was performed using GraphPad Prism (version 6 for Mac OS X , La Jolla, CA).

**Results**

**Overall Preference**

There was an overall preference for Letter 2 (FR=17.64 (P< 0.0001)), with post hoc analyses demonstrating this headline subheaded letter with full prose was preferred to both Letter 1 (P<0.001, rank sum difference=26) and Letter 3 (P<0.05, Rank sum difference =16). There was however no statistical difference between Letter 1 and 3. The median ratings for the subheadings are shown in Table 2.

**Comprehension**

The difference in ease of comprehension between the letters was significant (FR = 17.22 (P<0.001)) with Letter 1 (full prose) scoring less than both Letter 2 (P<0.001, Rank sum difference =23) and Letter 3 (P< 0.05, Rank sum difference =17.50)

**Readability**

There was a difference between the readability of the letters (FR= 31.20 (P<0.0001) with again both Letter 2 and Letter 3 scoring higher than Letter 1 (P<0.001, Rank sum difference=30 and 27 respectively). No statistical difference was demonstrated between Letter 2 and 3.

**Informativeness**

There was an apparent statistical difference with regards to how informative the letters were (Fr = 11.58 (p< 0.003) with Letter 2 rated as more informative than Letter 1 (P<0.01,Rank sum difference=19) Other matched pairs did not demonstrate any statistical difference.

**Usefulness**

The usefulness of the letters were found to be statistical significant (Fr = 22.22 (P<0.0001). Letters 2 and 3 were found to be more useful compared to letter 1 (P<0.001 and 0.05, Rank sum difference =28 and 18.5 respectively).

**Helpful**

There was a difference in terms of which letter was rated as more helpful if the GP was the next doctor to review the patient having received the consultation letters (FR=16.71, P<0.0002), although this only reached significance when comparing Letter 2 to Letter1 (P<0.01, Rank sum difference=28).

**Content**

20 out of 30 GPs completed the survey, amounting to a 66.7% completion rate. All participants accurately identified the key facts in the history, examination, diagnosis and treatment plan with overall content identification rate of almost 100% in all letters. This was however not the case when it came to identifying some of the detailed information from the letters; Letter 2 and 3 allowed easy identification of the detailed content. For example, when we asked about the detailed follow up plan, 100% of participants were able to pick up this information from letter 2 and 3 whilst letter 1 scored 93%. The clear headings in the fully subheaded letter 3 allowed for better identification of the detailed content with a content identification rate for letter 3 of 93.3% compared to 86.7% for letter 2.

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| **Table 2: Median Rating for Subheadings**   |
|   |   | **Letter 1** | **Letter 2**  |  **Letter 3** |
| **Comprehension** | Median | 6 | 8 | 7.5 |
| IQR | 2 | 2 | 1 |
| **Readability** | Median | 5 | 8 | 8 |
| IQR | 2 | 0.5 | 2 |
| **Helpfulness** | Median | 6 | 8 | 8 |
| IQR | 1.25 | 0 | 1.25 |
| **Informativeness** | Median | 6.5 | 8 | 8 |
| IQR | 2 | 2 | 2 |
| **Preference** | Median | 6 | 9 | 7 |
| IQR | 1.25 | 1.25 | 2 |
| **Usefulness**   | Median | 5 | 8 | 7.5 |
| IQR | 2 | 1 | 1 |

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| *Table 1: showing the median, minimum and maximal rating of**the headings in the questionnaire. IQR= interquartile range* |

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**Discussion**

This study demonstrates the importance of letter structure over letter content for effective communication. We have shown that although all the example and commonly used letter structures contained almost identical information, the headline subheadings with full prose structure of Letter 2 and the fully subheaded structure of Letter 3 made them appear more informative, concise and hence more useful compared with the full prose Letter 1. A very interesting point however is the fact that almost every comment seems to suggest that Letter 1 had the highest word count and therefore the most difficult to read when in actual fact Letter 2, the most preferred letter, had a 6% higher word count. The structure of Letter 2 allowed the GPs to easily identify the important points whilst allowing more in-depth analysis of the letter when required and this was in keeping with some of the free comments we received from the question. One GP wrote “Letters to GPs have 2 functions: quick look as it arrives: i.e. do I the GP need to do something… and secondly when or if the patient ever comes in to draw attention to issues within the letter when it is read in detail. Most critical is to ensure that things that need action don’t get lost simply because they are in the middle of a paragraph of text”. This sentiment was shared by many of the participants in the study. These findings are in keeping with similar research in this area; Peridis et al, 2012 audited the readability of ENT outpatient clinic letters and found that structured letters had better readability scores compared to unstructured letters. Parks et al, 2011 also investigated the type of structured letter preferred by GP’s receiving letters from a dermatology clinic and concluded that GP’s preferred full subheaded letters 14, 15.

With regards to the global ratings, both Letter 2 and 3 scored consistently higher ratings compared to Letter 1 and this is keeping with current research in this area12-15. Letters 2 and 3 were rated more comprehensible and useful to Letter 1. Our results also showed clear overall preference for Letter 2 although interesting sub-analyses failed to clearly identify on which domains this opinion was based. Further detail on this comparison would have required more in-depth analysis of a direct nature between these two letter structures, which was not a feature of the utilised questionnaire.

**Conclusion**

Primary care physicians prefer structured letter formats to unstructured letters for reasons of ease of comprehension, usefulness, Informativeness and readability. The relevance of these structured subheadings is key to providing a correspondence that saves time but minimises the risk of the reader overlooking important information; headings make a letter easier and quicker to read but too many headings can hinder how the letter is analyzed. With the current trend towards management of increasingly complex diseases in the community, concise and clear communication between hospital specialists and GPs is vital. We therefore propose and encourage the use of headline subheadings for diagnosis and management to introduce the correspondence. This format gives GPs the best opportunity to assimilate the important information, together with detailed subsequent prose if they wish to have more information about the consultation at a future date.

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