

Effective provision of health information on leaflets in dental settings

Yoriko Matsuoka, Kakuhiro Fukai

Abstract : Information leaflets are used daily for supplemental materials with verbal advice in dental clinics. This is because it is hard for dental caregivers to provide patients with health information without misinterpretation within a limited consultation time. Previous researches have suggested that the appropriate way to offer health information for patients to make it understandable is to add visual or written information with verbal advice. It has been, however, in the process of research and development which elements be contained in health information leaflets in dentistry. This paper aims to discuss the effective provision of health information on leaflets in dental settings covering main 4 points: quality of information leaflets from dental professionals' perspective; readability and design on leaflets; roles of leaflets as decision aids; prerequisites for leaflets on oral health instruction. In view of the effective offering of leaflets in dental settings, four functions will be included: to use leaflets for decision aids; to make use of leaflets relating to prevent oral diseases or to maintain patients' present good condition; to be available for approach towards patients' families or their colleagues; to use leaflets according to the life stages. Considering effective provision of health information on leaflets may lead to enhance the quality of oral health instruction in each case.

Key words : leaflets, health information, readability, decision aids

Introduction

In the scenes of oral health instruction, health information is provided for patients to make it

understandable and avoiding misinterpretation within a limited consultation time. Then, in addition to verbal advice, ready-made leaflets, original materials, or directly drawing pictures are used for a supplement explanation.

The content of information patients want to receive varies according to personal trait, past experience of dental treatments, disease conditions, life styles, opinions about good health, and with/without subjective symptoms such as

【著者連絡先】

〒341-0003 埼玉県三郷市彦成3-86
深井歯科医院・深井保健科学研究所
松岡順子
TEL&FAX : 048-957-3315
E-mail : yorikom@wg8.so-net.ne.jp

swelling and pain. On the other hand, from the viewpoint of dentists and dental hygienists, there is a case to give intentional advice, suitable for each patient at that time.

In order to inform appropriately according to individual patient, if possible, it is desirable to offer a certain additionally visual or written input with verbal advice¹⁻²⁾. Those materials include videotapes, audiotapes, computers, or the Internet. Leaflets, however, remain widely used as a method to convey health information even now. Besides, written materials contain available information to check uncertainty patients have missed to hear in the consultation or to clarify their own questions by themselves for another day. This paper aims to discuss the effective provision of health information focusing on leaflets in dental settings.

Quality of information leaflets

The quality of health information will be covered following five minimum criteria : 1) to have clear aims 2) to make information sources explicit 3) to describe information date 4) to list further sources of reference materials 5) to indicate the scientific evidence at that time.

DISCERN instrument is one of the guidelines which enable health professionals, patients, publishers, and authors, without the need for specialists' knowledge, to judge the quality and accuracy of written information on treatment choices³⁻⁴⁾. DISCERN instrument arose from a national project funded by British Library from 1996-7. It is a brief questionnaire consisted of 15 questions plus an overall quality, rated on a 5-point scale. It is organized in the content: clarification of information sources, each date, to be balanced and unbiased, benefits and risks of treatment.

Then, Clear logic and evidence on leaflets will lead patients to choose and apprehend good quali-

ty of health information they want to receive to find answers for their questions at that time.

Readability and design on information leaflets

Effective leaflets will be available to help health professionals explain to patients with ease in short minutes. Besides, for patients, it will be comprehensible, readable, acceptable, and memorable with ease. For these purposes, it is indispensable that dental caregivers carefully think over the suitable leaflets as to following elements: readability, font, layout, print size, diagrams, and color^{1) 5)}.

The minimum 12 point, simple typeface and unvaried font are considered as a readable typeface⁶⁻⁷⁾. Illustrations inserted into leaflets could aid patients in text comprehension, especially with unfamiliar contents or doing methods⁸⁾.

Readability formulas were first developed in the United States in the 1920s. They are predictions of reading ease, designed to assess suitability of written materials mathematically for readers. The two most representative formulas are Flesch Reading Ease Formula (FRE) and Flesch-Kincaid Grade Level Formula (FK)¹⁰⁾. FRE and FK analyze two factors: the average number of syllables per word in every 100 words and the average number of words per sentence. FRE score maps to a reading ease index from 0 to 100. The closer score to 100 means the easier content; the closer score to 0 means the more difficult content. In general, a score below 30 is considered very difficult; a score of 40 to 50 is estimated to be written at the academic paper level; a score of 70 to 80 represents the content of fairy tales. For FK developed from FRE, the scores reflect the approximate reading grade level of content based on the American grade level system⁹⁾.

According to the previous research assessed readability of published orthodontic patient information leaflets (PILs), overall 42.3% was rated as

fairly difficult or difficult to read for patients¹⁰ . For a national survey of written information provided to patients and their families, 64% of leaflets could be unclear to be understood by an estimated 60% of the British population¹¹ .

Roles of leaflets as decision aids

Decision aids are to support patients in choosing among alternative treatment options. The concrete elements include treatment procedure, risks, benefits, prognosis, costs, and period of time. In addition to the most common combinations of oral and written information, decision aids take many forms such as decision boards, videotapes, interactive computer based information tool, and written brochures¹² . The decision boards are visual aids used in a bedside or chairside consultation to provide information regarding probabilities of treatment outcomes and quality of life associated with treatment choices, benefits and risks¹³ .

Decision aids have variable effect on patients' comprehension concerning treatments, relieving decisional conflict, making them more actively participate in decision making process without incentive anxiety¹⁴ . Decisional conflict defines uncertainty or difficulty in identifying the best alternative due to have both desirable and undesirable outcomes on the course of action chosen among several options¹⁵ .

Patient decision aids relating to oral prevention have some options to choose. Regarding dental caries prevention, for instance, patients can decide to choose whether to use only dentifrice including fluoride or to use it plus fluoride mouth rinsing; to choose frequency of having a snack between meals or using of inter dental brush in a day.

Dental characteristics

The dentistry has some characteristics: both oral professionals and patients themselves can

directly see and touch inside of mouth; individual can notice the change to better or worse oral condition; healthy and unhealthy sites are partly mixed in one mouth. To see the change of personal oral health condition by oneself means significantly effective to prevent oral diseases. Though one may have dental caries and periodontal disease throughout nearly all of the life stages, each prevalence pattern has age characteristics.

Dental caries and periodontal disease have significant relevance to everyday dietary habits and self oral hygiene. To enhance the effect of prevention and treatments will maintain one's mouth clean in daily life and to receive dental check-up regularly as well as to improve skills of dental professionals.

Prerequisites for leaflets on oral health instruction

Dental prerequisites on leaflets may have 4 factors: 1) information quality 2) readability and design of information leaflets 3) decision aids 4) materials (Table 1). The purposes to use leaflets may be divided into four types of information: condition and subjective symptoms; important notices after care; to prevent or maintain the current condition; to choose among treatment options and to agree. It is essential that dental professionals use different leaflets along with different importance of aims and prerequisites.

The aims of leaflet usage are different in each case: past to present, present, and future, from seeing oral condition of patients. In a case through past to present, for instance, patients' tooth brushing habits so far and frequency of taking snacks between meals cause dental caries on a certain spot of teeth. In a present case, dental careers explain how to cope with patients' gum swelling now. Then in view of the future, dental caregivers offer detail explanation how to prevent dental caries and periodontal disease or to keep person's

Table 1 Prerequisites classified by purposes of leaflet usage in oral health instruction

Purposes of leaflet usage	scenes	Prerequisites on leaflets			
		Quality of information ¹⁾	Readability and design ²⁾	Decision aids ³⁾	Materials ⁴⁾
Information to help patients understand the clinical condition	Oral examination and diagnosis	○ ⁶⁾	○		
Information of important notices ⁵⁾	After professional oral health care	○	○		○
Information to prevent oral diseases, and to improve and maintain oral health condition	Oral health instruction	○	○	○	○
Information to choose among treatment options and to consent	Decision making for treatment plan	○	○	○	

1) Quality of leaflets contains the factors: update, noteworthy topics, explicit sources, description of additional sources, and distinction with individuality and generalities.

2) Readability defines predictions of reading ease, designed to assess suitability of written materials mathematically for readers. Design includes typeface, layout, illustrations, diagrams, color.

3) Patient decision aids include treatment procedure, risks, benefits, term, and costs.

4) Materials mean to keep well, to be portable, and to have appropriate paper size, and thickness.

5) It is caution such as medication, after tooth extraction, or how to keep dentures clean.

6) A circle is marked according to high priority.

current good condition.

No matter how intelligible explanation may be, dental professionals tend to fall into one-sided communication unless they offer dental services meeting with each patient's expectation which changes through the process of past experience or subjective symptoms. Though patients want to get a sort of information regarding self management for their own problems and risk avoidance, preventive information may not be always covered in written materials¹⁶⁾.

Conclusion

Four key points are to offer leaflets for patients effectively in dental settings: 1) to use leaflets for decision aids that patients can understand their current condition and choose among treatment options 2) to make use of leaflets regarding to prevent oral diseases or to maintain one's present good condition, helpful to make it understandable how to prevent dental caries and periodontal disease 3) to be available for approach towards patients' families and their colleagues 4) to use leaflets according to the life stages. For dental caregivers, to consider effective provision of health information on leaflets may lead to enhance the quality of oral health instruction in accordance with each case.

References

- 1) Kenny T, Wilson RG, Purves IN, et al: A PIL for every ill? Patient information leaflets (PILs): a review of past, present and future use, *Family Practice*, 15, 471-479, 1998.
- 2) Gauld VA.: Written advice: compliance and recall, *Journal of the Royal College of General Practitioners*, 31, 553-556, 1981.
- 3) Charnock D.: The DISCERN handbook. Quality criteria for consumer health information on treatment choices, Radcliffe Medical Press, UK, 1-41, 1998.
- 4) Lewis MA, Newton JT.: An evaluation of the quality of commercially produced patient information leaflets, *Br Dent J*, 201(2), 114-117, 2006.
- 5) Ley P, DipPsych BA.: Comprehension, memory and the success of communications with the patient, *J Inst Health Educ*, 10(1-4), 1972.
- 6) Albert T, Chadwick S.: How readable are practice leaflets? , *BMJ*, 305(21), 1266-1268, 1992.
- 7) Newton JT.: The readability and utility of general dental practice patient information leaflets: an evaluation, *Br Dent J*, 178, 329-332, 1995.
- 8) Kools M, van de Wiel MWJ, Ruiters RAC, et al: Pictures and text in instructions for medical devices: effects on recall and actual performance, *Patient Education and Counseling*, 64, 104-111, 2006.
- 9) DuBay WH.: The principles of readability, 1-70, 2004, downloaded in 2006, <http://www.impact.information.com/impactinfo/readability02.pdf>.
- 10) Harwood A, Harrison JE.: How readable are orthodontic patient information leaflets? , *Journal of Orthodontics*, 31, 210-219, 2004.

- 11) Payne S, Large S, Jarrett N, et al: Written information given to patients and families by palliative care units: a national survey, the Lancet, 355, 1792, 2000.
- 12) Barry MJ: Health decision aids to facilitate shared decision making in office practice, Ann Intern Med, 136, 127-135, 2002.
- 13) Johnson BR, Schwartz A, Goldberg J, et al: A chair-side aid for shared decision making in dentistry: a randomized controlled trial, Journal of Dental Education, 70(2), 2006.
- 14) O'Connor AM, Rostom A, Fiset V, et al: Decision aids for patients facing health treatment or screening decisions: systematic review, BMJ, 319, 731-734, 1999.
- 15) O'Connor AM, Jacobsen MJ: Decisional conflict: assessing and supporting patients experiencing uncertainty about choices affecting their health, 1-25, 2004, downloaded in 2006, http://decisionaid.ohri.ca/docs/Training/Decisional_Conflict.pdf.
- 16) Coulter A, Entwistle V, Gilbert D: Sharing decisions with patients: is the information good enough? , BMJ, 318, 318-322, 1999.

歯科臨床におけるリーフレットの効果的な活用

松岡 順子, 深井 稔博

(深井保健科学研究所)

日常の歯科臨床の場面で、歯科医師や歯科衛生士は、限られた診療時間内にできるだけ患者にわかりやすく保健医療情報を伝えるために、既製のリーフレットや手書きの資料を用いて口頭の説明を補足している場合が多い。これらの媒体を用いた説明の患者側の理解や選択に対する効果は、これまでの研究でも報告されてきた。しかしながら、歯科領域において、リーフレットに記載される情報に関する体系的な研究報告は少ない。

そこで本稿では、歯科臨床場面で、リーフレットを利用した効果的な情報提供について、情報の質、わかりやすさ、保健指導における具備条件の観点から考察を試みた。歯科臨床におけるリーフレットに求められ役割には、患者の自己決定の支援、口腔疾患の予防と健康増進に関する情報提供、患者の家族や周囲へのアプローチ、そして各ライフステージの特性を踏まえた予知性などがあり、これらの追究を通して、臨床における歯科保健指導の質がより高められると考えられる。