Patient-perceived value of a specialty-specific welcome letter

What you say and how you say it

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Abstract

Background

Patient experience and clinical outcomes are improved when patients know what to expect. Providing valuable, appropriate information proves challenging considering variation in patient education, literacy, and limitations specific to patients with neurologic disease. Scaffolding of what to expect, care team members, needed materials, procedures, directions to facilities, and methods of communication are core aspects of improving patient readiness.

Methods

This study employed standard quality improvement methods. An existing (original) patient welcome letter was first analyzed to assess its literacy levels. Surveys were then administered to patients with neurologic disease assessing perception of readiness for ambulatory appointments and the overall value of the welcome letter. In addition to Likert-type scales, patients also provided open feedback on what should be included in the letter. A revised letter was then created with added content, improving literacy levels. The letter was further assessed through clinical and nonclinical groups including our neuromedicine Patient and Family Advisory Council. Response data were analyzed comparing the original vs the revised score using a *t* test assuming equal variances.

Results

The “overall value” score of the original welcome letter (3.79 of 5.0) improved to the revised score (4.63 of 5.0). Patients perceived the revised welcome letter as improving their readiness significantly as ambulatory patients with neurologic disease.

Conclusions

Preparing patients for their neurology visits is important and affects visits’ value. Sensitivity to literacy levels is an essential component of person-centered care among neurologic patients. Carefully created and assessed welcome letters help to achieve these goals by improving readiness for outpatient appointments and increases perceived overall value significantly.

Patients should understand what is expected of them across ambulatory and inpatient settings to improve clinical satisfaction and outcomes.^{1–3} However, ensuring that patients are adequately informed is difficult with varying levels of patient literacy. Patient readiness, a specific

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Patient-readiness, a specific element of being informed, must account for patient literacy.

element of being informed, must account for patient literacy. Studies, however, show that most health care systems overestimate patients’ literacy levels and communicate in ways patients do not understand.⁴ Rarely is attention given to literacy levels in health care settings⁵ because materials provided to patients typically fail standard measures of literacy.^{6,7} Adequate information regarding expectations and readiness proves even more challenging among patients with complex neurologic symptoms.

In health care systems, most ambulatory practices provide information to their first-time patients before their appointment, often referred to as a Patient Welcome Letter. Few studies, however, have investigated these foundational materials provided to patients in ambulatory settings. Although content in welcome letters may differ by specialty, they typically include information about what to expect during a visit, maps and directions to the location, and necessary appointment details including who will see them, ways to communicate, and methods of supporting patients.

With the knowledge that patient literacy is not comprehensively considered in health care systems, our study intended to (1) systematically evaluate and refine the Patient Welcome Letter in neurology using standard methods of evaluation of literacy levels and (2) assess patient-reported readiness as patients with neurologic disease using a refined patient-centered welcome letter.

Methods

Standard Protocol Approvals, Registrations, and Patient Consents

The data were prospectively collected as part of a Continuing Quality Improvement Institutional Review Board (IRB)–certified initiative. Standard rapid-cycling quality improvement methods were used for this project. Approval was obtained by the local IRB for retrospective further analysis and publication.

Procedure

Plan-do-study-act cycle 1

The first cycle in this project was to assess the original welcome letter for reading ease and readability using standard literacy assessments. The National Institutes of Health recommends that patient materials be written at a third-to fifth-grade reading level and that the average United States citizen reads at approximately an eighth-grade reading level.⁸ Hence, our aim was to develop the material at the

eighth-grade level or lower. Programs including Microsoft Word utilize formulas to create the Flesch-Kincaid grade-level and reading-ease calculations using the average number of syllables per word and words per sentence to measure word difficulty and syntactic complexity. The Reading-Ease scale ranges from zero to 100 with scores under 40 considered difficult or very difficult to read and scores above 80 considered easy or very easy to read. It is recommended that documents be written at 60 or above to be considered plain English, therefore we set out to develop the material at 60 or higher. Although Flesch-Kincaid analyses within Microsoft Work are very user friendly and helpful in the creation of patient materials, most medical terms and health care system specifics have higher than average syllable counts and therefore drive the reading grade-level score up. These multisyllabic, specialty-specific, and health care system proper nouns were considered outliers, and our content was both analyzed with and without the outliers for clear assessment (table).

With additional input from physician champions, a survey was created for patients to evaluate patient-perceived value of the original welcome letter, on a Likert-type scale, ranging from 1 (Not Valuable) to 5 (Very Valuable) as well as open-ended feedback. Presurveys focused on details about how to locate the facility, elements of a care team, billing and payment information, and supportive programs for patients. The survey also included collection of demographic information as well as 6 Likert-type questions about the value of the letter, including an Overall Value score (appendix e-1, links.lww.com/CPJ/A83). Trained undergraduate interns, as part of a larger program, administered the surveys to patients in a neurology waiting room within a large academic medical center. Presurvey data were collected during a 3-week period.

Plan-do-study-act cycle 2

Five members of the neuromedicine Patient and Family Advisory Council (PFAC) provided additional feedback on the original welcome letter before incorporating feedback from the neurology patient participants presurvey. Most suggestions were about the inclusion of facility and parking maps. Feedback from the participants were also integrated into the original letter to create a refined version. Core

Table Literacy-level statistics for the original and modified patient welcome letter

Literacy-level statistics	Original	Modified	Modified removing outliers
Flesch reading ease	50.4	57.5	60.8
Flesch-kincaid grade level	9.2	8.6	7.8

Outliers included healthcare facility specific proper names and “Neurology.”

changes include content first appointment details, fees, ways to contact our facility, patient portal activation and use, parking, office hours and scheduling, details about forms and appointments, methods and expectations for cancellations, medical records, and assistance with wayfinding at our facility. The modified letter was then reanalyzed using the Flesch-Kinkaid metrics. The trained undergraduate interns then administered the postsurveys on the revised letter about the value of the letter and the Overall Value using the Likert-type scale. Both the pre- and postsurveys included qualitative, open-ended feedback. Postsurvey data were collected during a second 3-week period in the same neurology waiting room.

The patient survey data were analyzed using Microsoft Excel. *T*-test was applied, assuming equal variances comparing the pre- and postsurvey results because the number and type of participants was similar for the pre- and postpopulations.

Data availability

Any data not published within the article will be shared, as anonymized data, upon request from any qualified investigator.

Results

A total of 74 patients were included in the quality improvement project. Thirty-nine patients with neurologic disease received the presurvey on the original letter. These patients included 24 women and 15 men. Seventy-two percent identified as white, not Hispanic, 18% as black or African American, 5% as Asian, 2.5% as white, Hispanic, and 2.5% declined to answer. The patients ranged in age from 20 to 80 years, with a mean age of 49.5 years.

Thirty-five additional patients with neurologic disease were included in the postsurvey on the revised letter.

Patients included 25 women and 10 men. Sixty percent identified as white, not Hispanic, 9% as black or African American, 14% as white, Hispanic, and 17% declined to answer. The patients ranged in age from 21 to 88 years, with a mean age of 63.3 years.

Reading ease improved significantly with revision of the welcome letter (table: Literacy-Level Statistics for the Original and Modified Patient Welcome Letter). Figure visualized the improvement in Perceived Overall Value of the welcome letter, with a significant increase in the proportion of readers perceiving the letter as “very valuable.” For the original welcome letter, the average Overall Value score was 3.79 of 5.00 (SD = 1.08). For the revised welcome letter (appendix e-2, links.lww.com/CPJ/A83), that score increased to 4.63 of 5.00 (SD = 0.65). This change in overall value was statistically significant, *t* (72) (*p* < 0.001; figure). There were no statistically significant differences observed in the other initial 5 Likert-type questions assessing comfort with appointment, where to go for the appointment, understanding the content of the letter, how to contact the office/provider, and satisfaction with letter.

Discussion

Our study showed that patients with neurologic disease reported greater Overall Value for an ambulatory neurology clinic Patient Welcome Letter after systematic evaluation and modification for patient literacy and when using a patient-centered approach by incorporating direct feedback. Our study also showed that a specialty-specific welcome letter for

Figure Perceived patient value of welcome letter

Our study showed that neurology patients reported greater Overall Value for an ambulatory neurology clinic Patient Welcome Letter after systematic evaluation and modification for patient literacy.

neurology was written at a literacy level beyond the recommended level to provide broad readability and that patients' literacy levels must be considered to realize a patient-centered approach to providing care. This approach is critical in quality improvement work, but specialty-specific experience for neurology is not widely documented. A Patient Welcome Letter presents a focus on the foundational communication for ambulatory patients and is a simple yet essential component to managing patient expectations, readiness as a patient, and perceived Overall Value with this information. Despite these overt advantages, literature on specialty-specific adult Patient Welcome Letters is scarce, and we consider our neurology-specific welcome letter, which takes into account the relevant prerequisites, an important contribution to the field.

Modifying patient-facing materials with input from actual patients, PFAC, attendings, residents, advanced practice providers, nurses, clinic staff, marketing, and legal departments ensures that patients encounter patient-centered care at the outset. When patients know what is expected for their specialty-specific care, they are better able to adhere to basic aspects of receiving care like arriving on time, to the appropriate location, with the proper materials (e.g., identification, insurance cards, paperwork, and scans), equipped with understanding of their care team members, and ways in which to receive support. This will likely allow for better incorporation of the specialty-specific care into the general individual health care plan, the effect of which should be studied in the future.

Although the Overall Value score demonstrated significant improvement in our pre- and postsurvey assessment, the remaining 5 items assessed did not. This may be a limitation to the study as the first 5 items may have been difficult to answer. Because our participants were patients already in the waiting room and ideally had already received the original welcome letter, details about comfort with appointment, where to go for the appointment, understanding the content of the letter, how to contact the office/provider, and satisfaction with letter may have been elusive. Although the original letter failed in ideal health-literacy assessment, it did include some relevant

information for their current appointment and could have affected the initial 5 items.

Relatedly, another limitation to the study is that some surveyed patients reported never having received the original welcome letter before their appointment, posing a risk of selection bias. Despite the policy for providing all patients the welcome letter, last minute appointments may have limited the ability to send the letter, incorrect contact information on file might limit reachability of patients, and perhaps the patient did not attend to or comprehend the welcome letter content given its poor attention to health literacy.

Future direction

Given the limitation that some patients reported not receiving the Patient Welcome Letter and it is not known whether that is a process issue or a patient comprehension issue, future work should incorporate at least a single item of health literacy assessment such as the Single Item.

Literacy Screener⁹ is a baseline assessment of the patient's literacy level in addition to their perceived readiness, and Overall Value is an important component not addressed in the current work. In addition, a preappointment call ensuring patients received the welcome letter would be an important quality assurance check to ensuring that reported patient readiness is linked to the receipt of the welcome letter.

Patient-centered letters help improve patient information and patient perceived readiness for their outpatient appointment. This may, further downstream, help improve outcomes of these visits yet needs to be formally examined in future work. Our next plan-do-study-act cycle will prospectively track patients who receive the revised Patient Welcome Letter with attention to health literacy and compare assessment of clinical experiences (i.e., Patient Satisfaction through Clinical Groups – Consumer Assessment For Healthcare Providers And Systems) and outcomes (e.g., compliance and adherence to medical regimens) before and after the implementation of the modified Patient Welcome Letter with appropriate literacy levels.

Author contributions

K.M. Busl: Drafting/revising the manuscript, study concept or design, analysis or interpretation of data, and study supervision. J. Alongi: Drafting/revising the manuscript, data acquisition, study concept or design, analysis or interpretation of data, and statistical analysis. A. Anderson: Data acquisition, study concept or design, and analysis or interpretation of data. M. Jaffee: Study concept or design and obtaining funding. J. M. Baron-Lee: Drafting/revising the manuscript, study concept or design, analysis or interpretation of data, and study supervision.

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TAKE-HOME POINTS

- A welcome letter is expected to provide relevant information including what to expect, care team members, needed materials, procedures, directions to facilities, and needs to deliver this information appropriate to the readers' literacy level
- Providing ambulatory patients with a specialty-specific welcome letter is of perceived value and improves patient experience
- Carefully created and assessed welcome letters help to achieve person-centered care

Disclosure

K. M. Busl serves on the editorial board of *Neurocritical Care On Call* and as chair of the writing group for the Neurology Self-Assessment Examination for the American Academy of Neurology and serves as consultant for Guidepoint and Healthcare Advances. J. Alongi and A. Anderson report no disclosures relevant to the manuscript. M. Jaffee received

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