Enhancing continuity of information

Essential components of a referral document

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ABSTRACT

OBJECTIVE To identify elements of data that have been shown to contribute to continuity of information between primary care providers and medical specialists providing care to adult asthma patients.

DESIGN Systematic review of the literature followed by a 2-round modified Delphi consensus process.

SETTING Province of Ontario.

PARTICIPANTS Eight expert panelists, including 3 practising family physicians, a medical specialist knowledgeable in the treatment of asthma, a family physician previously involved in provincial initiatives related to primary care reform, an e-health technologist, a developer of evidence-based guidelines, and an operations and programs specialist.

METHOD We completed a systematic literature review to develop a list of items or data elements related to patient information transfer in chronic care. We engaged an 8-member expert panel in a 2-round modified Delphi process to assess the importance of the 74 data elements identified in the literature review and to identify any additional important elements.

MAIN FINDINGS The expert panelists reached consensus on 24 components of information, referred to here as minimum essential elements of a referral document, needed for consultations on adult asthma patients.

CONCLUSION The 24 minimum essential elements of information that should be transferred during referral of asthma patients from primary care providers to experts in asthma care were generated by primary care physicians and thought essential for achieving continuity in information transfer. We assembled these elements into a suggested format for a referral document. The format can be easily modified by practitioners caring for patients with other chronic diseases.

EDITOR’S KEY POINTS

• Referrals for consultation present an opportunity to improve continuity of information between primary care providers and medical specialists. Improving referral documents could enhance continuity of information and help overcome the communication and coordination challenges that arise between primary care providers and those to whom they refer their patients.

• In this study, 24 essential components of information that should be included in referral documents for adult patients with asthma were identified, and these elements were used to create a sample referral document. Panelists indicated that omission of these elements would lead to delays in provision of care and to frustrating expenditures of time and effort by patients and their care providers.

• Although the elements identified were derived from literature that focused exclusively on transfer of patient information relating to the care of adult asthma patients, a limited pilot study of the sample referral document suggested that most of the essential elements would be appropriate for use in transfer of patient information related to other chronic conditions, such as diabetes, cardiovascular disease, and hypertension.

*Full text is available in English at www.cfp.ca. This article has been peer reviewed.

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A blank version of the referral document created based on the results of this study is available at www.cfp.ca. Go to the full text of this article on-line, then click on CFPlus in the menu at the top right-hand side of the page.
Pour une meilleure transmission de l'information

Les composantes essentielles d’une demande de consultation

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Liisa Jaakkimainen MD  Anne Marie Mior  Yves Talbot MD  Eugene Vayda MD

RÉSUMÉ

OBJECTIF Identifier les données dont on a démontré l’importance pour la transmission correcte d’information entre soignants de première ligne et médecins spécialistes prodiguant des soins à des asthmatiques adultes.

TYPE D’ÉTUDE Revue systématique de littérature suivie d’un processus de consensus Delphi modifié comportant 2 étapes.

CONTEXTE Province d’Ontario.

PARTICIPANTS Huit panélistes experts, dont 3 médecins de famille en exercice, un médecin spécialiste qui connaît bien le traitement de l’asthme, un médecin de famille ayant participé à un projet de réforme des soins primaires, un technologue de la cybersanté, un concepteur de directives de pratique fondées sur des preuves, et un spécialiste des opérations et programmes.

MÉTHODE À partir d’une revue systématique de la littérature, on a dressé une liste d’articles ou d’éléments d’information relatifs à la transmission d’information concernant des patients des soins chroniques. Un panel de 8 experts a traversé un processus Delphi modifié comportant 2 étapes pour évaluer l’importance des 74 éléments relevés dans la revue de littérature et identifier tout autre élément important.

PRINCIPALES OBSERVATIONS Les panélistes experts ont atteint un consensus sur 24 composantes de l’information, que nous désignerons ici comme éléments essentiels minimaux de la demande de consultation pour un asthmatique adulte.

CONCLUSION Les 24 éléments d’information essentiels minimaux que le soignant de première ligne devrait transmettre à l’expert lors d’une demande de consultation pour un patient asthmatique ont été identifiés par des médecins de première ligne; ils sont considérés essentiels pour assurer une transmission adéquate de l’information. Nous avons rassemblé ces éléments dans un document susceptible de servir aux demandes de consultation. Ce modèle peut facilement être modifié par les médecins qui soignent des patients souffrant d’autres maladies chroniques.

POINTS DE REPÈRE DU RÉDACTEUR

• Les demandes de consultation sont une occasion d’améliorer la transmission de l’information entre soignants de première ligne et médecins spécialistes. De meilleures demandes de consultation pourraient améliorer la transmission de l’information et aider à atténuer les problèmes de communication et de coordination qui surviennent entre les soignants de première ligne et ceux auxquels ils réfèrent leurs patients.
• Dans cette étude, on a cerné 24 composantes essentielles de l’information qui devraient faire partie d’une demande de consultation pour un asthmatique adulte; ces éléments ont servi à créer un modèle de demande de consultation. Les panélistes ont indiqué que l’omission de ces éléments entraînerait des retards dans la prestation des soins et exigerait une quantité frustrante de temps et d’efforts de la part des patients et du personnel soignant.
• Même si les éléments cernés provenaient d’articles portant exclusivement sur la transmission d’information relative aux soins d’asthmatiques adultes, une étude pilote limitée du modèle de demande de consultation donnait à croire que la plupart des éléments essentiels pourraient être utilisés de façon appropriée pour la transmission d’information concernant un patient souffrant d’une autre condition chronique, telle que le diabète, une maladie cardiovasculaire et l’hypertension.
Two of the most important challenges confronting primary care in the 21st century are improving coordination of patient care and mitigating the effects that increasing medical specialization has had on both coordination and continuity of care.\(^1\) Greater fragmentation of care—one consequence of increasing medical specialization—presents challenges in coordination and communication both for patients suffering from chronic diseases, such as asthma, diabetes, congestive heart failure, and depression, and for their care providers.\(^2,3\)

Our focus in this article is on coordination of care between primary care providers and specialists involved in treating adult asthma patients in Ontario. Asthma is among 4 ambulatory care sensitive–conditions, all chronic, that are associated with many hospitalizations deemed avoidable as long as patients have timely access to high-quality care in their communities. High-quality care would include disease-prevention programs and appropriate primary health care.\(^4\) We contend that coordinating timely access to appropriate care is an outcome of high-quality decision making and that, in turn, the quality of decision making is profoundly affected by a concept referred to as informational continuity. \(^5\) Informational continuity means the use, transfer, and management of patient information. Good informational continuity is achieved with the accurate assimilation, timely transfer, and sharing of essential patient information among care providers that includes relevant information on past events and on patients’ personal circumstances.\(^6\)

Referrals for consultation present an opportunity to improve informational continuity between primary care providers and medical specialists. Ideally, the purpose of referrals is to transfer patient information that facilitates responses to specific questions posed by primary care providers regarding next steps in the care of, in this case, adult asthma patients. Vital, therefore, to the appropriateness and quality of decisions and recommendations on care made by specialists is the quality and comprehensiveness of the content of referral letters and the accessibility of their format. The content will serve as the basis for decisions about care, while the format will influence how well the content is interpreted, how important it is perceived to be, and how useful it is to the recipient.

In this study, we engaged an 8-member expert panel to establish the optimal content of a referral document for consultation on adult asthma patients and to suggest ways of organizing this content.

**METHODS**

**Systematic literature review**

This paper reports on one aspect—referrals—of a much larger study we undertook to look at a number of points of transfer of patient information between those providing care for adult asthma patients. We looked at consultation letters, discharge summaries from hospitals and emergency departments, referrals to emergency departments, and reports generated by asthma education centres. We completed a systematic literature review of articles written in English and published between 1990 and 2005 that were identified through the following key words: shared care, communication between family physicians and specialists, referral patterns, information transfer, self care, discharge letters, specialists, referral and consultation letters, and letters. We searched for articles in Ovid MEDLINE, PubMed, ProQuest, and the Cochrane Database of Systematic Reviews.

Members of the research team, which included primary care practitioners and academic researchers, evaluated 111 articles. Each article was reviewed by 3 different team members; each group of 3 included either the principal investigator or the research coordinator, or both, and at least 1 practising primary care physician. A reviewer’s guide was developed by the team and used to review each article. The reviewer’s guide contained inclusion and exclusion criteria, including type of article, subjects or participants, setting, purpose, data source, and theoretical framework (if any). The level of evidence used in each paper was ascertained and noted in the reviewer’s guide using a 6-level rubric applied by Barnsley et al and developed from D’Agostino and Kwan.\(^7\)

Of the 111 articles evaluated by the research team, 24 were selected. These were used in the development of 74 items or data elements related to patient information transfer in chronic care. These data elements spanned all the points of transfer referred to above.

**Identification of minimum essential elements**

After completing the systematic review, we engaged an 8-member expert panel in a modified Delphi process to assess the importance of the 74 data elements. Our panelists were experts in the area of adult asthma care and included 3 practising family physicians, a medical specialist knowledgeable in the treatment of asthma, a family physician previously involved in provincial initiatives related to primary care reform, an expert in e-health technology, a specialist in reviews of operations and programs, and a developer of evidence-based practice guidelines relating to management of adult asthma.

The data elements were subjected to a 2-round Delphi consensus process. Materials for the first round were mailed to panelists in April 2005. The materials included a letter of instruction, an information booklet with a summary of the evidence for each element and related references, an answer booklet where each item could be rated, and an addressed envelope with a return courier form.

Panelists were asked to rate each of the 74 data elements on the basis of its importance. They were asked how essential or necessary each item would be to ensuring high-quality of patient information transfer.

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and facilitating coordination of care between providers involved in managing adult asthma patients. Data elements were rated on a 9-point Likert scale ranging from 1 (this item is not necessary at all) to 9 (this item is essential) with a midpoint of 5 (nice to have but not essential). Panelists were invited to provide their comments and suggestions for alternate wording, terminology, and item format and sequencing, and to add their own suggestion for new items.

Data from round 1 were entered into an Excel spreadsheet to facilitate consideration by the research team. Material for round 2 of the Delphi process was based on first-round ratings and related comments and on discussions held with the research team that focused on panelists' ratings and comments. In round 2, we asked the expert panelists to reconsider 49 data elements that had received only moderate consensus in round 1 and to consider 2 new items that were developed based on panelists' feedback and on new research that came to our attention during the time between round 1 and round 2. Round 2 materials were mailed to panelists in June 2005. They were very similar to the materials mailed to panelists in round 1 with the addition of a compilation of the panel's ratings and comments from round 1.

This study protocol received ethics approval from the University of Toronto's Ethics Review Committee.

### RESULTS

Evidence contained in the 24 articles reviewed was based mainly on observational studies or expert opinion. The systematic abstraction of data elements from these papers, combined with the subsequent Delphi process, allowed us to identify a set of essential elements that could be evaluated using more rigorous methods. Of the 74 original data elements, 25 achieved high consensus in round 1. In round 2, panelists rated 51 elements (2 new items and 49 original elements that had received only moderate consensus in round 1). Overall, 54 elements achieved high consensus; of these, 24 elements related specifically to referral for consultation between primary care providers and medical specialists. We refer to these 24 data elements, summarized in Table 1, as minimum essential elements.

These elements now needed to be evaluated in clinical settings for their effect on continuity of patient information. To this end, and upon further consultation with

### Table 1. Minimum essential elements for referral documents

<table>
<thead>
<tr>
<th>MINIMUM ESSENTIAL ELEMENTS</th>
<th>LABEL IN FIGURE 1</th>
<th>REASON AND EXAMPLE</th>
<th>SUPPORT FROM REFERENCES AND LEVELS OF EVIDENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Patient's name, (2) date of birth, (3) contact information, and (4) OHIP number</td>
<td>Patient details</td>
<td>Identify patient to avoid medical errors and ensure patient safety</td>
<td>Eliminates potential adverse events (Recommendation of the expert panel; level 6)</td>
</tr>
<tr>
<td>(5) Primary care provider's name, (6) contact information, and (7) OHIP billing number</td>
<td>Referring provider details; Referring physician details (billing information)</td>
<td>Serves to associate referral letter with correct provider and ensures appropriate billing</td>
<td>Ensures appropriate billing as per OHIP billing guidelines* (level 6)</td>
</tr>
<tr>
<td>(8) Problem(s) briefly identified by referring physician</td>
<td>Patient problem</td>
<td>Describe problem(s) that led to this referral, eg, Healthy male with a 10-y history of controlled asthma with 2 emergency department visits in the last 12 d despite medication changes</td>
<td>Improving content of referral letters is important; missing details affect patient care* (level 5)</td>
</tr>
<tr>
<td>(9) Reason for referral, including (10) the specific question posed by referring care provider and (11) expectations of the consultant</td>
<td>Specific question and expectation of referral</td>
<td>State purpose of referral; specifically identify consultant what you want or need, eg, Please see this patient for recent exacerbation of well-controlled asthma and offer suggestions for medications to maintain long-term control; consider for referral to the Clinical Asthma Educator in your clinic</td>
<td>Inclusion of specific questions and expectations enhances clarity and eliminates repeat consultations and subsequent overspending* (level 5)</td>
</tr>
<tr>
<td>(12) Patient's relevant medical history and (13) physical diagnosis, including (14) past and (15) current treatment</td>
<td>Past medical history Medication tried and discontinued</td>
<td>Give relevant information for diagnosis and include what you have already tried and what is currently being done, eg, PEFx2 since recent visit to emergency; initial introduction of medium dose of ICS subsequently increased to maximum dose. Patient also using an updated Asthma Action Plan</td>
<td>Inclusion of relevant details eliminates redundancy* (level 6)</td>
</tr>
<tr>
<td>(16) Patient's current medications</td>
<td>Current medication</td>
<td>Itemize medications currently prescribed and already tried and discontinued that are relevant to the problem, eg, Ventolin 2 puffs QID x 10 y, introduced medium dose of ICS and LABAsx7 d. After 2nd emergency visit, increased to maximum dose of ICS and LABAs with little improvement. No other medications</td>
<td>Advises of current medication and eliminates duplication* (level 5)</td>
</tr>
</tbody>
</table>

Table 1 Continued on page 1433e.3
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Table 1 continued from page 1433.e2

<table>
<thead>
<tr>
<th>(17) Laboratory tests and investigations including (18) pertinent laboratory findings</th>
<th>Recent laboratory and diagnostic results</th>
<th>Describe laboratory tests and investigations already conducted that are relevant to the problem, eg, Results March 22/07: CXR normal; PEF &lt;60%; all blood work within normal limits. See copy of results included</th>
<th>Limits duplication of procedures, reduces unnecessary resource use, and improves patient satisfaction* (level 5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(19) Details that patient is unable or unwilling to provide</td>
<td>Other relevant information (essential if patient is unreliable)</td>
<td>Apprise consultant of potential language barriers or patient’s limited understanding of the problem, eg, Patient speaks Spanish, has only limited English, and has no family or friends to translate</td>
<td>Important for understanding patient or enlisting assistance of an interpreter and elucidating relevant details that the patient cannot convey** (level 5)</td>
</tr>
<tr>
<td>(20) List of suspected predisposing factors or triggers</td>
<td>Other relevant information (essential if important to diagnosis)</td>
<td>Identify known or suspected predisposing factors or triggers, eg, Indoor: dust mites, mold spores; outdoor: ragweed, grass, and mold spores</td>
<td>High-quality criteria for asthma referral† (level 5)</td>
</tr>
<tr>
<td>(21) Verbal instructions or educational materials supplied to patient to date</td>
<td>Other relevant information (essential if related to question posed by referring provider)</td>
<td>Identify any instruction offered to patient to date and need for (further) education, eg, Patient might need instruction on inhaler technique or use of peak flow meter; has not received any education since initial diagnosis 10 y ago</td>
<td>Enhances informational continuity, limits redundancy and ensures patient-centric approach (Recommendation of the expert panel; level 6)</td>
</tr>
<tr>
<td>(22) Whether new referral or re-referral</td>
<td>Type of referral</td>
<td>Identify need for further medical investigation for new question or concern, or reinvestigation if initial question not adequately answered during first consult, eg, Patient referred to you in 1997 for diagnosis of asthma. This is a new referral for evaluation of asthma exacerbation</td>
<td>Re-referrals are useful when referring physician’s questions were not answered during first consultation or when patient has been referred before for a related problem but the questions or concerns are new; identifies appropriate referral and resource use† (level 5)</td>
</tr>
<tr>
<td>(23) Level of urgency</td>
<td>Level of urgency</td>
<td>Denotes level of concern of referring physician, eg, Please see ASAP as patient is currently on maximum doses of corticosteroid medications and has had 2 emergency visits in 12 d</td>
<td>Ensures appropriate waits for urgent cases and offers suitable appointments for simpler requests (Recommendation of the expert panel; level 6)</td>
</tr>
<tr>
<td>(24) Date prepared</td>
<td>Date prepared</td>
<td>Provide date referral for consultation was prepared</td>
<td>Facilitates tracking and timely coordination of care; prevents gaps in care; improves wait times; provides a follow-up mechanism (Recommendation of the expert panel; level 6)</td>
</tr>
</tbody>
</table>


*Levels of evidence related to outcomes: Level 5 evidence comes from descriptive clinical studies and can be useful in studying how to apply a new technique and identify the problems associated with it and how it works with various groups of patients. Level 6, the weakest type of evidence, is based on the opinion of respected authorities or expert committees without additional data.

our panelists and project team members, we assembled the minimum essential elements into a suggested format for a referral document (Figure 1).

DISCUSSION

One consequence of increasing medical specialization has been greater fragmentation of care. Fragmentation of care presents particular challenges in coordination and communication for patients suffering from chronic diseases and for their care providers.1–3 Transferring patient information accurately and completely is essential for high-quality care.

Primary care providers and medical specialists are known to use highly individualized rote communication styles that can lead to gaps in the referral process. Delays in treatment and discontinuity of care arise from inadequate communication from those originating referrals (unclear messages) and from those receiving referrals (inadequate responses). Improving referral letters offers an opportunity to enhance informational continuity and to overcome the communication and coordination challenges between primary care
providers and specialists. From a larger set of evidence-based information elements collected during a systematic review of the literature, our expert panel identified 24 minimum data elements deemed essential for good informational continuity. Our panelists indicated that omission of these minimum essential elements would lead inevitably to delays in provision of care and to frustrating of time and effort on the part of both patients and their care providers while critical missing information was sought and retrieved. These omissions represent real barriers to informational continuity and to coordination of care since they divert resources and cause delays in treatment.

Routine inclusion of the 24 essential elements in referrals could enhance informational continuity, limit misuse of limited resources, and close gaps in
care and information transfer. Consistent provision of essential elements might be reinforced or facilitated by organizing them into a standardized format, such as the referral document we show in Figure 1. A few empirical studies provide support for using a standardized way of transferring patient information. For example, Jenkins et al.15 noted that form letters provided more information than freestyle letters with no increase in length. Specialists were more satisfied with form letters because they included pertinent data in a standardized format and thus ensured the inclusion of vital information.

The content and format we show in Figure 1 requires further study in clinical situations to assess whether these elements in a standardized template or in some alternative presentation significantly improve communication and patient information transfer between primary care practitioners and medical specialists engaged in adult asthma care. One anonymous reviewer helpfully suggested that another avenue for ensuring inclusion of the essential elements in routine patient information transfer would be to work with vendors of electronic medical records to incorporate the elements into the automated referral letters they provide among their products.

### Limitations

The minimum essential elements we identified as part of this study were derived from literature that focused exclusively on transfer of patient information relating to the care of adult asthma patients. A limited pilot study of the template we present in Figure 1 suggested to us that most of the essential elements (all except item 20) would be appropriate for use in transfer of patient information related to other chronic conditions, such as diabetes, cardiovascular disease, and hypertension.

### Conclusion

Expert panelists reached consensus on the inclusion of 24 minimum essential elements in referral documents generated by primary care physicians for medical specialists. We assembled these elements into a format that could be readily modified by practitioners caring for patients with other chronic diseases. A standardized template, such as the one shown in Figure 1 might improve communication and transfer of patient information between primary care practitioners and medical specialists engaged in adult asthma care. It might also help to close gaps inherent in the consultation process that arise as a consequence of the highly individualized communication styles currently used by primary care providers and medical specialists.

This article describes one aspect of a larger study that examined patient information transfer between those providing care for adult asthma patients in Ontario and included information transfer among primary care practitioners, medical specialists, asthma educators, emergency room physicians, and providers of care in hospitals. In the larger study, in addition to information content, we examined other aspects of informational continuity including format (standardized or structured versus unstructured transfer mechanisms), mode (electronic, facsimile, and mail), and organizational context (where we identified contextual factors that affect the accessibility, accuracy, completeness, and timeliness of information).

Our study focused on provider-to-provider interaction and the critical pieces of information that need to be transferred to enhance informational continuity. Future work on patient information transfer should extend to the role of patients in facilitating information transfer and in contributing to informational continuity. Next steps to pilot-test these elements and assess their potential to affect information transfer might also involve identification of exchange mechanisms and processes by which these elements are best transferred. This too should include consideration of the role of patients as active participants in the transfer of their own health information.

Drs Berta, Barnsley, Cockerill, Davis, and Vayda, and Ms Mior are affiliated with the Department of Health Policy, Management and Evaluation at the University of Toronto in Ontario. Dr Vayda is Professor Emeritus with the Department of Health Policy, Management and Evaluation. Drs Bloom, Davis, Talbot, and Jaakkimainen are affiliated with the Department of Family and Community Medicine at the University of Toronto. Drs Bloom, Talbot, and Jaakkimainen are practising family physicians, and Dr Jaakkimainen is a Scientist with the Institute for Clinical Evaluative Sciences. Dr Davis is Vice-President of Continuing Health Education and Improvement at the Association of American Medical Colleges in Washington, DC.

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### Contributors

All the authors contributed to the original conception of the study. Dr Berta and Ms Mior did the original literature review; all the other authors reviewed their findings. Dr Barnsley and Dr Berta devised the research questions used in the proposal for funding. Dr Berta and Ms Mior co-coordinated the Delphi consensus process. All the authors contributed to interpreting the data and feedback from the 2 Delphi consensus rounds and to the development of indicators predicated on consensus panel data and feedback. Regarding treatment issues related to adult asthma care, Dr Bloom and Dr Talbot offered expertise in information transfer and coordination between primary care providers and medical specialists. Dr Davis offered expertise in issues relating to new knowledge and uptake of information on care practices. Dr Jaakkimainen offered expertise in matters relating to referral to medical specialists, and Dr Vayda offered expertise in informational continuity issues. Dr Berta wrote the original draft of the article and made subsequent revisions. All the authors contributed to revising the article and approved the final draft.

### Competing interests

None declared

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### References


