Health Promotion in Community Pharmacy

Country Report – Denmark

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Preface

The report is a part of a European Project - Health Promotion in Primary Health Care: General Practice and Community Pharmacy. The project is co-ordinated and managed by the Ludwig Boltzmann-Institute for the Sociology of Health and Medicine (LBISHM), Vienna, WHO Collaborating Centre for Hospitals and Health Promotion.

The overall goal of the project is to contribute at a European level to the development of quality assured and quality assuring patient/client-oriented health promotion in general practice and community pharmacy in all member states of the European Union.

Professionals from general practice and community pharmacy from all 15 member states of the European Union were invited to become partners in a joint development of European instruments. The Danish Pharmaceutical Association entered as a partner in this project and sub-contracted with Pharmakon, Danish College of Pharmacy Practice, to compile the report.

The Danish Country Report

The Danish country report for community pharmacy comprises the collection of:
- Five to ten comprehensive descriptions of existing initiatives (Part A I)
  Criteria for the selection of initiatives were established as:
  - Initiatives with a high degree of implementation
  - Initiatives representing a unique contribution
  - Examples of both primary, secondary and tertiary health promotion initiatives.
  Five initiatives were selected for description:
  - Pharmacy-based smoking cessation (primary)
  - Pharmacy-based weight reduction (primary)
  - Pharmacy services for the elderly (tertiary)
  - Quality improvement of drug therapy for asthma patients in Denmark (tertiary including some services from the primary and secondary levels)
  - The Diabetes Year - 2000 (both primary, secondary and tertiary services)
As a supplement, an overview with further examples of pharmacy activities and projects has been produced. The activities included have been evaluated, or the experiences/results have been published or communicated. The overview is included in Appendix II and comprises more than 30 initiatives.
- A list of existing national guidelines (Part AII)
- A description of relevant preconditions for health promotion in community pharmacy (Part B)
The European project

The overall project is based on two general assumptions:

1. Health promotion in primary health care can serve as an opportunity to increase the health gain for the population by improving health outcomes of primary health care services. By systematically applying principles of health promotion, professionals in primary health care should be able to increase the impact of their work and better achieve their professional goals.

2. Since there are already a lot of health promotion activities going on in general practice and community pharmacy across Europe, these experiences can be systematically collected, compiled and made available for mutual learning and the development of European supportive instruments.

The main focus of the project is a European effort to collect, document and re-analyse existing models of good and best practice (including promising initiatives) and existing guidelines. The project will look for proposals to include national models or initiatives in a database (www.univie.ac.at/phc/inhalt.html) of European models of good and best practice (e.g. evaluated models, as well as promising initiatives and existing national guidelines – for each of the two professions) and to provide an analysis of these.

Furthermore, information is being compiled concerning specific preconditions for health promotion in general practice and community pharmacy in the national health care systems as supporting or hindering factors.

Pharmakon
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Part A I: National initiatives

Pharmacy-based smoking cessation services

Name of the initiative/model:
The Danish programme for smoking cessation consists of two models:
a) Quit smoking - join a smoking cessation group at the pharmacy (a direct translation of the Danish name).
   Internationally, this initiative is known as Pharmacists helping smokers to quit. The concept is based on a
   combination of pharmacist-led support groups and the use of nicotine replacement therapy (NRT).
b) Smoking cessation at the counter (a direct translation of the Danish name). An initiative to promote smoking
   cessation to the customers/clients, including an individual-based smoking cessation service.

In the following, a) and b) will refer to the two models mentioned above.

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Who has commissioned the initiative/model?

a) Pharmacist helping smokers to quit was commissioned by the Danish Pharmaceutical Association and the WHO Tobacco or Health unit in co-operation.

The Danish Pharmaceutical Association gave high priority to the development and implementation of pharmacy-based smoking cessation activities in their plans for pharmacy practice development at the beginning of the nineties. This fell in line with the targets in the Action Plan for a Tobacco-free Europe from WHO Regional Office of Europe. The Plan urges international and national organisations of pharmacists to launch initiatives to promote non-smoking among their members and to adopt a proactive approach to the general public.

b) The individual counselling model was commissioned by the Danish Pharmaceutical Association. The model was adopted from the National Pharmaceutical Association of the United Kingdom and adapted to Danish conditions by Pharmakon, Danish College of Pharmacy Practice. In the UK, the model is known as The PAS Smoking Cessation Service Model for Community Pharmacy.

Who has co-ordinated the initiative/model?
The Danish Pharmaceutical Association has in collaboration with Pharmakon, Danish College of Pharmacy Practice co-ordinated the Danish smoking cessation programme.

What is the running time of the initiative/project?

a) The group-based model was introduced in 1992 and is still running. A demonstration project evaluating the concept was conducted from 1992 to 1993.

b) The individual counselling model was introduced in 1996 and is still running.

What is the current state of the initiative/project (e.g. concept development, pilot phase, finished, integral part of everyday practice)?

Smoking cessation services are now an integral part of pharmacy practice. About 25% of Danish pharmacies offer smoking cessation services and 67% of these have group-based support.

Short description of the initiative/model:

Which problem is being addressed?

Health effects: WHO has described smoking as a global epidemic. Several decades of epidemiological research have identified smoking as the major cause of preventable mortality. For individual smokers, the magnitude of risk rises with increasing duration of smoking. Life-time-smokers live on average 8 years less than non-smokers. Half of all life-time smokers will eventually die from tobacco-related illnesses, half in middle age, half in old age.
Every year, 12,000 Danes die as a result of smoking:
- 6,000 die from cardiovascular diseases
- 4,000 die from cancer
- 2,000 die from chronic obstructive lung disease.

Smoking prevalence in the adult population of Denmark is 35% (31% are daily smokers). The smoking prevalence is equal for men and women. 18% of men and 14% of women are heavy smokers. For the last five years, the annual average decrease in smoking prevalence has been about 1-2% for men, ½-1% for women. About 75-80% of the smokers want to quit and about one-third have made at least three serious attempts to do so.

The role of the pharmacist in smoking cessation: In 1988, WHO Regional Office for Europe adopted a set of recommendations for development of the role of the pharmacist in Europe. One of these recommendations emphasised that pharmacists should help to promote healthy life-styles - including ill-health prevention. The community pharmacist is a highly trained professional who can be seen without an appointment, in an informal setting and is visited both by sick and healthy people. This provides pharmacists with the opportunity to promote smoking cessation to a wide spectrum of the community.

The smoking cessation programme can be seen in the context of the extended role of the pharmacist. Pharmacists and community pharmacies have not traditionally been very active in smoking cessation.

In 1985, the first nicotine chewing gum was introduced in Denmark. In the following years, new nicotine products were launched and made available as OTC’s. At the same time, health information campaigns produced an increasing pressure on smokers to stop, and for those who needed support, the option of the pharmacy programme was welcomed.

What are the goals, aim and targets?

a) The ultimate goal is that after a quit smoking programme, the participants will have stopped and will be motivated to remain non-smokers.

The goal of the pharmacist-led support groups was to facilitate learning, aimed at changing attitudes:
- explicit change of attitudes towards smoking and beginning a behavioural change
- implicit change in attitude about the role of the pharmacists.
b) The model was published in a training manual and mailed to all community pharmacies in Denmark with the specific aim of encouraging the pharmacy to:
- take up the model and adapt it to their own service
- ask more questions when giving advice on smoking cessation
- give customers more pieces of advice on how to stop smoking
- actively promote smoking cessation to people with smoking-related diseases/problems
- encourage and motivate smokers to use the pharmacy to help them stop smoking
- implement smoking cessation as an integral part of everyday practice.

a) + b) For both models the aim is to give the pharmacist/pharmacy:
- greater professional satisfaction
- better understanding of smoking cessation
- recognition as a member of the health care team
- a valuable and concrete way of implementing health promotion and ill-health prevention.
And furthermore, to contribute to reduce health expenditure.

What are the specific strategies and measures applied?

a) **Pharmacists helping smokers to quit** is a model whereby a pharmacist provides a quit smoking programme to a group of 8 to 12 people who wants to quit smoking. The programme lasts for eight weeks and comprises six one-and-a-half-hour meetings with the pharmacist acting as group moderator. It is based on the use of nicotine replacement therapy and group discussion, feedback and advice sessions. At each meeting, a relevant topic for smoking cessation is taken up i.e.:
- nicotine dependence and withdrawal symptoms
- weight increase and changes in diet
- the use of nicotine replacement therapy.

This is followed by a group round and a discussion session. The smokers pay a fee to participate in the programme.

b) The individual model is based on the cyclical stage model (theoretical frame of reference) for behavioural change:
- pre-contemplation stage = smoking
- contemplation stage = thinking about quitting
- preparation stage = decision to quit and preparations to stop
- action stage = actual smoking cessation
- maintenance stage
- staying stopped
- or relapse.
The model describes how the pharmacy can support the smoker at different stages in the cyclical model. This part of the model is considered to be a basic level of commitment in the smoking cessation programme.

Furthermore, the model describes a second level which is an individual-based smoking cessation service involving structured counselling sessions with the smoker. The first counselling session is a highly structured interview (approx. 20 min), which is conducted in a separate room or quiet area in the pharmacy. The interview ends with an appointment being made for the next session. The intervals between the sessions are individual, but meeting weekly for the first four weeks is recommended. Subsequent sessions are planned to last no longer than 5-10 minutes, unless the participant has a specific problem. The pharmacy is advised to charge a fee for the service.

What is the scope of the initiative/model?

The scope of the group-based model was national. Pharmacies should be able to offer this programme where it is needed throughout Denmark. The scope of the individual-based model was national for the basic level and where needed, the individual counselling sessions should be available.

a) Pharmacists helping smokers to quit is a part of the WHO Regional Office for Europe’s Health for All strategy and it is also the pharmacists’ contribution to WHO’s Action Plan for a Tobacco-Free Europe.

Which partners have been involved in development and implementation?

The Danish Pharmaceutical Association was involved in the implementation by e.g. providing support with central marketing and close contact to the most important governmental (The Danish Council on Smoking and Health) and non-governmental organisations (The Danish Cancer Society, The Danish Heart Foundation and The Danish Lung Association) working within the area of tobacco and health.

Has any systematic project evaluation been conducted on the model/initiative?

a) The concept, Pharmacists helping smokers to quit was piloted and evaluated at 20 pharmacies distributed geographically throughout Denmark. This was a joint project conducted by WHO Regional Office for Europe and the Danish Pharmaceutical Association running from 1992 to 1993. A sociologist from the Royal Danish School of Pharmacy was responsible for the evaluation. The evaluation project was finished in 1993 and the evaluation report finalised in 1995.

The overall purpose of the project was to train pharmacists to help smokers to quit. The goal of the project was to study the outcomes of smoking cessation support groups at pharmacies. 251 smokers participated. The average group size was 12, with a range of 9-15 participants.
The elements of the evaluation include the:
- training course for pharmacists (evaluated on basis of questionnaires and an oral evaluation by the evaluator)
- experience and effectiveness of pharmacist-led support groups,
- experience and effectiveness of NRT,
- outcome of the intervention after 3, 6 and 12 months (cessation was not verified with clinical tests).

The evaluation employs a combination of quantitative (questionnaires) and qualitative (site visits and interviews) methods.

a) The individual-based model, *Smoking cessation at the counter*, has not been evaluated in Denmark.

If information available: What is the knowledge about project results so far?

a) The pharmacist-led support groups are considered a success. Of the participants who completed the programme, over 90% rated the support group as either good or very good. Among those who followed the entire 8 weeks session, there was virtually no criticism of the role of the pharmacist or of the local pharmacy as a meeting place.

The outcome of the intervention:
60% of the original 251 participants reported smoking cessation after 8 weeks. After three months, the success rate was 36%. After six months, 33% claimed to be non-smokers and this dropped to 29% after one year.

The project *Pharmacists helping smokers to quit* has contributed to health promotion in Denmark. It has also contributed to building up the role of the community pharmacist as well as the role of the pharmacy in health promotion. The project started a trend in Danish pharmacies in helping smokers to quit.

If information available: Which were the most important factors supporting the development and implementation? (e.g. knowledge and skills of actors/key persons, support by professional organisations, support by health policy and other relevant actors; etc.)

a) + b) The development of a common concept was important to ensure uniformity and quality of the programme.

a) One of the most important factors for both development and implementation has been the creation of a platform for the model by the Danish Pharmaceutical Association and WHO Regional Office for Europe in addition to the contact with other partners as governmental and non-governmental organisations and also the pharmaceutical companies.
In Denmark, all pharmacists who want to initiate a smoking cessation programme at the pharmacy have to participate in a training course prior to this. The theoretical part of the course includes:
- the pharmacology of nicotine and tobacco
- tobacco dependence and clinical, psychological and social aspects of tobacco use.

Group dynamics and theory are key parts of the training. The training also advises on practical problems and the marketing of smoking cessation to the customers. The training makes the pharmacists able, at an educationally and technically qualified level, to plan and implement the programme in the pharmacy, as well as to introduce it to the pharmacy’s customers, local health care professionals and other potential partners.

The training course includes a manual designed for the pharmacist with guidelines and advice for the establishment of a smoking cessation group, marketing material and literature. The goal of the manual is to ensure uniformity and quality of the programme and it has proved to be an essential tool for the pharmacists.

Another important factor has been the marketing of the programme. The Danish Pharmaceutical Association initially marketed the programme to the profession and offered the two-day training course and all material needed to conduct a smoking cessation programme free of charge for the first 20 pharmacies in the project. The fee paid by the smokers participating in the programme covered additional costs to the pharmacy.

The marketing of the programme to the public was carried out both centrally and locally. Centrally, the Danish Pharmaceutical Association arranged press conferences, and produced press releases for the major newspapers, TV and radio stations. Locally, pharmacists provided displays in the pharmacies, gave marketing folders to all customers who bought NRT products, advertised in local newspapers, and on radio and TV, and informed relevant local health care providers, e.g. GPs. As a result of a successful pilot project and high media interest throughout the project, the first pharmacies set a trend for pharmacy-based smoking cessation.

a) One of the most important factors supporting the implementation has been that all pharmacies in Denmark received a manual with guidelines and advice for implementation including:
- a flip chart
- a number of smoking cessation progress cards for the clients who want to give up smoking
- a number of pharmacy monitoring forms

The Danish Pharmaceutical Association gave these materials to the pharmacies free of charge. Pharmakon, Danish College of Pharmacy Practice introduced the model at training days where approximately 20% of the Danish pharmacies participated.

Another important factor was the possibility of involving all personnel in the activity. Furthermore, with this model it was possible to be involved in smoking cessation at different levels of commitment.
The model was updated and re-launched as an element in the Danish Pharmaceutical Association’s national campaign in 1999 - The Heart Year. A campaign focused on patients with cardiovascular diseases. This has been an important factor in maintaining the degree of implementation in pharmacy practice.

If information available: Which were the most important barriers concerning development and implementation?

a) The following list comprises the most important barriers for the group-based smoking cessation model:
   - Difficulties in getting enough participants for a group
   - The market for smoking cessation support in groups is small, since the majority of smokers stop on their own, and of those who need support, only a limited number choose the group model.
   - The economy of the service and other actors
   - A national campaign was launched in 1995. Smoking cessation programmes were made available nationally and free of charge to the public by STOP. STOP is a joint project by the Danish Council on Smoking and Health Council, the Danish Cancer Society, The Danish Lung Association, and the Danish Heart Foundation. The aim is to ensure opportunities, materials and facilities for those who are motivated to quit smoking. The aim is also to ensure high commitment in quit-smoking activities from local organisations and key figures. In this campaign smoking cessations activities were made free of charge. The pharmacies did not have that possibility.
   - The lack of integration with the national initiatives on smoking cessation
   - The lack of integration with the national STOP campaigns was a major setback for smoking cessation activities in the pharmacies. Not being integrated with the other offers free of charge and not being integrated and recognised as a vital health profession in smoking cessation led to a major lack of motivation for continuing with smoking cessation - though it was successful.
   - The lack of decision on a role for pharmacy assistants caused internal problems
   - Being the largest group of professional employees in Danish pharmacies, pharmaconomists requested a definition of their role in smoking cessation. This did not come until 1996 with the launch of the individual counselling model.

a) The following list comprises the most important barriers for the group-based smoking cessation model:
Charging a fee for the service
Most pharmacies felt uncomfortable charging a fee for the service. In Denmark, most pharmacy services are free of charge. Furthermore, the staff would have liked to have some experience before charging even though the charge is required by law.

Which specific aspects of the model/initiative would you consider especially well developed or otherwise instructive and thus relevant for transfer to other EU member states?
The concept of group sessions at the pharmacy can be applied to other programmes. In Denmark, the same model is used for a pharmacy-based weight reduction programme.
For more details about how pharmacists, pharmacies and pharmaceutical associations can implement a similar programme to help smokers to quit, we can refer to the WHO Guide: Pharmacies and Smoking Cessation. This guide describes in detail how the Danish project was organised, including a teaching plan, and examples of course materials and marketing material.

Available publications:

Pharmacist helping smokers to quit, Evaluation report. WHO Regional Office for Europe EUR/ICP/LVNG 03 03 04, 1997.
Pharmacy-based weight reduction services

Name of the initiative/model:
The Danish programme consists of two models:
a) Lose weight - join a support group at your pharmacy (a direct translation of the Danish name).
b) BMI-Individual weight reduction counselling (a direct translation of the Danish name).

In the following, a) and b) will refer to the two models mentioned above.

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Who has commissioned the initiative/model?
a) The model was commissioned by Pharmakon, Danish College of Pharmacy Practice upon request from the Danish pharmacies for a common concept for pharmacy-based weight reduction groups.

The background was the positive experiences with both weight reduction services at a small number of pharmacies and the Danish smoking cessation concept (Pharmacists helping smokers to quit).

b) The individual counselling model was commissioned by The Danish Pharmaceutical Association (DPA) and Pharmakon. The model was an element in the DPA's national campaign in 1999 - The Heart Year. The campaign focused on patients with cardiovascular diseases.

Who has co-ordinated the initiative/model?
a) The group-based model was co-ordinated by Pharmakon.
b) The individual model was co-ordinated by Pharmakon in collaboration with DPA.

What is the running time of the initiative/model?
a) The concept was introduced in January 1994 and is still running. The model was evaluated in a study, which ran from February 1994 to July 1995.
b) The individual model was launched in 1999 and is still running.
What is the current state of the initiative/project?
Weight reduction services are now an integral part of pharmacy practice in Denmark.

About 25% of Danish pharmacies offer lose weight courses to the public.

In 1999, a survey among Danish pharmacies showed that (Note: response rate 48.5%):
- 19% had hosted support groups for more than a total of 410 persons, and
- 14% had provided individual counselling and BMI-measurement to more than 210 persons.

Short description of the initiative/model:

Which problem is being addressed?
The development in the prevalence of obesity has taken on epidemic character in the western world. Obesity is responsible for a large proportion of the coronary diseases, diabetes and certain forms of cancer although at the same time, obesity is a risk factor that can be modified.

WHO states that overweight and obesity represent a rapidly growing threat to the health of populations in an increasing numbers of countries worldwide. Obesity is regarded by WHO as a major global public health problem where global epidemic projections for the next decade are so serious, that public health action is urgently required.

In countries comparable to Denmark, with regard to the prevalence of obesity and the health care expenses, the complications linked to obesity account for 4-8% of all resources for the combating of disease and this figure is expected to rise in the coming years. It is therefore necessary to develop effective, resource light treatment offers within health care settings. Evaluation of weight-management programmes within health care settings suggests the following important points in relation to the nature and value of support systems:
- Specially trained health personnel produce better results
- There is greater value in frequent, rather than monthly or longer intervals between visits
- Better responses are achieved with most patients in a group setting.

What are the goals, aims and targets?
a) The objective of the “lose weight” groups is for the participants to achieve a realistic and permanent weight loss and that they feel encouraged and motivated to continue the necessary changes in lifestyle to retain this weight loss.
The purposes of the support groups are:

- to lose weight
- to reduce the total and relative dietary fat content from the typical 35-45 energy % to the recommended < 30 energy %.
- to reduce the risk of health-related consequences by providing an understanding of the factors influencing the development of obesity
- to give ideas and inspiration with respect to how diet and exercise habits can be changed and maintained
- to inform about different strategies for treatment of obesity - the effect and use - plus advantages and disadvantages
- to bring the participants into contact with other people in the same situation for mutual inspiration, support and motivation through experience exchange.

The aims for the pharmacies are to create an alternative counselling setting and to document that pharmacy-based weight reduction groups is a valid low intervention for the management of obesity at a low cost and the results are comparable to results from interventions of other health professionals.

b) The purposes of the individual model are:

- to offer overweight or obese pharmacy customers a service based on individual counselling and follow up
- to use the special knowledge of the pharmacy concerning diet, nutrition, obesity management and disease management
- to illustrate that the pharmacy offers more than just distribution of medicine.

What are the specific strategies and measures applied?

a) The model is based on support from a group of 10-12 people in a similar situation and on education in nutrition and physiology.

The service includes eight sessions of 1½ hours over a three month period. The first meeting is a free introduction with general orientation about obesity and the long-term health consequences of obesity. It is mentioned who will benefit from the course, the content of the course and what results can be expected. At the end of the meeting, participants can sign up and pay a fee for the continuing service.

At the following sessions, body weight is assessed, experiences are exchanged and discussed in a group round. Finally, the sessions include education in nutrition and physiology where participants are educated in the correct combination of food and the importance of physical activity. The participants are weighed regularly during the programme and supported by the team leaders and the other participants.

The pharmacy team leaders (usually one pharmacist and 1-2 pharmaconomists) undertake all education and counselling.
b) The model is based on individual counselling and follow-up. The service includes five counselling sessions. The first counselling session is planned as a structured interview collecting relevant information about the customer including:
- personal weight history (including BMI, physical activity, dietary patterns)
- assessment of health indicators (fat distribution, smoking, family history)
- establishment of motivation for losing weight
- experiences from previous slimming attempts
- expectations from the pharmacy service.

Realistic and appropriate targets are set with support from the pharmacy and an action plan is devised. The interview ends with an appointment being made for the next session. The intervals between the sessions are individual, but meeting weekly for the first four weeks is recommended. Subsequent sessions are planned to last no longer than 5-10 minutes, unless the participant has a specific problem. The pharmacy is advised to charge a fee for the service.

What is the scope of the initiative/model?
The scope of the programme was national and pharmacies throughout Denmark should be able to offer the two models where it is needed.

Which partners have been involved in development and implementation?
Pharmacists and pharmaconomists with experience in pharmacy-based weight reduction counselling have been involved in the development of the programme.

Has any systematic project evaluation been conducted on the model/initiative?
a) The group model was evaluated in a retrospective study at 19 pharmacies from February 1994 to July 1995. Development of questionnaires and collection of data for the evaluation was performed by a graduate in applied psychology. Another external evaluator analysed the data and drew up the final report in June 1996. The results were published in September 1999 in the Journal of the Danish Medical Association.

Two hundred and sixty-nine overweight/obese people (BMI >25 kg/m², 32±4.5 [mean±SD]) paid 550 DKK (approximately 22 euros) each for a 12 weeks slimming course with groups of 8-20. The age was between 18-81 years, and 259 were females. Before and after the course, and again after three, six and 12 months follow-up, the participants filled in a questionnaire and their self-reported body weight was assessed on the pharmacy scales.
The questionnaire had the following domains:

- Background information (sex, age, weight at the beginning of the course, height, occupation, duration of overweight, number of serious slimming attempts, slimming methods used)
- Overview of weight loss
- Expected weight loss
- Diet, exercise and change of habits
- Use of slimming products
- Consultations with the general practitioner
- Changes in health status
- Experience and effectiveness of support groups at the pharmacy

All data except the data on weight and BMI were qualitative data.

b) No systematic project evaluation has been performed on the individual-based model.

If information available: What is the knowledge about project results so far? Please provide a short summary on acceptability, feasibility, effectiveness, sustainability, economic evaluation (according to information available).

a) Outcome of the intervention

One hundred and ninety-one or 71% of the participants completed the 12-week weight reduction programme. The average weight loss was 5.3 and 6.2 kg among females and males, respectively. The weight loss maintenance was assessed at a one-year follow-up in 122 (45%) of the participants who had entered the programme. The loss maintenance was 4.0 and 6.7 kg in 118 females and four males, respectively. At the one year follow-up, 40 participants (20%) who completed the course had maintained a weight loss >5 kg. In conclusion, the initial weight loss, and maintenance and drop-out rate are comparable with results from general practitioners and hospital out-patient clinics, but the costs are substantially lower.

Which were the most important factors supporting the development and implementation?

a) + b) The development of a common concept has been important to ensure uniformity and quality of the programme.

a) To support the implementation, team leaders attended a two-day compulsory training course (developed by Pharmakon). During the course, they received both theoretical and practical training. Group dynamics and theory was a major part of the training. Practical problems in organising groups as well as marketing the lose weight groups were also addressed.

Another important factor is a manual designed for the team leaders with guidelines and advice on implementation of lose weight groups, marketing material and literature. Pharmakon provides updated materials for the manual in electronic form for a small fee.
To be a pharmacy team is regarded as a very important strength of the concept.

b) An important factor supporting the implementation has been a manual with guidelines and advice for implementation of the service including self-check essays and monitoring materials.

The service was introduced as an element in the DPA’s national campaign in 1999 - The Heart Year. This was an important factor in supporting the implementation together with the possibility of participating in continuing education programmes.

Which were the most important barriers concerning development and implementation?

a) No important barriers concerning the implementation were reported in the evaluation of the service.

b) It is recommended that the staff who undertakes the counselling have knowledge of nutrition, weight reduction and management strategies, for example, through a continuing education programme. This seems to be a barrier for the implementation of the service in pharmacies which do not provide the group-based service.

Which specific aspects of the model/initiative would you consider especially well developed or otherwise instructive and thus relevant for transfer to other EU member states?

Both models have already been used by other countries, however, in the area of smoking cessation. We believe that the models for pharmacy-based weight reduction services have equal potential.

Available publications, reports, self-descriptions


Elderly Service Programme

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Who has commissioned the initiative/model?
The Elderly Service Programme (ESP) was commissioned by the Danish Pharmaceutical Association (DPA). In the beginning of the nineties, the DPA gave high priority to development and implementation of pharmacy-based health services to the elderly.

Who has co-ordinated the initiative/model?
The programme was co-ordinated by the DPA.

Materials for the ESP were developed by Pharmakon, Danish College of Pharmacy Practice in collaboration with the DPA.

Documentation and evaluation of satisfaction with the ESP have been performed by a consulting sociologist. Elements of the ESP have been evaluated in a prospective, controlled multi-centred study co-ordinated by Pharmakon.
What is the running time of the initiative/project?
The ESP ran from 1992 to 1998. The survey evaluating satisfaction with the ESP was performed in 1993. The controlled multi-centre study ran from 1996 to 1999.

What is the current state of the initiative/project (e.g. concept development, pilot phase, finished, integral part of everyday practice)?
One or more elements of the ESP were implemented in 75% of the Danish pharmacies in 1993. In 1998, the DPA officially ended the programme, but elements of the ESP are still an integral part of pharmacy practice.

Short description of the initiative/model:

Which problem is being addressed?
In Denmark, as in many European countries, approximately 11-17% of the total population is over 65 years and this number is predicted to rise continuously. Biomedical research, better health care, significant advances in public health and hygiene and a healthier life-style over the last century have enabled people to live longer and also to remain independent for a longer period. However, the increasing number of elderly people within the population has profound effects on society, including greater demands on health care resources and social entitlements.

Approximately 80% of those aged over 65 suffer from at least one chronic illness and use, on average, between two to six prescribed medicines. Polypharmacy, coupled with failing memory, altered pharmacokinetics, changed pharmacodynamics and a decreased resilience to the adverse effects of drug therapy may lead to increased risks of drug-related problems. Research has indicated that many hospital admissions of elderly patients (up to 31%) are directly related to drug therapy. Many drug-related problems and aspects of sub-optimal prescribing are preventable with careful patient assessment, patient education and monitoring. These latter interventions can be provided by community pharmacies. Community pharmacies are widely distributed and accessible to the general public and the elderly are the primary customers.

An increased emphasis on developing health services to the elderly was given high priority by the DPA at the beginning of the nineties. The ESP was a new approach to pharmacy practice and a significant way of making visible/of demonstrating that pharmaceutical service can add quality and value to health outcomes.

What are the goals, aims and targets?
The main objectives of the programme were as follows:
- to improve use of medicine and thereby the quality of life for the elderly
- develop pharmacy practice and promote the pharmacy as part of the primary health care team.
What are the specific strategies and measures applied?

The principles of the ESP were as follows:

- the activities should be directed towards the individual medicine user and the focus should be the patients perspective
- the activities should improve quality of life for the elderly by improving the quality of drug therapy and by strengthening self-care
- the elements of the programme represent different levels of activity
- the community pharmacies can choose their level of participation in the programme
- the activities should be co-ordinated with other relevant initiatives and campaigns
- the activities should promote the pharmacy as a key member of the primary health care team

The four main elements of the ESP are:

- Pharmacist consultation
  Individual patient counselling using a structured approach to identify actual and potential drug-related problems. After having made an assessment, the pharmacist formulates an intervention and monitoring plan, if necessary. The pharmacist provides individualised patient education and advice on medication use and medical conditions. If necessary, the elderly person is referred to the GP.

- Technical medication review - “brown bag” medication review
  The medicine is reviewed to encourage the disposal of outdated and unwanted medicines. The elderly person is counselled on use and technical handling of the medication. If needed, the patient is referred to a pharmacist consultation.

- Medication overview
  An up-dated overview of all medicines used by the elderly person. It is a means for the elderly an improved use of medicine, and it is a means of communication with other health professionals.

- Lectures
  An offer for groups of patients or health care providers (nurses, home helpers). The lectures were on topics such as the correct use of medicine, age-related problems (i.e. constipation and sleeping problems) and diseases and their management (i.e. arthritis and cardiovascular diseases).

Other activities

- “Ask about your medicine”
- A re-launching of the European campaign to encourage the public to seek information which would help them to derive maximum therapeutic benefit from a course of medication.
- A campaign day - focusing on disposal of outdated and unused medicines.
- A calendar - a part of a campaign focusing on fall accidents among the elderly. The calendar gave information on medicine and the risk of falling and referred readers to the pharmacy for specific information.
- A conference about the elderly and medicines.
What is the scope of the initiative/model?
The programme was planned to be national and the elements implemented in pharmacy practice of the nineties.

Which partners have been involved in development and implementation?
The campaign day was arranged in co-operation between the local pharmacies and the local committees of the DaneAge Association (non-governmental organisation with 410,000 members). The calendar was produced as part of a campaign by The National Consumer Agency of Denmark (governmental organisation) and sold through the pharmacies. harmakon was involved in the development of a manual of community pharmacy-based intervention strategies to help standardise the interventions carried out in different pharmacies. Furthermore, Pharmakon arranged the continuing education programmes to support the implementation.

Has any systematic project evaluation been conducted on the model/initiative?
The programme has been evaluated in a qualitative and quantitative survey conducted by counselling sociologists. In the quantitative part of the survey, a questionnaire was distributed to all Danish pharmacies in May-July 1993. The pharmacies were asked to give their opinion on the relevancy of the content of the service and the conditions for implementation. In the qualitative part of the survey, 12 interviews were conducted in October 1993 at nine pharmacies throughout Denmark.

Three of the four main elements in the ESP have been evaluated in a prospective, controlled multi-centred study co-ordinated by Pharmakon. The study was a part of a multi-centred study carried out in seven EU countries with funds from BIOMED 2. The title of the study is: Improving the well-being of elderly patients via community pharmacy-based provision of pharmaceutical care.

The study ran over 18 months from 1997 to 1998. It involved 524 patients receiving five or more drugs and aged >65 years, 14 intervention and 14 control pharmacies.

What is the knowledge about the project results so far?
The main results of the quantitative survey representing 75% of the Danish pharmacies can be summarized as follows:

- all the objectives in the ESP were perceived as important or very important. Most pharmacies believed that the objectives were possible to achieve
- 30% were active and 10% were planning to start, whereas 60% had no plans to participate in the programme
- only one third of the pharmacies believed in a reasonable outcome compared to the resource input
- most pharmacies were satisfied with the materials designed for the programme
- the statement: “the elderly will find it natural that pharmacies provides the programme” was believed by about 50%
The results of the controlled study are currently being analysed. Preliminary results show that intervention patients have significantly better quality of life and symptom scores, fewer problems with medicines, fewer contacts with GP's and decreased use of Benzodiazepins. Indicators of drug use and knowledge, compliance and general satisfaction showed no difference between the groups.

Which were the most important factors supporting the development and implementation?
One of the most important factors for both development and implementation was the creation of a platform for the programme by the DPA.

Another important factor was the marketing of the programme. DPA initially marketed the programme to the profession via:
- a brochure describing the programme - produced to motivate the community pharmacies
- a binder introducing the elderly to the pharmacy staff
- providing all pharmacies with two manuals which were updated continuously until 1998
  - one with detailed guidelines and advice for implementation of the services within the programme
  - one with materials for both internal and external education
- providing materials for the “brown bag” medication review: Brown bags and medication review cards
- a video illustrating how the services can be carried out
- a newsletter and a catalogue with (inspiration) ideas for new activities and projects

The marketing of the programme to the public was carried out both centrally and locally; centrally by the DPA and locally by the pharmacies supported with materials from the DPA. Furthermore, the DPA arranged a conference about the elderly and medicine in February 1993. The conference was opened by the Minister of Health.

Continuing education programmes were offered by Pharmakon during the period the ESP ran.

The establishment of experience exchange groups was an important factor in the maintenance of programme.
Which were the most important barriers concerning development and implementation?

The barriers mentioned in the quantitative survey of 1993 were as follows:

- 15% mentioned the risk of an internal conflict of interest between pharmacists and pharmacy assistants. Usually, the pharmacists were responsible for the activities, but the pharmacy assistants were active in 20% of the pharmacies.
- The training was considered time-consuming, but not a barrier for participating in the activities.
- Most pharmacies expressed a need for more knowledge within the following areas: the elderly and their use of medicines, social-related problems, how to follow the activities up including quality assurance of the activities.
- 63% believed that the elderly will find it more naturally if the activities within the ESP were carried out by the patients’ own general practitioner.
- Many pharmacies were concerned about a possible conflict of interest with other health care professionals.

Which specific aspects of the model/initiative would you consider especially well developed or otherwise instructive and thus relevant for the transfer to other EU member states?

The concepts of the four main elements of the ESP are all very well-developed and definitely relevant for transfer to other EU member countries. We believe that there is a need for services like this and the acceptance among the elderly of using the pharmacy services will increase in the coming years. It is, however, difficult to measure the outcomes of the activities within the programme and from the European study, we know that the model had less impact on the quality of drug therapy than was anticipated.

Available publications, reports, self-descriptions:

Reports in Danish:

Publications in English:
Quality improvement of drug therapy for asthma patients in Denmark

Name of the initiative/model:
Therapeutic Outcomes Monitoring is the name of the pharmaceutical care model tested in the project Quality improvement of drug therapy for asthma patients in Denmark.

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Who has commissioned the initiative/model?
The Danish Pharmaceutical Association commissioned the project in 1991. The Therapeutic Outcomes Monitoring (TOM) model was developed in collaboration with the University of Florida.

Who has co-ordinated the initiative/model?
The Danish Pharmaceutical Association (DPA) and Pharmakon, Danish College of Pharmacy Practice have in co-operation with professor Charles D. Hepler (University of Florida) initiated the project. The project was co-ordinated by Pharmakon, Danish College of Pharmacy Practice.

What is the running time of the initiative/project?
The project started in March 1993 with a feasibility study. From August 1994 to August 1995, a controlled trial was carried out.

What is the current state of the initiative/project (e.g. concept development, pilot phase, finished, integral part of everyday practice)?
The project is finished and the results have been published.

The full scale TOM programme has not been implemented as everyday practice at any pharmacy - but that, on the other hand, was never expected. Many of the participating pharmacies have implemented elements of the programme in everyday practice.
The experiences and results from the project have been used both internationally and in Denmark. Pharmakon has developed a manual for WHO (Programme for Pharmaceuticals Regional Office for Europe) on pharmacy-based asthma services for implementation through EuroPharm Forum. In Denmark, a manual has been developed (based on the previous mentioned) and an education programme (Asthma-Allergy Counsellor) has been established in collaboration with the patient organisation.

Short description of the initiative/model:

Which problem is being addressed?
Successful drug therapy is an essential element in managing asthma. However, despite improved anti-asthma drugs and improved understanding of the possibilities for asthma management, uncontrolled asthma remains a serious problem, in part because of drug-related morbidity and mortality. Continuous provision of optimal asthma care is increasingly crucial to all professionals, according to our present understanding of asthma as a chronic condition, rather than one consisting of acute episodes. The fact that drug therapy does not produce the expected outcomes has been attributed more to ineffective implementation of therapy than to a lack of efficacious drug products.

Efforts to improve implementation of asthma therapy have documented the value of therapeutic guidelines, patient education, compliance enhancement, written action plans, peak-flow and diary monitoring and integrated self-management programmes which include social support and communication with professionals. However, studies that changed isolated factors, e.g. patient knowledge, have not documented an impact on morbidity.

From a system viewpoint, changing multiple factors of care should be more effective in preventing drug-related morbidity (DRM) in asthma than improving isolated factors. From this viewpoint, DRM is a result of inadequate management of therapy, in particular, failure to recognise and resolve drug-related problems before they become DRM. Two types of DRM are important: Therapeutic failures (where the original medical problem remains unresolved) and adverse events (where a new medical problem develops).

Development and evaluation of programmes which do not focus on isolated factors are therefore needed.

The concept of pharmaceutical care defined as The responsible provision of drug therapy with the purpose of achieving definite outcomes that improve a patient’s quality of life has been one of the major strategies in the development of pharmacy practice in the 1990s. In Denmark pharmaceutical care is regarded as one of the areas of Good Pharmacy Practice.

Research and development in Danish pharmacies has focused on the concept of pharmaceutical care in the 1990s. Pharmaceutical care is a continuous quality improvement function aimed at the drug use system. The overall purpose is to ensure optimal quality of life (clinical and psychosocial outcomes) for individual patients
and health economic outcomes from society’s perspective. All participants in the drug use system, including primary care actors such as GPs, pharmacists; nurses and the patients themselves are seen as essential resources.

What are the goals, aims and targets?
The aim of the project was to implement and evaluate a Danish adaptation of the TOM programme from the University of Florida. The programme was intended to increase:
- participation of Danish pharmacists in drug therapy monitoring and management and
- co-operation among pharmacists, patients, and GPs
This was expected to improve communication, competence, drug therapy management, and outcomes.

The research objective was to evaluate whether quality improvement of drug therapy, by TOM services, can cost-effectively improve health status, quality of drug therapy, clinical and psycho-social outcomes for patients with moderate to severe asthma.

What are the specific strategies and measures applied?
Pharmaceutical care can be implemented in community pharmacy practice by means of a model like TOM. The TOM programme was carried out (in the project) by a pharmacist in co-operation with the GP:

The Danish TOM programme placed equal emphasis on the patient’s perspective, i.e. coping, control, and empowerment, and the professional perspective, i.e. compliance, patient knowledge, and therapeutic problems.
The programme is a structured, cyclical outcomes improvement process comprising the following seven steps:

1. Establishment of the patient-pharmacist-physician relationship
   - Discussion of pharmacist’s new role in asthma management, and expectations about the actions of each member of the partnership
2. Collection of patient data (patient interview)
   - The patient’s perspective: open-ended questions focusing on everyday life situation (Social, medical and therapeutic history, including patient perceived problems. Satisfaction and needs. Illness and treatment).
   - The professional perspective: checklist questions on:
     - Activities of daily living
     - Knowledge and attitudes
     - General health status, symptom status, allergies
     - Clinical measurements
     - Drug therapy, history of treatment
     - Compliance and coping strategies, medication use
3. Identification and analysis of drug-related problems
- Subjective information: described by the patient, e.g. asthma symptoms, perceived problems.
- Objective information, e.g. drug use, inhaler technique.
- Assessment: initially, assessment of patient asthma status and prescribed drug therapy; on follow-up, assessment of progress toward therapeutic objectives, e.g. change in drug use.
- Therapeutic objectives: establishing or re-considering therapeutic objectives based on patient information; on follow-up, assessment of information relative to achieving the therapeutic objective.
- Plan to achieve therapeutic objective.

4. Outlining goals of therapy
Both short and long term goals of therapy are discussed. Patient agreement with goals is given high priority.

5. Choice of individual intervention- and monitoring plan
The intervention plan could include the following TOM services:
- Check of peak-flow, inhaler technique, asthma symptoms, and perceived problems
- Assessment of the total drug therapy
- Assessment and monitoring of drug use and compliance
- Referral to GP
- Counselling on problem solving in everyday life
- Education on asthma, medication, and self-management
- Instruction in self-monitoring, self-regulation, and management of attacks.

6. Implementation of monitoring and follow-up

7. Documentation and reporting to GP and patient

The specific activities at each step vary from patient to patient and from time to time, according to the pharmacist’s and GP’s professional judgement of each patient’s needs.

What is the scope of the initiative/model? (E.g. local, regional, national)
In the project, the intervention was carried out in 16 community pharmacies. The future scope of the TOM programme is that it should be provided by selected pharmacies where needed in the local health care system.

Which partners have been involved in development and implementation? (E.g. professional organisations, health policy actors, patient organisations, other relevant actors)
A scientific committee consisting of key research persons in the areas of social pharmacy, clinical pharmacy, general practice, pharmacotherapy and community pharmacy practice supported the project.

The project was politically anchored at the DPA.

Four community pharmacies participated in a development project comprising the development and testing of a Danish TOM-manual, based on a manual developed by the University of Florida.
Has any systematic project evaluation been conducted on the model/initiative?

The project was carried out as a prospective, controlled multi-centre study. To evaluate the programme, a combined evaluation strategy was used comprising:

- a controlled study evaluating effect on process variables and patient outcomes,
- an analysis of effects on quality of drug therapy,
- a process- and participant evaluation,
- a health-economic analysis, and
- a qualitative interview study.

Five hundred asthma patients aged 16-60 and treated in primary care with moderate to severe asthma, 31 community pharmacies (16 intervention- and 15 control pharmacies) and 139 GPs participated in the study. The 264 intervention patients were offered a consultation once a month with the TOM-pharmacist.

- Patient outcomes: Data were collected at baseline, and after 6 and 12 months intervention, when the patients filled out questionnaires at the pharmacy. Process and outcomes measures were:
  
  Proces measures:
  - peak expiratory flow rate
  - knowledge of asthma and asthma medications
  - inhalation errors
  - medication use
  - drug-related problems in the TOM group.

  Outcomes measures:
  - asthma symptom status
  - days of sickness
  - health-related and asthma-related quality of life
  - use of health care resources
  - satisfaction with health care and pharmacy.

- Effects on drug therapy: Consumption of individual anti-asthma drugs measured as the number of defined daily doses (DDD) purchased. Data were collected from the pharmacies’ computer systems for a period beginning six months prior to the study and during the first and second six months of the study. Treatment changes for TOM patients were classified based on drug regimes at the beginning and the end of the study.

- Process- and participants evaluation: After the study was finalised, the intervention group (altogether 209 patients, 58 GPs and 15 pharmacists) filled out evaluation questionnaires. The patients were asked about positive and negative outcomes of the project and about suggestions for improvement. The GPs received questions concerning the quality of the content and the accomplishment of the project, outcomes of the project, and their general attitude towards the role of the pharmacy and about their experiences from participating in the project. The TOM pharmacists were asked to give their opinion on the relevancy of the content of the project, an assessment of the accomplishment of similar projects, and experiences from participation.
- Health-economic analysis: The cost-effectiveness of the programme was evaluated. The total programme cost, cost of drugs, health care resource costs, and indirect cost were evaluated together with the effects of the programme on: asthma symptom status, days of sickness, quality of life, satisfaction with health care, PEFR, inhalation technique, and knowledge.

- Qualitative interview study: The purpose of the qualitative study was to gain a thorough understanding of asthma patients’ thinking and acting in relation to their treatment as well as to evaluate the impact and relevance of the patient education provided in the TOM-programme and to make suggestions for quality improvement.

15 intervention and 15 control patients, chosen at random, were interviewed with a semi-structured interview guide. Patient conceptions were identified for the following themes:

- Asthma and causes of asthma
  - Conceptions of asthma
  - Conceptions of causes of asthma

- The treatment of asthma in theory and practice
  - The aim of the treatment
  - Knowledge about asthma treatment
  - Who is responsible for the treatment?
  - Compliance
  - Coping mechanisms
  - Defence mechanisms

- Quality of life
  - Restrictions in life
  - Quality of present life situation
  - Future outlook

- Communication and contact
  - What do patients consider important?
  - Patients’ views on pharmacies

Typical and important patterns were identified by analysing the interviews. To obtain a combined analysis, generalised categories were constructed based on the thematic analyses. A diagram of global understanding was made, combining behaviour, assessment of life and position of control. Typical positions were identified from the diagram and patient profiles were constructed giving a personalised narrative image of the type.

What is the knowledge about the project results so far?

- Patient outcomes: Beneficial effects were found for the following outcomes measures: asthma symptom status, days of sickness and health-related and asthma-related quality of life. Satisfaction with health care and pharmacy in general varied through the course of the project with no significant difference between the groups at the final evaluation.

Beneficial effects were also found for the following process measures: knowledge of asthma and
medications, inhalations errors, drug use and drug-related problems. No significant difference was found for peak-flow rate. The project has demonstrated that therapeutic outcomes monitoring by community pharmacists was an effective quality improvement strategy for asthma patients in primary care.

- Effects on drug therapy: At the end of the study, the intervention patients had a more adequate asthma treatment than the control patients. The proportion of inhaled steroids increased and the proportion of beta2-agonists decreased for the intervention patients. The asthma treatment remained constant for those in the control group. The results show that community pharmacists and physicians working together can improve drug therapy for patients with moderate to severe asthma.

- Process- and participants evaluation: The participants’ evaluation shows that the asthma patients were satisfied with the TOM-programme. 50-75% of the patients reported that the programme had a beneficial impact on quality of life, health status and coping/problem solving in everyday life. Furthermore, knowledge of asthma and asthma medication had improved during the study. The patients suggested fewer and shorter contacts as improvements in the programme. Self-monitoring by use of PEF and a diary were considered a burden for approximately one third of the patients. The participating GPs were satisfied with the competence and loyalty of the intervention pharmacies. The GPs were more reserved towards the general role of the pharmacy in quality assurance of drug therapy.

- Health-economic analysis
  The programme was shown to be cost-effective with cost-effectiveness ratios between 0.18 and 0.56. The pay off time for the programme is 23 months (range 9-64 months in the sensitivity analysis). It is concluded that the community pharmacist can contribute to identifying and solving drug-related problems in a cost effective way with a positive impact on asthma patients’ health, clinical and psycho-social outcomes, even though the programme is time consuming and intensive.

- Qualitative interview study
  Recommendations for patient education based on the five identified patient profiles:
  - The autonomous, optimistic asthmatic
    Patients with many resources. They want continuous information, especially discussion of their treatment and condition. Not everyone can/should reach this goal, but (maybe) perhaps a large number of asthmatics could.
  - The non-investing asthmatic with minimal symptoms
    These patients could learn and do a lot more, but why should they? They are doing well. They should not have priority if they are not interested.
  - The common-standard, well-functioning asthmatic
    This position ought to be realistic for most asthmatics. Some can definitely do better by gaining more control and competence.
  - The independent, but insecure asthmatic
    These patients are well-educated in asthma, but are still discouraged about their life. Insecurity dominates their situation. Their fear needs to be understood and dealt with as well as their (treatment) condition.
The inhibited, discouraged asthmatic.

These patients do not feel well and have very limited resources or motivation to change their situation. They need improvements in nearly all domains (treatment, emotional reactions, knowledge, understanding/beliefs, behaviour, position of control), but it may be unrealistic. Priority should be given to changes that will influence their quality of life the most.

Which were the most important factors supporting the development and implementation?
The most important factor for the development and implementation of the project was that it was funded by Apotekerfonden of 1991. Moreover, it was important for the implementation at the pharmacies that the TOM-pharmacists were compensated for their time by the project grant.

The experiences from the feasibility study were very important in the development and implementation of the Danish TOM-programme.

Pharmacist training was important for the implementation of the TOM programme. The TOM-pharmacists received the following materials:
- a textbook
- a self-study manual on asthma pathophysiology, therapy and management
- a manual describing TOM procedures and record formats (adapted for Danish pharmacies). This manual was a major tool for performing a standardised and documented TOM-process, but all pharmacies organised the programme in a way that would fit into their local conditions.
- a video illustrating the TOM process with a case patient.

Pharmacists attended a two day training course before starting the programme. Intervention pharmacists studied asthma pathophysiology and therapy, the TOM process, organisation of a TOM practice and cooperation with partners in primary health care. They also participated in simulated patient care (case studies). The pharmacists were asked to test the TOM-practice on volunteers in their private network before implementation.

During the project, the TOM-pharmacists met in experience exchange groups to discuss practice improvement. The meetings were important for the development of the new role of the pharmacist.

A newsletter secured the information flow from the project management to all participants, partners and relevant bodies (e.g. National Board of Health, the Counties). Monthly progress reports from the intervention pharmacies to the project management were an important tool for following the implementation of the programme.
If information available: Which were the most important barriers concerning development and implementation? From the participants evaluation we know that it was difficult for about one third of the pharmacies to fit the TOM programme into the daily routine of the pharmacy and that it was difficult to establish teamwork with the pharmaconomists where the tasks were considered relevant for both parts.

As expected, the full scale TOM programme has not been implemented as everyday practice after the study at any pharmacy. The most important barrier was the lack compensation for the TOM services.

Which specific aspects of the model/initiative would you consider especially well developed or otherwise instructive and thus relevant for the transfer to other EU member states? We find the TOM programme and the evaluation strategy, including some of the evaluation instruments, well-developed and relevant for transfer to other EU member states. The following topics are considered especially relevant:
- tools for outcomes monitoring and patient interview (from the TOM manual)
- the combination of expert- and patient perspectives
- the progress report system for project management.

The programme is already described as part of the Pharmacy-based Asthma Services - Protocol and Guidelines issued by WHO Regional Office for Europe.

Available publications, reports, self-descriptions:


Pharmacy-based asthma services – Protocol and guidelines. WHO Regional Office for Europe. EuroPharm Forum. EUR/ICP/QCPH 06 06 02

The Diabetes Year – 2000, a campaign year with focus on Diabetes.

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Who has commissioned the initiative/model?
The Danish Pharmaceutical Association (DPA) commissioned the campaign year.

Who has co-ordinated the initiative/model?
The campaign year was co-ordinated by The DPA in co-operation with Pharmakon, Danish College of Pharmacy Practice.
What is the running time of the initiative/project?
The campaign ran in year 2000, however it is expected that the diabetes services, which are introduced during the campaign year, will be implemented permanently in community pharmacy practice.

What is the current state of the initiative/project?
The programme of the campaign year was launched in January 2000. An incremental introduction of the campaign elements was planned. The first services were introduced in April 2000 and the last was introduced in October 2000.

Short description of the initiative/model:

Which problem is being addressed?
The role of the pharmacy

The St Vincent Declaration Action Programme (SVD) has defined objectives for improvements in diabetes care in the 1990s. The implementation of these proposals requires input at the level of prevention, detection and treatment. The role of the pharmacist in diabetes care is described in The PharmaDiaβ programme. The programme is developed by EuroPharm Forum's task force on Diabetes care in collaboration with SVD, and outlines recommendations and concrete ideas on how pharmacists can implement the guidelines at national level. The DPA represents Denmark in the EuroPharm Forum task force.

Health effects
The problems in focus are:

- Primary prevention of diabetes.
  Diabetes is the fourth leading cause of death in developed countries. Factors such as obesity and lack of physical activity have been strongly linked with the incidence of type 2 diabetes, and the rising world prevalence of type 2 diabetes is mainly attributed to life-style changes.
  The role of the pharmacy: To advise people at risk to adopt healthy life styles, for example by teaching them the value of an appropriate diet, physical activity, weight control, smoking cessation and less alcohol intake.

- Detection of undiagnosed diabetes.
  Early detection of diabetes is important, particular in type 2. On average, a person has type 2 diabetes for seven years before the person gets the diagnosis, and up to 50% will already have developed complications by the time they are diagnosed. Thus, the sooner a person knows that he/she has diabetes, gets professional advice and acts on it, the better chance they have of delaying the progression of the long term complications.
  The role of the pharmacy: To advise people at risk to have their blood glucose levels checked periodically and to watch out for the signs and symptoms of undiagnosed diabetes, to identify people with signs or symptoms of an undiagnosed diabetes and to offer screening on an individual basis or as a part of a campaign.
Implementation of optimal therapy and prevention of complications.

Diabetes is a chronic disease process. The aim of good diabetes care is to prevent the complications of diabetes and high morbidity and premature mortality through good diabetes control, patient education, and monitoring.

A lack of diabetes education has been identified in diabetics. Those who often have the most unmet need are the elderly type 2, who are less likely to be cared for by a specialist diabetes team.

Complications from diabetes, e.g. coronary artery and peripheral vascular disease, stroke, diabetic neuropathy, amputations, renal failure and blindness, result in increased disability, reduced life expectancy, and enormous health costs to society.

The role of the pharmacy: To encourage self-monitoring by providing patient education and instruction in self-monitoring, and to prevent, identify and solve drug-related problems by offering pharmaceutical care to diabetes patients.

What are the goals, aims and targets?

The aims set by DPA for the Diabetes Year are:

- To identify patients with undiagnosed type 2 diabetes and refer them to the relevant treatment
- To contribute to quality improvement of drug therapy for diabetes patients by increased counselling
- To provide support and education about diabetes, general health promotion and diabetes care to prevent complications
- To provide high quality counselling to the customers
- To ensure competence development of the pharmacy staff
- That 50% of the Danish pharmacies participate in the campaign
- That the participating pharmacies offer one or more of the services.

What are the specific strategies and measures applied?

The programme of the DPA consists of the following services:

Lectures about diabetes and diabetes treatment

An offer for groups of patients, relatives/carers or health care providers (e.g. nurses, home helpers). Topics included are, for example: physiology, disease management, prevention, complications, self-monitoring, diet, and exercise and foot management.

- Measuring blood glucose and counselling
  The service includes 1) blood glucose measuring, 2) identification of risk factors and possible signs of undiagnosed diabetes and 3) individual counselling about e.g. healthy life-style, symptom assessment, correct use of medicine, and if necessary, referral to other services or general practitioner.
- Instruction and education in self-monitoring of blood glucose
  The service includes:
  - Counselling in selection of the most suitable blood glucose testing meter,
  - Instruction in use of the meters,
  - Provision of self-monitoring skills – counselling in use of diary and interpretation of the measured blood
    glucose values.
  - Follow up.

- Pharmaceutical care for patients with type 2 diabetes
  An individual patient counselling using a structured approach to identify actual and potential drug-related
  problems. After a patient assessment, an intervention and monitoring plan is formulated. Individualised
  patient education and advice on medication use and medical conditions are provided. If necessary, the
  diabetic is referred to the GP.

- Foot management counselling
  Individual counselling about general foot care, self-examination, and self-care.
  In addition, the pharmacies are encouraged to reintroduce smoking cessation services, blood pressure
  measurement and weight reduction services as part of the campaign.

- Information leaflets to support the counselling at the counter
  The information leaflets were developed for the campaign. The topics correspond with the campaign
  services and are as follows: Diabetes medicine, financial support for patients with type 2 diabetes, smoking
  cessation, weight reduction, self-monitoring of blood glucose, blood glucose measurement, blood pressure
  measurement and improved drug therapy.

What is the scope of the initiative/model?
The scope of the campaign is national.

Which partners have been involved in development and implementation?
The following partners were involved in or shared their experiences for the development and implementation
of the campaign:
  - A small group of community pharmacists from four pharmacies developed a programme and carried out a
    feasibility study for pharmaceutical care for patients with type 2 diabetes. The project provided ideas and
    experience for the development of several campaign services.
  - A linked project between The Royal Danish School of Pharmacy and the Danish pharmacies contributes to
    the spreading of the campaign through involving the pharmacy students during their six months internship in
    community pharmacy.
  - A central collaboration is established between the DPA and the Diabetes Association (patient organisation).
    DPA encourages the community pharmacies to establish collaboration with the local committees of the
    Diabetes Association.
Has any systematic project evaluation been conducted on the model/initiative?
An evaluation of the campaign year is planned and the results will be available ultimo 2001.

What is the knowledge about the project results so far?
No information is yet available from the evaluation of the campaign year.

Information is, however, available from a feasibility study which was used for the development and implementation of the campaign elements. The title of the project is: *Pharmaceutical care for patients with type 2 diabetes*. It was carried out at four community pharmacies in 1997 by a small group of pharmacists. The aim was to find suitable methods whereby the pharmacy can contribute to an improved drug therapy for patients with type 2 diabetes with the purpose of improving quality of life and preventing or postponing the development of long-term complications.

The study ran for six months and fifty-four patients (between 40-60 years) with type 2 diabetes participated. Fifty-one participants completed the six-month programme. One of the patients died and two dropped out.

The aim of the programme was to support and motivate patients with type 2 diabetes to take responsibility for their diabetes treatment. The programme included four consultations with a pharmacist at the pharmacy or in the patient’s home. At the first consultation, the patient received education in how to measure blood glucose, the use of diary and the evaluation of the data. After an individual patient counselling, in which a structured approach to identify actual and potential drug-related problems was used, the pharmacists formulated an intervention and monitoring plan. The diabetes patient was referred to the GP or another member of the diabetes team if it was necessary.

At the subsequent consultations, the patient’s monitoring was checked, the diary was reviewed and the patient’s understanding was assessed.

At three evening sessions in between the consultations, a patient education programme was carried out for each pharmacy’s group of diabetes patients. The education programme was arranged in collaboration with members of a local diabetes team (doctors, nurses, dieticians, and foot therapists) and the patient association.

Questionnaires, structured interviews, diabetes diaries, and the pharmacists’ records were used as data for the evaluation.
The results of the feasibility study can be summarised as follows:

- Knowledge
  The participants had increased their knowledge about foot care and the body’s reaction to diet, exercise, alcohol, drug therapy and low blood glucose.

- Coping and quality of life
  The participants were less worried about losing their job and developing long-term complications. They had become more positive about their own health and were especially aware of their own capacity to prevent drug-related problems and complications of diabetes.

- Drug-related problems
  The participants' diabetes management and their understanding of compliance were improved.

- Measurement of blood glucose and diary keeping
  Instruction in measurement of blood glucose was a very good educational instrument and gave a very good understanding of the influence of food, exercise and alcohol on the blood glucose levels.

- Healthier life-style
  The participants had fewer symptoms during the six months programme.

- Collaboration with other health care professionals
  An improved understanding of diabetes management and self-care principles gave the participants confidence in communicating with the general practitioner about the therapy. It became natural to consult other members of the diabetes team.

- Pharmaceutical care instruments and toolbox
  The instruments and the toolbox, developed for the project, were valuable tools in carrying out the pharmaceutical care programme. The pharmacist felt that the toolbox needed to be supplemented with more patient education materials.

Which were the most important factors supporting the development and implementation?

No information is yet available from the campaign year. The following, is a list of elements which were developed to support the implementation:

The services were introduced as elements in the DPA national campaign year 2000 - The Diabetes Year. This will, no doubt, be an important factor in supporting the implementation in community pharmacy.

Pharmakon developed a guideline for each of the services in the campaign. The purpose of the guidelines is to provide a systematic and structured approach to the diabetes services, including documentation of the services, their outcomes and implementation strategies. The guidelines were developed as a quality management system. These guidelines will, together with the possibility of participating in a wide range of continuing education programmes, be important in supporting the implementation. Pharmakon also developed a diabetes counsellor education for pharmacists and pharmaconomists in collaboration with the Diabetes Association. The courses and the counsellor education will also be offered in year 2001.
Another important factor will be the DPA’s marketing of the programme to the profession by:
- A folder describing the campaign year
- Study material developed by Pharmakon. The material is intended for self-study and consists of four chapters: 1) Incidence of diabetes, 2) What is diabetes? 3) Treatment, 4) Long-term complications. Also included are overviews of drug products available for diabetes treatment and a guideline for foot care, as are test questions, essays and cases, including suggested solutions.

The DPA has produced several marketing materials to be used locally by the pharmacies:
- Post cards and a counter display
- Advertisement boards for display in windows or in the public area of the pharmacy.
- Press releases to be adapted by the individual pharmacy.
- A diabetes column has been established in Farmaci, the Journal of the DPA. The purpose is experience exchange.

If information available: Which were the most important barriers concerning development and implementation?
No information is yet available from the campaign year.

Very few barriers are mentioned in the evaluation report from the feasibility study at the four community pharmacies – and none are highlighted as important.

Which specific aspects of the model/initiative would you consider especially well developed or otherwise instructive and thus relevant for the transfer to other EU member states?
The services are all very well developed and definitely relevant for transfer to other EU member states.

Available publications, reports, self-descriptions:

Part A 2: Structure for the description of National Guidelines/National Guidance Documents for Patient Oriented Health Promotion

1. Name or title of guideline/guidance document
   Requirements Document - Quality Management in Pharmacy

2. Date of publication
   1993, updated June 1995

3. Who commissioned its development?
   The Danish Pharmaceutical Association

4. Which actors have been mainly involved in its development?
   The Danish Pharmaceutical Association

5. Is there any knowledge about utilisation of the guidelines/guidance document so far?
   Yes, the document is being widely used and has been implemented in most Danish pharmacies. However, the document is now being replaced by another document: Quality at the Pharmacy. ISO certification is possible based on this new document.

6. Please provide the document and available publications, reports, self-descriptions
   An English version of the Requirements Document is enclosed in Appendix I. The document Quality at the Pharmacy has not been translated into English.
Part B: Preconditions for patient/user oriented health promotion in community pharmacy

General characteristics of the health care system and specific characteristics of community pharmacy relevant for patient/user oriented health promotion in Denmark

General overview of the health care system

The responsibility for the health care system in Denmark lies with the Ministry of Health (1). In 1984, Denmark joined the WHO Regional Targets in Support of the Regional Strategy for Health for All. This is reflected in the Government’s Public Health Programme (1999-2008) (2). The programme focuses on improvement of the public health via a cross-sectional effort that aims at specific targets which are to be reached within 10 years.

The programme has 17 targets - the two major targets are:

- a longer life with better quality of life
- social equity in health.

The remaining 15 targets concern a reinforced effort divided into subgroups: risk factors, age groups, prevention, and structural targets.

The Danish health care service is divided into two sectors: Primary health care and secondary health care (the hospital sector) (3).

The major differences between the two sectors are:

<table>
<thead>
<tr>
<th>Primary health care</th>
<th>Hospital</th>
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<tbody>
<tr>
<td>Local</td>
<td>Regional</td>
</tr>
<tr>
<td>Primary contact</td>
<td>Contact on referral</td>
</tr>
<tr>
<td>Non-restricted access</td>
<td>Restricted access</td>
</tr>
<tr>
<td>Low degree of specialisation</td>
<td>High degree of specialisation</td>
</tr>
</tbody>
</table>

The primary health care sector deals with general health problems and its services are available for all. It can be divided into two parts:
- one part which mainly deals with treatment and care (general practitioners (GPs), dentists, practising specialists, pharmacies, physiotherapists etc.)
- one part which is predominantly preventive and deals with preventive health schemes, health care and child dental care.

The hospital sector deals with medical conditions which require more specialised treatment, equipment and intensive care (3).
In the Danish health care service, the GPs act as “gatekeepers” with regard to hospital treatment and treatment by specialists. It is free for all residents in Denmark to consult a GP, to go to an emergency unit, and - on a referral from the GP - to go to hospital or to a specialist (3).

The Danish health care service is characterised both by being publicly financed through taxes and, for most of the services, by being run directly by the public authorities (3).

However, medicine is an exception: the patient has to pay part of the cost of his/her drugs, sometimes the full cost, both for prescription drugs and over-the-counter medicine. In most cases, the cost of the prescribed drugs is partly reimbursed by the National Health Insurance (governed by the regional health authorities (the Counties) in Denmark) according to a list developed by the National Board of Health. All patients are covered by the reimbursement scheme, independent of their financial situation. The reimbursement scheme is need dependant, which means that the reimbursement is higher the more drugs the patient uses (3).

There is one major private health insurance company. They give their members further reimbursement in specific areas.

In Denmark, only pharmacies have the right to sell drugs. This applies equally to prescription drugs and over-the-counter drugs. Licenses to run a pharmacy are issued by the Ministry of Health. In 1999, there were 288 pharmacies in Denmark (4).

The hospitals in Denmark are owned by the Counties, a few by the Municipalities and a few by the State. There are few private hospitals in Denmark. There are 19 hospital pharmacies owned by the hospitals. There are no expenses for the patient in connection with hospitalisation.

The drugs are distributed to the pharmacies by a wholesaler, of which there are three in Denmark (5): two private wholesalers primarily serving community pharmacies and one wholesaler (owned by the counties) serving the hospital pharmacies. The pharmaceutical manufacturers are not allowed to deliver their products directly to the pharmacies.

Information concerning general practice in Denmark is not part of this.
Specific situation for community pharmacy

Organisation:
As mentioned above, there are 288 pharmacies. However, the distribution net for drugs is widespread. There are 43 pharmacy sub-branches (professional staff, including a pharmacist), 147 pharmacy shops (professional staff, but no pharmacist), a total of 478 professionally staffed units. Besides, drugs can be delivered via 1,083 delivery facilities in other shops, e.g. a grocery store (on a contract and under the responsibility of a pharmacy) (4).

The number of pharmacies and pharmacy sub-branches is regulated by the Ministry of Health. In order to obtain a license to buy a pharmacy, one must be a pharmacist.

The staff of an average pharmacy is:
3.2 pharmacists (the owner included)
8.4 pharmaconomists
1.1 students
2.0 others (cleaners, delivery staff etc.)

On average, each pharmacy serves 18,450 inhabitants and handles 154,100 prescriptions annually. There are 922 pharmacists working in the Danish pharmacies, corresponding to one pharmacist per 5,766 inhabitants.

For international comparison, we have 478 professionally staffed units for a population of 5.3 million, corresponding to one unit per 11 million inhabitants.

The professional role of the community pharmacist:
The license to run a pharmacy implies a duty to (6):
- provide pharmacy-only drugs to the consumers (prescription drug and OTC)
- provide non-restricted drugs prescribed to the consumer
- procure and provide ex tempore preparations
- give information about drugs, use and storage of drugs to consumers, health professionals and the authorities
- collect unused drugs from consumers and health professionals for destruction
- deliver information to the National Health Insurance and the Ministry of Health on drug sales
- take pharmacist and pharmaconomist students during their internship.

The license to run a pharmacy implies the right to give pharmaceutical services and to hold health-promoting activities which have a natural relationship to other pharmacy tasks. It is also stated (6) that, unless there are special reasons, the pharmacy is obliged to charge money for pharmaceutical services and health promoting activities.
In a recent white paper, it is stated that the major objectives for the pharmacy sector are (7):
- responsible and safe distribution of drugs
- that drug prices are the same all over the country
- the consumer must be ensured reasonably easy access to buy drugs, also in scarcely populated areas of the country where there is no direct business or economic basis for a pharmacy
- the distribution must be handled at reasonable socio-economic costs
- the individual pharmacy should have the prospect of achieving a fair economic result.

The Ministry of Health has, based on the white paper (7), drawn up a basis for deciding on the future of the pharmacy sector (8). In this paper it is stated that:

“The pharmacies have an important role in the efforts of improving public health in Denmark, including services on smoking cessation, asthma schools, diet advice, dose dispensing etc.” Connected with this, it is also stated that “the pharmacies have already undertaken health promoting activities”.

In the annual report (1999), (4) the Danish Pharmaceutical Association focuses on the role of the pharmacy in prevention of ill-health: smoking cessation programmes, slimming programmes, information and screening for osteoporosis, etc. It is also stated in the annual report that “the pharmacy makes a difference”. Examples such as asthma counselling at the pharmacies, pharmacists as consultants for nursing homes, pharmacist consultations, dose dispensing and pharmacy as an educator in the health care sector are described in separate articles.

Health promotion as part of the professional role:
As it can be seen from the above, health promotion is defined as a part of the professional role of the pharmacy. This is not only according to the profession itself, but also to the Ministry of Health.

The definition used for health promotion is the definition given by WHO (9):
Health promotion is the process of enabling people to increase control over, and to improve, their health.

Patient/user profile for pharmacy customers:
The pharmacy’s customers are mainly women (73.3%) according to an analyses carried out by Dansk Kundelindeks (Danish Customer Index) in 1999 (10).

The distribution on age groups:
<26 years 5.4%
26-35 years 13.3%
36-45 years 15.4%
46-55 years 20.7%
56-65 years 20.6%
over 65 years 24.5%
The reason for visiting the pharmacy (latest visit) was to:
buy prescription only drugs 81%
buy OTC drugs 43%
buy other things 26%
get advice on health/disease/drugs 5%
have something demonstrated 1%
other things 2%

Note that it was possible to give more than one answer.

The customers come to the pharmacy:
every day 0.5%
every week but not daily 18.2%
every month but not weekly 58.0%
less frequent than monthly 23.3%

42.4% of the customers never visit other pharmacies and 48.4% visit other pharmacies less than once a month.

Current patient/user oriented health promotion practice in community pharmacy

In a survey carried out in the beginning of 2000 (11), in which 51% of all pharmacies participated, it was shown that:
17.5% offer a smoking cessation programme (group sessions)
33.0% offer an individual smoking cessation programme
19.5% offer slimming programmes
37.3% offer blood pressure measurement
14.4% offer BMI measurement
38.7% offer blood sugar measurement
56.3% give instruction in self-monitoring (in blood sugar measurement)
34.0% offer education to school classes “The Right Dose”

In total, 80.3% of the Danish pharmacies (of the 51% who participated) are active in one or more fields within health promotion and ill-health prevention.
Preferences and Expectations

The role of the community pharmacist - their own perception

In a qualitative study from 1985 (12), the community pharmacists' perception of their own role is analysed. Four typical roles are identified:

- the technical perception: the community pharmacist looks upon him/herself as the expert on medicines in relation to other health professions and the users
- the business perception: the community pharmacist sees him/herself as an expert who sells a healing commodity
- the conforming perception: some community pharmacists are engaged professionally to a lesser degree, but pay more attention to other people, both among their colleagues in the pharmacy and by adapting their work in the pharmacy to their private life
- the holistic perception: this pharmacist has a humanistic view of the user, of his own working functions in the pharmacy and of the health services as such.

In another qualitative research from 1994 (13), with focus on the community pharmacist in relation to asthma and asthma patients, it is concluded that the community pharmacist, in his own perception, has a relatively narrow role as problem co-ordinator in relation to the other health professionals. The report recommends development of the competence of the community pharmacist with regard to knowledge about asthma, communication skills and problem solving.

Pharmacists and pharmaconomists, who took part in a controlled study (14): Quality Improvement of Drug Therapy for Asthma Patients, had positive experiences from participation in the project: they increased their knowledge on asthma, experienced positive meetings and good contact with patients, good contact with the doctors and professional development. Other comments mentioned the challenge to participate in a project, the usefulness of being active towards the patient and increased patient compliance.

In another project: The Diabetic and the Pharmacy (15), 595 pharmacy employees (15% of all employees) filled in a questionnaire. They stated that they give information to type 2 diabetics not only on products, but also on non-medical treatment and prevention. The most frequent type of information (32%) concerned life-style (diet, exercise, and smoking).
Customer acceptance of health promotion activities in pharmacy

The pharmacy customers are very satisfied with the Danish pharmacies. The design of the Dansk Kundindeks (Danish Customer Index) study (10) is based on a method used by European Customer Satisfaction Index (ECSI). The study shows a total customer satisfaction index of 82 which is high compared to pharmacies in other countries and to companies in other businesses. The loyalty index is 81 which is also a high score. Customer satisfaction is mostly created on the basis of personal attendance while customer loyalty is mainly based on image.

The customers' perception of pharmacy services shows that the customer appreciates that pharmacies offer health promotion activities: The score for importance are:
- lose weight activities: 69
- smoking cessation programmes: 76
- blood pressure measurement: 78
- medicine review and pharmacist consultation: 82

In a qualitative study from 1996 (16), one of the results is that the attitude towards the pharmacies is positive. Many elderly people, however, view the pharmacy as a delivery facility for prescription drugs and not as a place where they can get more thorough information about drugs. The elderly have the wish and the need for more information, but they rarely seek it themselves.

In the mentioned asthma study above (14), more than 90% of the patients considered it important or very important to have knowledge of their disease, about the action of asthma medication, about the adverse effects of the medication, how to solve asthma-related problems in daily life and how to avoid an attack of asthma respectively. The asthma study also comprised a qualitative study (17). The customers' view on the pharmacy as a health care provider is:
- with regard to treatment: they expect cure or reduction of symptoms, no treatment failure and no adverse effects
- with regard to care: they expect contact, empathy, trust, confidence, influence, respect, responsibility, competence and time
- with respect to information, education and empowerment: they expect knowledge, understanding, and practical competence.

The customers' view on the pharmacy as a specialist shop is:
- with respect to products: the expect good and effective products, good technical quality, convenient use, acceptable prices.
- with respect to service: the expect good service, easy access, pleasant environment, short waiting time, products in stock, kind and competent staff.
Structural preconditions for the development and current practice of patient/user oriented health promotion in community pharmacy

Laws, rules and regulation

As mentioned in 1.2 in this report, the pharmacies have a role to play in the efforts to improve public health in Denmark. There is, however, a restriction in the Apotekerloven (Pharmacy Act) (6). It states that the license to run a pharmacy implies the right to give pharmaceutical services and provide health promoting activities which have a natural relationship to other pharmacy tasks. It is also stated that, unless there are special reasons, the pharmacy is obliged to charge money for pharmaceutical services and health promoting activities. The charge must, at least, cover the costs connected with the activity.

Education and training

Basic education:

There are two educations of relevance for community pharmacy:
- Master of Science in Pharmacy
- Pharmaconomist

The Master of Science degree is obtained at the Royal Danish School of Pharmacy (18) and is a 5 year academic study. When the degree has been obtained, the pharmacist can work in a community or hospital pharmacy, in the pharmaceutical industry or in the public administration and institutions such as the Danish Drug Agency, the National Board of Health, the Royal Danish School of Pharmacy, the Food Administration etc.

A recent survey (19) reveals the following employment pattern for newly-graduated pharmacists:
- community pharmacies 18%
- other private enterprises 52%
- public enterprises 26%
- unemployed 4%

Pharmaconomists have a 3 year education, taking place partly at the pharmacy and partly at Pharmakon, Danish College of Pharmacy Practice (20 weeks totally) (20). Most pharmaconomists work in a community pharmacy, however some are employed at other pharmaceutical enterprises.

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1 Mainly pharmaceutical industry
2 Hospital pharmacy, National Board of Health, Danish School of Pharmacy, Food Administration, Environment Administration etc.
The curriculum for Master of Science in Pharmacy contains 60 modules (18). Subjects relevant to health promotion are covered by the course “Social Pharmacy with Management and Organisation”. This course covers 5.5% of the study and comprises the subjects social pharmacy, economics, occupational health, management and organisation, drug dispensing and customer communication, and an internship in a pharmacy. Some of the optional courses are also of relevance for health promotion: communication and information, philosophy and ethics of pharmacy, international health care, clinical pharmacy, clinical pharmacy practice, clinical pharmacokinetics and pharmacodynamics.

The theoretical training for pharmaconomists contains 4 main domains (20):
- natural science subjects
- social and behavioural subjects
- general subjects
- pharmacy practice.

The social and behavioural subjects (social pharmacy and communication) and pharmacy practice each count for a total of 25% of the theoretical training during the internship at Pharmakon.

Continuing Education:
Continuing education is not a requirement of the authorities. However, pharmacists and pharmaconomists employed in a community pharmacy have the right and the duty to attend one course annually. There are several providers of continuing education:
- Pharmakon, Danish College of Pharmacy Practice
- The Royal Danish School of Pharmacy
- The Pharmaceutical Society
- The Danish Pharmaceutical Association
- Pharmaceutical industry

In 1999, 4,704 course participants attended courses at Pharmakon, distributed over 12,922 course days (21).

Participation in continuing education is sponsored in different ways: some courses are paid for by the employer (the pharmacy owner), some are supported (partly paid) by the Danish Pharmaceutical Association and some are sponsored by the pharmaceutical industry.

3 An educational centre for pharmacy practice, owned by the Danish Pharmaceutical Association, and independent of commercial interests
Pharmakon’s programme for continuing education (20) for pharmacists and pharmaconomists offers a variety of courses of relevance for health promotion. The course calendar for 2000-2001 contains the following courses of relevance for patient-oriented health promotion:

- Information School 1: Empowerment of communication competence
- Information School 2: Written communication
- Information School 3: Verbal communication
- Customer dialogue
- Pharmacy counsellor in heart diseases
- Pharmacy counsellor in asthma-allergy diseases
- Pharmacy counsellor in diabetes
- Self-medication and self-care
- Professional screening for symptoms
- Pharmaceutical care at the Counter
- The acting human being
- Healthy on healthy diet
- Pharmaceutical Care to type 2 diabetics
- Blood sugar measurements
- Blood pressure measurement and advice
- Individual weight loss advice
- Healthy travelling

There are also courses in basic theoretical subjects (pharmacotherapy, pathology etc.).

The Royal Danish School of Pharmacy has recently, in collaboration with Pharmakon, developed a specialist education in community pharmacy.

The Danish Pharmaceutical Society offers continuing education in clinical pharmacy.

We are not able to provide lists of courses offered by pharmaceutical industry.
Specific Policies, Programmes and Projects for patient/user oriented health promotion in community pharmacy

The Danish Pharmaceutical Association (the Association of the Pharmacy owners) organises campaigns such as:
- Quality standards: Basic requirements based on the guidelines Good Pharmacy Practice (22)
- Pharmacy services for the elderly - described in Part A1 C
- The Heart Year 1999 - described in health promotion in community pharmacy - an overview of health promotion initiatives in Denmark (Appendix II to Chapter A1)
- The Diabetes Year 2000 - described in Part A1 E

These are the major initiatives and campaigns. Other activities are mentioned in Appendix II to Chapter A1 of this report: Health promotion in community pharmacy - an overview of health promotion initiatives in Denmark. The Danish Pharmaceutical Association has launched some of the initiatives whereas others have been started by individual pharmacies.

The National Board of Health is responsible for health information to the general public in Denmark (23) in general. The subjects below are prioritised in the present Public Health Programme (2):
- alcohol
- asthma-allergy
- children
- diet
- pregnant women
- narcotics
- sun and skin cancer
- eating disorders
- HIV/aids

In general the pharmacies are not mentioned in the programmes listed above. There are, however, two exceptions: the programme for skin and cancer refers to a brochure designed by the Danish Pharmaceutical Association. The other exception is the programme for eating disorders: A publication on eating disorders (24) focuses on how the community pharmacists (among others) can be a partner in preventing eating disorders.

The Government’s Public Health Programme (1999-2008) (2) does not mention the pharmacy and its possible role in promoting public health.

However, the Ministry of Health (8) has - as mentioned before - stated that community pharmacy has an important role in the efforts to improve public health in Denmark and that they already have undertaken health promoting activities. It is also stated, based on good experiences, that a decision about organising dose dispensing from the pharmacies should be made.
Co-operation with regard to patient/user oriented health promotion.

The pharmacy (the pharmacies in general and the Danish Pharmaceutical Association) co-operates with various partners depending on the theme. In the table below, an overview is given:

<table>
<thead>
<tr>
<th>Co-operating partner</th>
<th>Project and activity</th>
</tr>
</thead>
</table>
| Royal Danish School of Pharmacy | - Education of pharmacists  
- Establishment of The Research Centre for Quality Assured Medicine Use  
- Development of programme for specialisation in community pharmacy  
- Organisation of internship for pharmacy students  
- Pharmacy practice research projects |
| Pharmakon, Danish College of Pharmacy Practice | - Education of pharmaconomists  
- Continuing professional development of pharmacists and pharmaconomists employed in community pharmacy  
- Development of pharmacy service programmes  
- Quality development and documentation of pharmacy management and the health professional role of the pharmacy  
- Pharmacy practice research projects |
| The Asthma-Allergy Association | - Provision of the education: Asthma-Allergy Counsellor at the pharmacy  
- Planning and development of the campaign: The Asthma Year 2001 |
| The Danish Heart Association | - Provision of the education: Heart Counsellor at the pharmacy  
- Planning and development of the campaign: The Heart Year 1999 |
| The Diabetes Association | - Provision of the education: Diabetes Counsellor  
- Planning and development of the campaign: The Diabetes Year 2000 |
| Regional authorities (counties) | - Project on dose dispensing for people living in their own homes  
- Project development, management and evaluation: Elderly and medicine in Århus County  
- Support of the project: Medicinmappe Randers  
- Support of the project: Consultant pharmacist to nursing homes  
- Project development: Quality use of new migraine medicine - development and evaluation of a pharmacy-based activity  
- Smoking cessation programmes in Funen County |
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<tr>
<th>Danish Medical Association - section for general practice</th>
<th>Project on self-medication practice - development of guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pharmaceutical industry</td>
<td>Conferences for community pharmacy</td>
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<td></td>
<td>Courses for community pharmacists and pharmaconomists</td>
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<td>Consultative tasks for community pharmacy</td>
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<tr>
<td>EuroPharm Forum and WHO</td>
<td>Smoking Cessation programme - development and implementation</td>
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<td>Questions to ask about your medicine - development and</td>
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<tr>
<td></td>
<td>implementation</td>
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<tr>
<td></td>
<td>Development of the manual: Pharmacy-based asthma services</td>
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<td>Development of the framework for the manual: CINDI - pharmacy-</td>
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<td>based hypertension management programme</td>
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<td></td>
<td>Development of GPP Health Information Compendium for NIS</td>
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<td>(Newly Independent States)</td>
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<td></td>
<td>Good Pharmacy Practice in NIS. Manual on development and</td>
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<td></td>
<td>implementation of standards</td>
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<tr>
<td>PCNE (Pharmaceutical Care Network Europe)</td>
<td>Development and management of research project: Improvement</td>
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<td>of asthma patients’ drug therapy</td>
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<td></td>
<td>Development and management of research project: Improving the</td>
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<td></td>
<td>well-being of elderly patients via community pharmacy-based</td>
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<td>pharmaceutical care</td>
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<td></td>
<td>Development and test of a project: Improved self-medication</td>
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<td>and self-care</td>
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Health promotion supported by discussions, newsletters, campaigns, lobbying etc.: Training courses and seminars constantly supports the pharmacies’ health promotion activities. Articles in the Danish pharmaceutical journals focus on this issue and many of the elements in the latest annual report of the Danish Pharmaceutical Association (4) are targeted at health promotion activities. The consumer magazine “Health” publishes many articles on health promotion issues, written by pharmacists and focusing of the role of the pharmacy in this relation.

One of the main messages of the Danish Pharmaceutical Association is that the pharmacy is an integral and equal partner in primary health care.

**Other relevant preconditions for patient/user oriented health promotion in community pharmacy not explicitly addressed in this framework**

None to add.
Appendix

List of references


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Appendix I

Requirements Document, Quality Management in Pharmacy.

The Danish Pharmaceutical Association

This document describes 8 requirements relating to the quality management systems in Danish pharmacies.

The overall objective is that, through education and training, development of operating systems in the individual pharmacy and internal and external auditing, it should be ensured and documented that all Danish pharmacies comply with these requirements over a number of years.

The requirements have been formulated in such a manner that they indicate what should be done, but now how it should be done. The requirements concern goals, minimum requirements and areas of application, but not methods. Thus it is up to the individual pharmacy to find the methods and solutions that suit its own situation and tradition. The individual pharmacy may be offered guidance, but must itself make the essential choices.

These requirements derive from several sources. Some are almost identical with the DS/ISO 9000 series requirements (1987 version) for quality management systems. Others are inspired by the requirements that are formulated partly in the Danish Quality Price, sometimes described as Total Quality Management (TQM), and WHO’s recommendations including the document “Health for All in the Year 2000 (1991 version), and the concept of pharmaceutical care.

By keeping close to these sources in formulating the requirements, it is possible to make the established quality management systems comparable to a great extent. A pharmacy which, for instance, seeks certification under the DS/ISO 9000 series may use the quality management system that was developed in accordance with this document as a basis, but may supplement that with the relevant ISO 9000 requirements standard.

All in all, the requirements set a high level. But the purpose has not been to set requirements for the most ideal situation. All Danish pharmacies should have a realistic possibility of complying with these requirements. Similarly, in due course it should be possible for the individual pharmacies to include more areas under quality management than just those covered by the 8 requirements, or to set an even higher level in the manner in which they comply with the 8 requirements than that explicitly demanded. The requirements aim at establishing tools and habits for quality management that can initiate on-going quality development rather than describe an ideal ultimate solution.

Remarks are appended to the text of requirements.

28 December 1993
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8. Quality registrations at sector level
I.

1.1 Distribution

The pharmacy shall maintain and develop safe, effective, operational and socio-economically acceptable distribution.

The distribution task includes purchases, storage, checking prescriptions and dispensing pharmaceuticals, health products, nursing supplies and other products that it is natural and expedient to distribute together with pharmaceuticals.

The requirements emphasizes the four considerations that are the basis of the pharmacy’s distribution task:

a) safety of distribution
b) efficiency of distribution, including waiting time, dispensing time, degrees of service and customer service
c) operationally efficient distribution from a pharmacy point of view
d) socio-economically effective distribution, where the aim is to limit aggregate health costs and ensure that through an active pharmaceutical effort in the health sector, society obtains optimal benefit from pharmaceutical treatment

1.2 Knowledge of customers and collaborating partners

The pharmacy shall work systematically to increase its knowledge about the needs of customers and co-operation partners. It should be ensured that the knowledge and experience obtained is used in the daily work at the pharmacy.

For the pharmacy to be able to supply satisfactory service it must carry out systematic analysis of the needs of customers and co-operation partners - including the needs of authorities and suppliers.

These can be documented by implementing actual surveys of customers, through contact with organised customer groups and through participation in pharmacy and therapeutic committee work.
1.3
Pharmacies must work to give consumers optimal professional counselling with regard to using pharmaceuticals and related products in the most expedient manner. In planning this advisory service, priority should be given to patients with special needs.

Compliance with the first sentence of this requirement can be documented in that the pharmacy works on developing written information systems and by ensuring the quality of the personal counselling.

Compliance with the second sentence can be demonstrated in that the pharmacy identifies patient groups with special needs, for which the pharmacy plans and systematically carries out a special effort.

1.4
The pharmacy shall work to provide secure, efficient and rational pharmaceutical therapy with the purpose of obtaining specific outcomes that improve the patient’s quality of life.

This necessitates not only that the pharmacy should consider itself as a supplier of pharmaceuticals, but also that the pharmacy should take an interest in the final outcome obtained by the customer from the specified drug therapy. On this basis, the pharmacy shall contribute to ensuring that the desired outcome with regard to the patients quality of life is achieved.

This work shall, to the greatest possible extent, take place in co-operation with the relevant parties in the Health Service.

1.5
The pharmacy should work to further the customers’ capacities of most expediently exercising self-care and self-treatment

1.6 Health-promotion and ill-health prevention
The pharmacy must participate in relevant health-promoting and ill-health prevention

The aim is that pharmacies shall participate in activities at the local or national level. It is up to the individual pharmacy to decide what is relevant.
1.7 Development of competence

The proprietor pharmacist shall work systematically to use and develop the human and professional resources available at the pharmacy.

Procedures shall therefore be established and maintained to identify the need for staff education/training and its implementation. Education/training shall be documented.

2. Quality policy and quality goals

The proprietor pharmacists shall define and document the quality policy and quality goals of the pharmacy’s area of professional responsibility.

The pharmacists shall ensure that the quality policy and quality goals are understood, implemented and maintained throughout the whole of the organisation. The extent to which the pharmacy meets its quality goals shall be subjected to ongoing assessment. This assessment shall be documented.

Education and supplementary training of pharmacy management and staff are an important strategic development parameter with a view to living up to the overall social responsibility of pharmacies. Planning of education/training should therefore be implemented with a view to staff and organisational developments.

This means that the proprietor pharmacist should regularly perform a documented evaluation of the situation at the pharmacy in these areas and define a working plan for the coming period.

Quality policy (quality goals and policy) are management tools to ensure that the pharmacy’s professional responsibility is realised.

Quality policy is a general declaration of intent in each of the areas described under the pharmacy’s professional responsibility.

Quality goals are targets, the implementation of which can be measured and which shall be realised within a fixed period of time. It is presupposed that a number of quality goals will be formulated for each of the areas described under the pharmacy’s professional responsibility.

Finally, it is required that the pharmacy obtains objective proof of whether the defined goals have been realised.

It is stressed that the formulation of policies and goals is the task of the proprietor pharmacist, even though their implementation takes place in co-operation with the staff and other interested parties.
3. Quality management system

The pharmacy shall develop and apply a documented system for quality management and quality development that covers all the pharmacy’s areas of professional responsibility.

The quality management system is a tool to ensure that the formulated quality policies and quality goals are met.

A quality management system consists of the systematic activities, routines, distribution of responsibilities and work procedures that ensure quality in the day-to-day running of the pharmacy.

The quality management system will normally be documented in a quality manual for pharmacies which is known by, and accessible to, all members of the staff. It will contain:

a) the pharmacy’s quality policy, quality goals, responsibility and competence at the pharmacy

b) written procedures and instructions for the work in the areas where this is necessary to ensure quality. The procedures are general descriptions of the work requirements whereas instructions are more detailed descriptions of the prescribed working methods in individual areas

c) forms to be filled in

The quality manual shall be subjected to document control, i.e. it shall be ensured that work is carried out in accordance with correct and valid versions of policies, goals, procedures, instructions and forms.

4. Evaluation of the quality management system

The quality management system that is used in order to fulfil the requirements of this requirements document shall be evaluated at suitable intervals by the proprietor pharmacist to ensure the continued expediency and efficiency of the system. Registrations concerning such evaluations shall be maintained.

This evaluation is intended to ensure that the system does not assume a life of its own, but that the pharmacy management regularly evaluates its efficiency. This evaluation can be based on audits, registration of corrective measures, analyses of the results achieved compared to the defined goals and evaluations as to whether the resources used for control in various areas are proportional to the results obtained from quality management.
5.

The pharmacy shall establish documents and maintain procedures for

a) examining the causes of non-conforming products and services and implementing the corrective action that is necessary to prevent repetition;

b) analysing all processes, work operations, dispensations, registrations concerning quality and complaints from consumers in order to detect and remove potential causes of non-conforming products and services;

c) initiating preventive activities to deal with quality problems to an extent corresponding to the actual risks;

d) following-up to ensure that corrective actions are undertaken and that they are effective;

e) implementing and registering changes in procedures, where these changes are a result of corrective actions;

6.

Pharmacies shall implement a system of planned and documented internal quality audit comprising the whole of the developed quality management system in order to verify that quality management activities are in accordance with the plans and to determine the efficiency of the quality management system.

This is one of the cornerstones in a system of quality management and quality development. The aim of corrective action is not to correct errors, but systematically to analyse the causes of quality defects in order to prevent repetitions.

A quality audit is an objective and factual examination of whether established requirements and systems are being complied with. Hereby quality problems or potential problems are identified in order to ensure that they are eliminated. Quality auditing ensures through control and motivation that the pharmacy fulfils the requirements set by itself and by others, and that this can be documented.
At least once a year, the pharmacy shall carry out an external quality audit covering the whole of the pharmacy’s quality management system with the same purpose as the internal audit.

This external audit shall be carried out by persons who are competent to do so.

The results of this external audit must be documented.

The auditor makes a final declaration with respect to whether the quality management system satisfies the requirements of this document. If this declaration is affirmative, it shall be registered with the Danish Pharmaceutical Association. This registration shall be accessible to the public.

7. Requirements from outside

The quality management system that is developed in order to comply with the (requirements) provisions of this requirements document shall also respect and realise the following basis:

- Current legislation
- FIP guidelines for “Good Pharmacy Practice”
- The Danish Pharmaceutical Association’s “Ethical Standards”
- The Danish Pharmaceutical Association’s quality policy and quality goals for the sector as a whole

Firstly, the requirements from outside mentioned here cover the legislative requirements which the pharmacy must comply with under all circumstances.

The pharmacy’s quality management system shall describe how the pharmacy ensures that the pharmacy and the relevant staff are aware of up-dated relevant legislative requirements.

Secondly, the requirements from outside cover the professional requirements to be met by the sector to ensure uniformity within the sector as a whole.

The pharmacy’s quality management system describes how the pharmacy shall ensure that the pharmacy and relevant staff members are conversant with FIP Guidelines for “Good Pharmacy Practice” and the Danish Pharmaceutical Association’s “Ethical Standards”.

The internal quality audit is carried out by pharmacy staff after they have received appropriate training. The employee carrying out a specific audit must not have the direct responsibility for the working area in question.

The purpose of the external quality audit is not to evaluate whether the pharmacy’s own policies, goals, procedures and instructions are correct, but whether they respect requirements from outside, including this document, and whether they are complied with in the day-to-day running of the pharmacies.
Equal importance shall be attached to the Danish Pharmaceutical Association’s quality policy and quality goals for the sector as a whole with respect to the pharmacy’s own quality policy and own quality goals so that it is possible to ensure minimum quality requirements for the sector.

8. Quality registrations at sector level

In areas and in a form laid down by the General Assembly or the board of the Danish Pharmaceutical Association, the pharmacy shall register and summarize total specific types of quality events, for example, certain deviations, complaints and registrations of effects. The Danish Pharmaceutical Association shall collect these registrations in statistics for the whole of the sector.

The purpose of these registrations is to contribute to documenting the quality and the social importance of the pharmacy sector’s activities and services, both externally in relation to the authorities and the population as well as internally, where documentation can stimulate further quality development.
Appendix II
An overview of patient/user oriented health promotion initiatives in Denmark

Content

The overview contains examples of pharmacy activities and projects considered essential as a part of the documentation of the effectiveness of Danish pharmacy practice. The activities included have been evaluated or the experiences/results have been published or communicated.

Framework

The framework used in this overview is that of primary, secondary, and tertiary disease prevention.

Each model will be briefly described by the following structure:

<table>
<thead>
<tr>
<th>Title:</th>
<th>Name of the initiative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year:</td>
<td>When was the model launched and updated?</td>
</tr>
<tr>
<td>Intervention:</td>
<td>A very short description of the intervention</td>
</tr>
<tr>
<td>Type of evaluation:</td>
<td>How can the evaluation be characterised?</td>
</tr>
<tr>
<td>Degree of implementation:</td>
<td>The degree of implementation is estimated within the following groups: less than 10%, 10-50%, more than 50% of the pharmacies.</td>
</tr>
<tr>
<td>Publications:</td>
<td>Type of publication</td>
</tr>
<tr>
<td>Contact person:</td>
<td>Main contact person(s) is listed</td>
</tr>
</tbody>
</table>
Primary prevention

<table>
<thead>
<tr>
<th>Activity</th>
<th>Model</th>
</tr>
</thead>
</table>
| Smoking cessation | 1. **Title**: Quit smoking – join a smoking cessation group at the pharmacy  
                      **Year**: 1992, updated in 1995  
                      **Intervention**: The concept is based on a combination of pharmacist-led support groups and the use of nicotine replacement therapy. Internationally known as: Pharmacists helping smokers to quit.  
                      **Type of evaluation**: Documentation of the activity and outcome. Outcome measure: smoking cessation.  
                      **Degree of implementation**: 10-50% of the pharmacies  
                      **Publications**: Report, articles in the national pharmaceutical journals, presented at several congresses.  
                      **Contact person**: Lotte Fonnesbæk, Pharmakon, Danish College of Pharmacy Practice, and Helle Jacobsgaard, Danish Pharmaceutical Association.  

2. **Title**: Smoking cessation counselling at the counter  
                      **Year**: 1996, updated in 1999  
                      **Intervention**: A programme to promote smoking cessation to customers, including an individually-based smoking cessation service. The theoretical frame of reference is the cyclical stage model for behavioural change.  
                      **Type of evaluation**: Documentation of the activity. This model has not been evaluated in Denmark.  
                      **Degree of implementation**: 10-50% of the pharmacies  
                      **Publications**: Article in a national pharmaceutical journal  
                      **Contact person**: Lotte Fonnesbæk, Pharmakon, Pharmakon, Danish College of Pharmacy Practice, and Helle Jacobsgaard, Danish Pharmaceutical Association.  

Weight reduction | 1. **Title**: Lose weight – join a support group at your pharmacy  
                      **Year**: 1994-  
                      **Intervention**: The model is based on support from a group of 10-12 people in a similar situation and on education in nutrition and physiology.  
                      **Type of evaluation**: Documentation of the service and outcome. Outcome measure: weight reduction.  
                      **Degree of implementation**: 10-50% of the pharmacies  
                      **Publications**: Report, article in Danish Medical Journal.  
                      **Contact person**: Lisbeth Hermansen, Pharmakon, Danish College of Pharmacy Practice.  

<table>
<thead>
<tr>
<th>Activity</th>
<th>Model</th>
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</thead>
</table>
| Providing education for other health care professionals | **Title:** Educating staff at nursing homes  
Year: 1985-  
*Intervention:* Staff at nursing homes were educated in the correct use and administration of drugs with focus on relevant therapeutic groups.  
*Type of evaluation:* No systematic project evaluation has been performed  
*Degree of implementation:* 10-50% of the pharmacies  
*Publications:* Presentation of the concept in national pharmaceutical journals and as posters at congresses.  
*Contact person:* Helle Jacobsgaard, Danish Pharmaceutical Association. |
| Teaching in schools                      | **Title:** Prevention of pregnancy and communicable diseases  
Year: 1985-  
*Intervention:* Pharmacist and pharmaconomists taught school children (age 13-16) about the risks of communicable diseases and the importance of using contraception.  
*Type of evaluation:* No systematic project evaluation has been performed  
*Degree of implementation:* 10-50% of the pharmacies  
*Publications:* The concept was presented at FIP congresses and articles in national pharmaceutical journals.  
*Contact person:* Helle Jacobsgaard, Danish Pharmaceutical Association. |
| **2.**                                   | **Title:** The right dose  
Year: 1993, updated and re-launched in 1999  
*Intervention:* Pharmacists and pharmaconomists teach school children (age 13-16) about the proper use of drugs, administration and storage, types of drugs, abuse of drugs, etc.  
*Type of evaluation:* Documentation of the service. No systematic project evaluation has been performed  
*Degree of implementation:* 10-50% of the pharmacies  
*Publications:* Report, articles in national pharmaceutical journals  
*Contact person:* Inger Duus Nielsen, Danish Pharmaceutical Association. |

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**Activity** | **Model**
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2. **Title:** BMI – Individual weight reduction counselling  
Year: 1999-  
*Intervention:* The model is based on individual counselling and follow-up.  
*Type of evaluation:* Documentation of the activity. No systematic project evaluation has been performed  
*Degree of implementation:* 10-50% of the pharmacies  
*Contact person:* Inger Duus Nielsen, Danish Pharmaceutical Association.

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<table>
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<tr>
<th>Activity</th>
<th>Model</th>
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</table>
| Response to symptoms | **Title:** Self-medication practice  
**Year:** 1999-  
**Intervention:** Pharmacists and GPs in collaboration have developed guidelines for treatment of minor ailments and referral.  
**Type of evaluation:** No systematic project evaluation has been performed.  
**Degree of implementation:** Less than 10% of the pharmacies  
**Publications:** Presented at FIP 1999 and in an article in a national pharmaceutical journal.  
**Contact person:** Helle Pinholt, Danish Pharmaceutical Association. |
| Lectures for the population in general, elderly and other population groups with special needs | 1. **Title:** Citizens meetings  
**Year:** 1985-  
**Intervention:** The citizens living in the vicinity of a pharmacy are invited to a meeting on a specific topic (for example: allergy and asthma, weight reduction, smoking cessation, pain, skin care, osteoporosis). Local health care professionals are often invited.  
**Type of evaluation:** No systematic project evaluation has been performed.  
**Degree of implementation:** 10-50% of the pharmacies  
**Publications:** Meetings have been described in national pharmaceutical journals.  
**Contact person:** Inger Duus Nielsen, Danish Pharmaceutical Association.  
2. **Title:** Meetings for groups of mothers with new-born babies  
**Year:** 1986-  
**Intervention:** The group of mothers was informed about how to handle typical minor ailments (skin care, fever, etc.) of their babies.  
**Type of evaluation:** No systematic project evaluation has been performed.  
**Degree of implementation:** Less than 10% of the pharmacies  
**Publications:** Article in the national pharmaceutical journal.  
**Contact person:** Helle Jacobsgaard, Danish Pharmaceutical Association |
| Information leaflets | **Title:** “Right now”  
**Year:** 1986-  
**Intervention:** Small articles on topics of current interest (sunscreen, allergy, lice, smoking cessation, etc.) are produced and distributed by the Danish Pharmaceutical Association. Pharmacies are encouraged to use them in their local health promotion i.e. by printing them in the local newspaper and displaying them in the pharmacy.  
**Degree of implementation:** More than 50% of the pharmacies  
**Contact person:** Helle Jacobsgaard, Danish Pharmaceutical Association |
### Secondary

<table>
<thead>
<tr>
<th>Activity</th>
<th>Model</th>
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<tr>
<td><strong>The Heart Year 1999</strong></td>
<td><em>Title:</em> Blood pressure measurement.</td>
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<tr>
<td></td>
<td><em>Year:</em> 1999-</td>
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<tr>
<td></td>
<td><em>Intervention:</em> The service was launched in the campaign year 1999. The blood pressure was measured and customers were referred to the GP according to the pharmacy guideline.</td>
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<tr>
<td></td>
<td><em>Type of evaluation:</em> Documentation of the intervention.</td>
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<tr>
<td></td>
<td><em>Degree of implementation:</em> 10-50% of the pharmacies</td>
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<tr>
<td></td>
<td><em>Publications:</em> Report</td>
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<tr>
<td></td>
<td><em>Contact person:</em> Inger Duus Nielsen, Danish Pharmaceutical Association, and Kirsten Pultz, Pharmakon, Danish College of Pharmacy Practice.</td>
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<tr>
<td><strong>The Diabetes Year - 2000</strong></td>
<td><em>Title:</em> Blood sugar measurement</td>
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<tr>
<td></td>
<td><em>Year:</em> 2000</td>
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<tr>
<td></td>
<td><em>Intervention:</em> The service was launched in the campaign year 2000. The customers receive relevant information about the result and are referred to a GP according to the pharmacy guidelines.</td>
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<tr>
<td></td>
<td><em>Type of evaluation:</em> Documentation of the intervention.</td>
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<tr>
<td></td>
<td><em>Degree of implementation:</em> 10-50% of the pharmacies</td>
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<tr>
<td></td>
<td><em>Publications:</em> Report will be published.</td>
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<tr>
<td></td>
<td><em>Contact person:</em> Inger Duus Nielsen, Danish Pharmaceutical Association, and Kirsten Pultz, Pharmakon, Danish College of Pharmacy Practice.</td>
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<tr>
<td><strong>Cholesterol measurement</strong></td>
<td><em>Title:</em> Cholesterol measurement at the pharmacy</td>
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<tr>
<td></td>
<td><em>Year:</em> 1991-</td>
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<td></td>
<td><em>Intervention:</em> Pharmacies offer cholesterol measurement and relevant information about the result is given to the customer. Referral to GP according to the pharmacy guideline.</td>
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<td><em>Type of evaluation:</em> Documentation of the intervention.</td>
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<td></td>
<td><em>Degree of implementation:</em> Less than 10% of the pharmacies</td>
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<tr>
<td></td>
<td><em>Publications:</em> Article in the national pharmaceutical journal.</td>
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<tr>
<td></td>
<td><em>Contact person:</em> Helle Jacobsgaard, Danish Pharmaceutical Association.</td>
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<tr>
<td><strong>Fat measurement</strong></td>
<td><em>Title:</em> Fat measurement</td>
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<td></td>
<td><em>Year:</em> 1994-</td>
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<tr>
<td></td>
<td><em>Intervention:</em> Fat measurement and advice giving offered to customers as paid service</td>
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<tr>
<td></td>
<td><em>Degree of implementation:</em> Less than 10% of the pharmacies</td>
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<tr>
<td></td>
<td><em>Publications:</em> presented at Nordic Pharmacy Conference 1994</td>
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<tr>
<td></td>
<td><em>Contact person:</em> Birgitte Gundersen, Frederiksberg Pharmacy</td>
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<td>Activity</td>
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</table>
| Carbon monoxide measurement  | Title: Measurement of carbon monoxide (CO)  
Year: 1997-  
Intervention: Measurement of CO is offered as part of individual smoking cessation programmes and as part of smoking cessation campaigns  
Type of evaluation: -  
Degree of implementation: 10-50% of the pharmacies  
Publications: article in a national pharmaceutical journal  
Contact person: Helle Jacobsgaard, Danish Pharmaceutical Association |
| Peak flow measurement       | Title: Peak flow measurement  
Year: 1994-  
Intervention: peak flow measurements are offered to customers with asthma or suspicion of asthma.  
Type of evaluation: -  
Degree of implementation: Less than 10% of the pharmacies  
Publications: -  
Contact person: Lotte Fonnesbæk, Pharmakon, Danish College of Pharmacy Practice |
### Tertiary

<table>
<thead>
<tr>
<th>Activity</th>
<th>Model</th>
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</thead>
</table>
| Identification of drug-related problems in collaboration with nurses and GPs | **Title:** Quality development of the drug use in a community – an interdisciplinary project in primary health care  
**Year:** 1997-1998  
**Intervention:** Documentation of drug-related problems in collaboration between pharmacy and district nurses. Development of treatment guidelines via audit (pharmacy, GPs and nurses).  
**Type of evaluation:** Documentation of the intervention and outcome. Outcome measures: Satisfaction.  
**Degree of implementation:** One pharmacy  
**Publications:** Report and article in the national pharmaceutical journal.  
**Contact person:** Ulla Poulsen, Vejen Pharmacy, and Lillian Møller, Bispebjerg Hospital. |
| Unit dose                                                               | 1. **Title:** Dose dispensing - quality management  
**Year:** 1996-1997  
**Intervention:** Development of a quality management system for dose dispensing at a nursing home and distribution of dose dispensed drugs to 200 persons living in the nursing home.  
**Type of evaluation:** Documentation of the activity.  
**Degree of implementation:** Less than 10% of the pharmacies  
**Publications:** Report, article in the national pharmaceutical journal, presented at FIP congress.  
**Contact person:** Lone Bøgh, Holstebro Løve Pharmacy |
|                                                                         | 2. **Title:** Dose dispensing - a project in Vejle county  
**Year:** 1997-1999  
**Intervention:** Dose dispensing to citizens living in their own home.  
**Type of evaluation:** Documentation of the activity, and outcomes. Outcome measures: health, satisfaction, and economy.  
**Degree of implementation:** Less than 10% of the pharmacies  
**Publications:** Report, articles in national pharmaceutical journals  
**Contact person:** Birgitte Rasmussen, Fredericia Axeltorv Pharmacy, and Hanne Herborg, Pharmakon, Danish College of Pharmacy practice. |
<table>
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<th>Activity</th>
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<tr>
<td>Patient medication card</td>
<td>Title: Drugs and the Elderly in Østerbro - a project on implementation of a patient medication card.</td>
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<tr>
<td></td>
<td>Year: 1991-1992</td>
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<tr>
<td></td>
<td>Intervention: Development and implementation of a patient medication card in collaboration between nurses, GPs, hospitals, and community pharmacists.</td>
</tr>
<tr>
<td></td>
<td>Type of evaluation: Documentation of the activity and outcomes. Outcome measures: satisfaction.</td>
</tr>
<tr>
<td></td>
<td>Degree of implementation: Less than 10% of the pharmacies</td>
</tr>
<tr>
<td></td>
<td>Publications: Report, articles in national pharmaceutical journals, presented at FIP and other congresses</td>
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<tr>
<td></td>
<td>Contact person: Bente Frøkjær, Pharmakon, Danish College of Pharmacy Practice, and Ellen Westh Sørensen, The Royal Danish School of Pharmacy.</td>
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</tbody>
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<thead>
<tr>
<th>Pharmacist consultations at the pharmacy</th>
<th>Title: Pharmacist consultations at the pharmacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year: 1993-</td>
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<tr>
<td>Intervention: Customers with special needs (e.g. poly pharmacy, suspicion of drug-related problems) are offered a pharmacist consultation in a quiet area. The intervention was developed in connection with Service for the Elderly (see part A1 C).</td>
<td></td>
</tr>
<tr>
<td>Type of evaluation:</td>
<td>-</td>
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<tr>
<td>Degree of implementation:</td>
<td>Less than 10% of the pharmacies</td>
</tr>
<tr>
<td>Publications:</td>
<td>-</td>
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<tr>
<td>Contact person:</td>
<td>Helle Jacobsgaard, Danish Pharmaceutical Association.</td>
</tr>
</tbody>
</table>

<p>| Pharmaceutical Care Programmes:         | Title: Implementation of pharmaceutical care at the counter                                                                            |
| I. Basic programmes                     | Year: 1995-1997                                                                                                                        |
|                                          | Intervention: Registration of drug-related problems and implementation of the basic model for pharmaceutical care at the counter.     |
|                                          | Type of evaluation: Documentation of the intervention.                                                                                    |
|                                          | Degree of implementation: Few pharmacies                                                                                                  |
|                                          | Publications: Three reports, articles in national pharmaceutical journals                                                              |
|                                          | Contact person: Inge Børsting, Brønshøj Pharmacy, and Lotte Fonnesbæk, Pharmakon, Danish College of Pharmacy Practice.                  |</p>
<table>
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<tr>
<th>Activity</th>
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</table>
| 2. Group specific programmes offered to population groups with special needs, e.g. elderly, families with children | **Title:** Improving the well-being of elderly patients via Pharmacy-based pharmaceutical care.  
**Year:** 1994-1995  
**Intervention:** Elderly customers (using more than 4 drugs) were offered a pharmaceutical care programme (repeated consultations) with medication review, information, education and follow up. Part of an international, controlled study.  
**Type of evaluation:** Documentation of the intervention and outcomes. Outcomes measures: health status, psycho-social status, health economy.  
**Degree of implementation:** Less than 10% of the pharmacies  
**Publications:** Report  
**Contact person:** Hanne Herborg, Pharmakon, Danish College of Pharmacy Practice. |
| | **Title:** Consultant pharmacist at nursing homes  
**Year:** 1991-1992  
**Intervention:** Community pharmacists acted as consultant pharmacists at nursing homes, i.e.: medication review, education, handling of drugs, etc.  
**Type of evaluation:** Documentation of the intervention and outcome. Outcomes measures: health economy.  
**Degree of implementation:** Less than 10% of the pharmacies  
**Publications:** Report, articles in the national pharmaceutical journal, presented at FIP and ESCP 1993.  
**Contact person:** Bente Frøkjær, Pharmakon, Danish College of Pharmacy practice |
| | **Title:** How to reduce drug costs at a Danish nursing home when three professions are working together  
**Year:** 1995-1996  
**Intervention:** A community pharmacist, a GP, and a nursing home assistant evaluated the patient medication records and changed, reduced or stopped the medications.  
**Type of evaluation:** Documentation of the intervention, and outcomes. Outcome measure: health economy.  
**Degree of implementation:** One pharmacy.  
**Publications:** Report, articles in a Danish medical journal, presented at an International Symposium, Malta, 1996.  
**Contact person:** Steffen Zederkof, Danish Pharmaceutical Association. |
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<th>Activity</th>
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| **Title:** Medicine Book in Randers  
*Year:* 1992-1994  
*Intervention:* Elderly customers were offered patient education, advice giving and follow up. They received their personal Medicine Book  
*Type of evaluation:* Documentation of the intervention and outcome. Outcome measure: satisfaction  
*Degree of implementation:* Less than 10% of the pharmacies  
*Publications:* Report, article in the national pharmaceutical journal.  
*Contact person:* Bente Frøkjær, Pharmakon, Danish College of Pharmacy Practice |

3. Disease specific programmes offered to patients with diseases where prevention of drug-related mobility is particular promising, e.g. asthma patients, diabetic patients, angina patients

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| **Title:** Quality improvement of asthma patients’ drug therapy  
*Year:* 1994-1995  
*Intervention:* Therapeutic outcome monitoring programme was offered to patients with moderate to severe asthma. Monthly consultations over one year (see description in this report – A1 D).  
*Type of evaluation:* Documentation of the intervention and outcome. Outcome measures: health status, psycho-social status, health economy.  
*Degree of implementation:* 10-50% of the pharmacies  
*Publications:* Report, article in the Danish Medical Journal, national pharmaceutical journals, presented at FIP 1996.  
*Contact person:* Hanne Herborg, Pharmakon, Danish College of Pharmacy Practice. |

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| **Title:** Pharmaceutical care to diabetes type 2 patients.  
*Year:* 1997-1998  
*Intervention:* Patient education, advice giving and follow up. It was a controlled multi-centre study (see description in this report – A1 E).  
*Type of evaluation:* Documentation of the intervention and outcome. Outcome measures: health status, psycho-social status.  
*Degree of implementation:* Less than 10% of the pharmacies  
*Publications:* Reports, article in the national pharmaceutical journal, presented at FIP 1999.  
*Contact person:* Inge-Lise Mogensen, Solrød Pharmacy, and Kirsten Pultz, Pharmakon, Danish College of Pharmacy Practice. |
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| 4. Screening for interactions | **Title:** Interaction control  
**Year:** 1989-  
**Intervention:** Control for interactions are installed in the pharmacy prescription handling programme. Warning signs are shown in case of possible interaction.  
**Type of evaluation:** -  
**Degree of implementation:** All pharmacies  
**Publications:** -  
**Contact person:** Inger Duus Nielsen, Danish Pharmaceutical Association |
| Activity                        | Model                                                                                                                                 |
| Title: Information to angina patients  
**Year:** 1999-  
**Intervention:** In connection with the Heart Year a programme with screening for angina and information on the disease and its medication was implemented.  
**Type of evaluation:** Documentation of the intervention.  
**Degree of implementation:** 10-50% of the pharmacies  
**Publications:** Report.  
**Contact person:** Inger Duus Nielsen, Danish Pharmaceutical Association |