Scandinavian Journal of Primary Health Care

ISSN: 0281-3432 (Print) 1502-7724 (Online) Journal homepage: https://www.tandfonline.com/loi/ipri20

# Implementation of guidelines in primary health care. A challenge for the municipal health centres in Finland

Seppo Miilunpalo, Erja Toropainen, Päivi Moisio

**To cite this article:** Seppo Miilunpalo, Erja Toropainen, Päivi Moisio (2001) Implementation of guidelines in primary health care. A challenge for the municipal health centres in Finland, Scandinavian Journal of Primary Health Care, 19:4, 227-231, DOI: 10.1080/02813430152706738

**To link to this article:** https://doi.org/10.1080/02813430152706738



Published online: 12 Jul 2009.

# Implementation of guidelines in primary health care
## *A challenge for the municipal health centres in Finland*

Seppo Miilunpalo, Erja Toropainen and Päivi Moisio

UKK Institute for Health Promotion Research, Tampere, Finland.

**Scand J Prim Health Care 2001;19:227–231. ISSN 0281-3432**

***Objective*** **– To assess the implementation of guidelines in Finnish primary health care units.**
***Design*** **– A semi-quantitative analysis of a cross-sectional interview survey.**
***Setting*** **– All municipal health centres in a selected region in Finland.**
***Subjects*** **– Head physicians and head nurses of the 31 participating units.**
***Main outcome measures*** **– Number of guidelines adopted; methods used in the implementation; and the unit's estimated purposefulness in the implementation of guidelines.**
***Results*** **– All health centres had adopted at least one guideline in the defined task areas, but only one-third of the units had implemented several guidelines. The implementation methods utilised were usually directive and passive rather than co-operative and problem-solving. Half of the units used training and methods involving active participation of the personnel, and in one-third a multiprofessional approach was applied. Clients' representatives were hardly ever involved in the adaptation of guidelines. A quarter of the health centres were assessed as purposeful in their policy to implement guidelines, the large units being more goal-oriented than the smaller ones.**
***Conclusions*** **– A minority of health centres are goal-oriented in the adoption of guidelines and use versatile methods to support the implementation; this presents an important managerial challenge for national health care development in Finland.**

***Key words:*** **practice guidelines, quality of health care, health services administration, primary health care.**

***Seppo Miilunpalo, UKK Institute for Health Promotion Research, P.O. Box 30, FIN-33501 Tampere, Finland. E-mail: seppo.miilunpalo@uta.fi***

Clinical guidelines are produced in various formats and in most European countries and North America (1–3). There are various reasons for the increasing interest in guidelines. Firstly, there is a growing awareness of large variations in clinical practice. Secondly, the escalating costs of health services have necessitated a review of professional practices. Thirdly, health professionals have difficulty keeping up-to-date with the fast-growing volume of new scientific information. Guidelines can thus be seen as a vehicle for improving quality of health services and for bringing the new scientific knowledge into daily clinical routines (4); their implementation has been shown to improve clinical practice (5,6).

In Finland, the municipalities are responsible for arranging comprehensive, multiprofessional primary health care (PHC) services for their residents, and this is done through municipal health centres (7). This administrative situation creates a favourable environment for improving local PHC services either by adopting national clinical guidelines or by developing local protocols and procedures guiding care providers in major task areas.

Since 1976, when the Finnish Diabetes Association launched the first national guideline on the care of a particular disease, the number of guidelines has grown: in a 1995 national survey in Finland, a total of 719 national or regional guidelines of different types and of varying quality were identified (8). Most were regional guidelines for specific clinical conditions and have been distributed by different clinics in university hospitals. Despite the number of guidelines, however, a survey shows that Finnish care providers report a shortage of common guidelines as one of the major obstacles in developing patient health education and counselling (9).

Several reports indicate problems in the adoption of clinical guidelines in PHC (1,3,10,11). The use of combined strategies for implementation has improved care-provider compliance with guidelines (12,13). Furthermore, the likelihood of practice change is greater if the users have been involved in the development process (16). It seems evident that the adoption of national guidelines should be on the basis of their being adapted to circumstances in local primary care units (15–17). The purpose of this survey was to assess practices in the implementation of guidelines in municipal health centres in Finland.

## MATERIAL AND METHODS

### *Sample*

All 33 health centres within 100 km of the city of Tampere were invited to participate in the study. This includes the five regional health centres within the city of Tampere (183 000 inhabitants) considered as organisationally independent entities. Two health

Table I. Characteristics of the participating municipal health centres (HC). Mean values and ranges (in parentheses) are presented.

| | Small HCs (n = 7) | Medium-sized HCs(n = 11) | Large HCs (n = 13) |
|---|---|---|---|
| Residents | 4034 (1994–7371) | 12775 (8135–19430) | 32390 (20992–63817) |
| Health stations | 1.1 (1–2) | 2.2 (1–5) | 3.2 (1–8) |
| Physicians | 2.9 (1–5) | 8.1 (5–13) | 15.8 (9–32) |
| Health nurses | 6.0 (2–10) | 16.2 (8–24) | 29.7 (17–56) |
| Physiotherapists | 1.4 (0–3) | 3.9 (3–6) | 10.1[1] (6–18) |

[1] The five regional health centres in the city of Tampere are not included, since their physiotherapeutic services are organised as centralised and joint services.

centres refused the interview because of time constraints. Characteristics of the participating health centres are presented in Table I. Seven units were classified as small (serving less than 8000 inhabitants), 11 as medium-sized and 13 as large (more than 20 000 inhabitants). These health centres are responsible for the PHC of a total of 590 000 residents, which corresponds to approximately 12% of the total Finnish population.

*Implementation of the survey*

The survey was conducted by questionnaire-based interviews. In 28 health centres the head physician and the head nurse were interviewed simultaneously; for practical reasons, in three units only one of them was present. The majority of interviews were conducted between October 1996 and March 1997. Representatives of five health centres were interviewed about 6 months earlier, since these centres belonged to the pilot group of 14 units with which the interview protocol was developed.

During the interview, the respondents were asked to seek a synthesis of their views of the practices in the health centre. The interviews, averaging about 1.5 h in duration and ranging from 1 h to more than 2 h, were conducted in co-operation with two researchers, the first acting mainly as interviewer (SM) the other as recorder (ET). Immediately after each interview, the interviewers reviewed the records and jointly interpreted the classifications in order to standardise the research material.

*Interview questions and classifications*

The interview included both open-ended and structured questions concerning organisational characteristics of the unit, division of work, collaboration and meeting practices within and between professional groups, organisational policies aimed at developing professional skills, and implementation of guidelines in patient care, etc.

In order to assess the implementation of guidelines, several indicator questions were designed. The respondents were asked to recall whether the health centre had applied nationally or regionally launched guidelines or developed local guidelines for patient care and counselling in one or more of the following eight task areas:

1. Non-pharmacological treatment of high blood pressure
2. Treatment and follow-up of type 2 diabetes mellitus
3. Diagnosis and treatment of depression
4. Treatment and follow-up of high serum cholesterol level
5. Counselling on health-enhancing physical activity
6. Counselling on healthy nutrition
7. Counselling on non-smoking
8. Counselling on stress.

If the health centre had implemented guidelines, further questions were asked to characterise the implementation processes in that particular health centre: participants, way of organisation, inclusion of educational interventions, etc. In addition, the respondents were asked how the implementation was supported and monitored after the adoption phase.

After each interview, the methods used in implementation were classified by the interviewers in accordance with the classification developed in the pilot study (Table II). The methods used in the different guidelines were combined to illustrate the versatility of methods for each health centre.

In summary, after each interview, the interviewers assessed the health centre's purposefulness in the implementation of guidelines. This classification was based on the prevalence of local guidelines; on the importance, expressed by the interviewees, of the guidelines; and on the versatility of the methods used in the implementation. The unit's purposefulness was classified as follows:

1. Purposeful – the health centre is goal-oriented in the adoption of guidelines; it has implemented several guidelines and it has versatile and established methods for their implementation.
2. Vague purpose – the health centre has some experience but vague purpose in the implementation of

Table II. Methods and means used in the implementation of guidelines.

*1. Directives*
– head physician informing the personnel about new guidelines, launched by external authorities or experts, as the major method of the adoption process, with or without any complementary methods
*2. Assigning responsibility*
– responsibility for the development and co-ordination of practices in a certain topic is delegated to one or two persons
*3. Training of personnel*
– organised on-site education on the topic for the personnel
*4. Multiprofessional approach*
– the role and tasks of different professionals are taken into account: other professional groups are informed about new practices in the work of one professional group
*5. Active participation*
– personnel are deliberately encouraged and enabled to participate in the adaptation of guidelines to local circumstances
*6. Support and follow-up of implementation*
– feasibility of guidelines is evaluated or their implementation is monitored
*7. Client-centred approach*
– clients' representatives are involved in the development or evaluation of the practice.

guidelines; the methods used are not established and are limited.

3. Lacking purpose – the health centre has no experience or, at best, limited experience and method in the implementation of guidelines, and no intention of changing.

The results reflect the percentage distributions in small, medium-sized and large health centres and in the whole sample. The chi-squared test and analysis of variance were used to test the differences between groups.

## RESULTS

### *Prevalence of local guidelines*

Guidelines were implemented most frequently in the case of treatment and follow-up of type 2 diabetes mellitus (Table III). Two-thirds of the health centres had implemented guidelines for the non-pharmacological treatment of high blood pressure, usually as part of their guidelines for the treatment of hypertension. There were fewer guidelines for the treatment of high serum cholesterol level or the diagnosis and treatment of depression than for the first two task areas. Only a few health centres had implemented guidelines for counselling on the relevant topics.

There were no major differences in the prevalence of guidelines between small, medium-sized and large health centres (Table III). Each of the 31 units had adopted at least one guideline in at least one of the eight task areas. Every fourth unit (26%) had adopted one and 42% had adopted two guidelines. Every sixth health centre (16%) had adopted four or more guidelines within the task areas of interest.

### *Methods of implementation*

Seven different methods could be identified in the implementation of guidelines. The most common method, used in almost all health centres, was assigning responsibility (Table IV). The co-ordination of treatment practices of diabetes mellitus was commonly delegated to a team of one physician and one nurse. Handing down directives was identified in two-thirds of the health centres. Training of personnel was used most frequently in large units, while active participation seemed to be equally common in large and small health centres. A multiprofessional approach and follow-up of implementation were procedures used less frequently. In only one health centre out of 31 were the representatives of a patient organisation invited to participate in the planning of a treatment procedure in one of the task areas.

Table III. Prevalence of guidelines for different task areas in municipal health centres (small, medium-sized and large health centres, and the whole sample) (%).

| Task area | Small (n = 7) | Medium-size (n = 11) | Large (n = 13) | Whole sample (n = 31) |
|---|---|---|---|---|
| Treatment and follow-up of type 2 diabetes mellitus | 86 | 91 | 100 | 94 |
| Non-pharmacological treatment of high blood pressure | 57 | 64 | 69 | 65 |
| Treatment and follow-up of high serum cholesterol level | 29 | 36 | 31 | 32 |
| Diagnosis and treatment of depression | 14 | 18 | 23 | 19 |
| Counselling on healthy nutrition | 14 | 18 | 15 | 16 |
| Counselling on non-smoking | - | 18 | 23 | 16 |
| Counselling on health-enhancing physical activity | - | 18 | 8 | 10 |
| Counselling on stress | - | - | 8 | 3 |

With the chi-squared test, no significant differences ($p > 0.05$) were observed between size groups in the prevalence of guidelines for different task areas.

Table IV. Prevalence of different methods in the implementation of guidelines in health centres (small, medium-sized and large health centres, and the whole sample) (%).

| Method | Small (n = 7) | Medium-size (n = 11) | Large (n = 13) | Whole sample (n = 31) | Chi-square[1] (p) |
|---|---|---|---|---|---|
| Assigning responsibility | 86 | 100 | 92 | 94 | .472 |
| Directives | 86 | 55 | 69 | 68 | .382 |
| Active participation | 57 | 64 | 46 | 55 | .648 |
| Training of personnel | 0 | 55 | 77 | 52 | .004 |
| Multiprofessional approach | 29 | 46 | 23 | 32 | .491 |
| Support and follow-up of implementation | 0 | 36 | 31 | 26 | .198 |
| Client-centred approach | 0 | 9 | 0 | 3 | .391 |

[1] The value of the chi-squared test is limited because of the limited number of cases and the relatively large number of cells where the expected count of cases is less than 5.

*Purposefulness*

Approximately one-quarter of the health centres were estimated as goal-oriented in implementing guidelines (Table V). Purposeful units were found in all size groups. However, nearly half of the health centres and two-thirds of the small units had very limited experiences of guidelines and set few goals for their implementation.

The consistency of this classification was evaluated afterwards by analysing the associations between the purposefulness and the number of guidelines implemented. The mean number of guidelines in the 14 units lacking purpose was 1.4 (min 1, max 2, 95% confidence interval (CI) 1.1–1.7); in the 9 units with vague purpose it was 2.3 (min 2, max 3, CI 1.9–2.7); and in the 8 purposeful units it was 4.8 (min 2, max 8, CI 3.1–6.4). The differences between the classified groups were statistically significant ($p < 0.001$). The confirmatory analyses also showed consistent differences in the methods used in the implementation. Active participation, training of the personnel, multiprofessional approach, and follow-up of implementation were commonly used in units classified as purposeful, but seldom or not at all in the other health centres.

## DISCUSSION

In the late 1990s, the medical associations in Finland established a comprehensive programme to create evidence-based guidelines (18). The results of this study show that, at the time when national guidelines had not yet been produced systematically, guidelines of varying quality have commonly been adopted for use in Finnish PHC. However, on the basis of data collected from the entire interview, only a quarter of the health centres were classified as purposeful in their policy to implement guidelines.

The implementation methods utilised were more often directive and passive than co-operative and problem-solving: Assigning responsibility and handing down directives seemed to be the most common methods, while training of personnel and active participation in the adaptation of guidelines were used less frequently. This may present a problem, since previous experience has shown that guidelines are more readily adopted if the users have had the possibility to discuss them in specifically arranged seminars, or if they themselves have been involved in the adaptation process (13,14). Furthermore, only a minority of the health centres could report activities supporting implementation after initial adoption of the guidelines or monitoring the care providers' compliance.

Only one-third of the health centres used a multiprofessional approach in the implementation of guidelines. This was surprising, because members of primary care teams have shared responsibilities and with more or less overlapping tasks in health examinations, and in patient care and counselling (19). Our observations also indicate that the municipal health centres do not recognise the importance of client participation in the development of practices.

The size of the primary care unit had a notable effect on guideline adaptation, large units being more active and goal-oriented than the smaller ones. Nearly half of medium-sized and almost three-quarters of the small units had very limited experience of, and trivial methods for, the implementation of guidelines. According to the principles of continuing quality improvement, of course, all health centres can develop their policies and benefit from the published evaluations of the usefulness of different methods in the implementation of guidelines (3,13,14,16).

Current national plans for the development of health care in Finland call for the development of national clinical guidelines (20). However, previous

Table V. Health centres' estimated purposefulness in the implementation of guidelines (small, medium-sized and large health centres, and the whole sample) (%).

| Purposefulness | Small (n = 7) | Medium-size (n = 11) | Large (n = 13) | Whole sample (n = 31) |
|---|---|---|---|---|
| Purposeful | 14 | 27 | 31 | 26 |
| Vague purpose | 14 | 27 | 39 | 29 |
| Lacking purpose | 71 | 46 | 31 | 45 |

studies have shown that, without local participation in the adaptation of guidelines and without support for their implementation, the compliance of care providers with the nationally or regionally disseminated guidelines remains low. The results of this study show that only a minority of Finnish health centres provide purposeful support for the implementation of guidelines. This represents an important managerial challenge for municipal health centres.

## REFERENCES


1. Haines A, Feder G. Guidance on guidelines. Writing them is easier than making them work (editorial). BMJ 1992;305:785–6.
2. Buchan H. Clinical guidelines: Acceptance and promotion (editorial). Qual Health Care 1993;2:213–4.
3. Thorsen T, Mäkelä M, editors. Changing professional practice. Theory and practice of clinical guidelines implementation. Copenhagen: Danish Institute for Health Services Research and Development, 1999.
4. Hayward R, Wilson M, Tunis S, Bass E, Guyatt G. Users' guides to the medical literature. VIII: How to use clinical practice guidelines. Are the recommendations valid? JAMA 1995;274:570–4.
5. Grimshaw JM, Russell IT. Effect of clinical guidelines on medical practice: A systematic review of rigorous evaluations. Lancet 1993;342:1317–22.
6. Thomas LH, McColl E, Cullum N, Rousseau N, Soutter J, Steen N. Effect of clinical guidelines in nursing, midwifery, and the therapies: a systematic review of evaluations. Qual Health Care 1998;7:183–91.
7. Hermansson T, Aro S. Finland's health care system: universal access to health care in a capitalistic democracy. JAMA 1994;271:1957–62.
8. Varonen H, Mäkelä M. Suomalaiset hoitosuositukset (Clinical guidelines in Finland). Duodecim 1996;112:994–8.
9. Laitakari J, Miilunpalo S, Vuori I. The process and methods of health counseling by primary health care personnel in Finland: a national survey. Patient Educ Couns 1997;30:61–70.
10. Morris PD, Morris ER. Family practice residents' compliance with preventive medicine recommendations. Am J Prev Med 1988;4:161–5.
11. Grol R, Dalhuijsen J, Thomas S, Veld C, Rutten G, Mokkink H. Attributes of clinical guidelines that influence use of guidelines in general practice: Observational study. BMJ 1998;317:858–61.
12. Wensing M, Grol R. Single and combined strategies for implementing changes in primary care: A literature review. Int J Qual Health Care 1994;6:115–32.
13. Davis DA, Tailor-Vaisey A. Translating guidelines into practice. A systematic review of theoretic concepts, practical experience and research evidence in the adoption of clinical practice guidelines. Can Med Assoc J 1997;157:408–16.
14. Grimshaw JM, Russel IT. Achieving health gain through clinical guidelines. II: Ensuring guidelines change clinical practice. Qual Health Care 1994;3:45–52.
15. Grimshaw JM, Russell IT. Achieving health gain through clinical guidelines. I: Developing scientifically valid guidelines. Qual Health Care 1993;2:243–8.
16. Thomson R, Lavender M, Madhok R. How to ensure that guidelines are effective. BMJ 1995;311:237–42.
17. Tuominen SK, Romppanen P, Rosenvall A. Sepelvaltimopotilaiden hyperkolesterolemian tutkimus ja hoito laiminlyöty (The assessment of cholesterol level and treatment of high cholesterol neglected among coronary patients). Suomen Laakaril 1996;51:1217–20.
18. Mäkelä M, Kunnamo I. Näyttöön perustuvat hoitosuositukset (Evidence-based clinical guidelines). Duodecim 1997;113:19–22.
19. van Weel C. Primary care tomorrow. Teamwork. Lancet 1994;344:1276–9.
20. Ministry of Social Affairs and Health. Health Care into the 21st century. Implementation of health care development project. An action programme. Handbooks 1999:6. Helsinki: Ministry of Social Affairs and Health, 1999.