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Policy and vision for community pharmacies in Finland: A roadmap towards enhanced integration and reduced costs

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Abstract

Finland's community pharmacy system provides an example of a privately-owned regulated system being proactively developed by the profession and its stakeholders. Community pharmacists have a legal duty to promote safe and rational medicine use in outpatient care. The development of professionally oriented practice has been nationally coordinated since the 1990s with the support of a national steering group consisting of professional bodies, authorities, pharmacy schools and continuing education centers. The primary focus has been in patient counseling services and public health programs. The services have extended towards prospective medication risk management applying evidence-based tools, databases and digitalization. Research has been essential in informing progress by indicating high-risk patients, medications, practices and processes needing improvement. Despite the commitment of the profession and pharmacy owners, large-scale implementation of services has been challenging because of lack of remuneration, the pharmacy income still consisting primarily of sale of prescription and nonprescription medicines. Policy documents by the Ministry of Social Affairs and Health have supported the extension of the community pharmacists' role beyond traditional dispensing to promote rational pharmacotherapy. The current roadmap by the Ministry of Social Affairs and Health emphasizes ensuring adequate regional availability and accessibility of medicines, regardless of the future pharmacy system. It also emphasizes the importance of strong regulation on pharmacy business operations and sale of medicines to ensure medication safety. At the same time, the roadmap requires that the regulation must enable implementation of new patient-oriented services and procedures, and further promote digitalization in service provision. Competition and balance of funding should be enhanced, e.g., through price competition, but the risk of pharmaceutical market concentration should be managed. The regulation should also consider influence of the new social and health care system on drug delivery. Year 2021 will be crucial for making long-term political decisions on the future direction of tasks and finances of Finnish community pharmacies in this framework. Government-funded studies are underway to guide decision making. Ongoing Covid-19 crisis has demonstrated the readiness of Finnish community pharmacies to adapt fast to meet the changing societal needs.

Keywords

Pharmacies; Primary Health Care; Delivery of Health Care, Integrated; Ambulatory Care; Community Health Services; Pharmacists; Community Pharmacy Services; Professional Practice; Finland

POLICIES AND STRATEGIC PLANS FOR THE DEVELOPMENT OF PRIMARY CARE IN FINLAND

Finland has a population of 5.5 million, of which 1.5 million (27%) live in the metropolitan area of Helsinki.[1,2] Life expectancy at birth is one of the highest in the world: 84.5 years for women and 79.2 years for men (2019).[1,2] GDP per capita was about 43,500 euros in 2019.[1-3] Education, social security and health care are considered as residents' rights and are financed by the state. Prevention of inequality has been a guiding principle in policy making. This has required regulation which has also been applied to the structures and operations of health care and pharmacy system.

Health care system and primary care

Finland has a public health care system, complemented by private and occupational health care services.[2,4] The services are divided into primary care and specialized care services. Municipalities (n=310 in 2019, divided in 19 regions) are responsible for organizing primary health care services that are mainly provided by municipal health centers (Health Care Act 2011). The secondary care is organized by central hospitals, each of them located in their own hospital districts (n=20) owned by federations of municipalities.[2] For tertiary care, Finland is divided into five areas, each with a university hospital. Primary care carries the main responsibility of care, and all patients admitted to secondary or tertiary care need a referral from primary care.

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Although legislation and general policy guidelines are prepared at the national level, municipalities and hospital districts have a large degree of freedom in the organization of services.[2] Three main acts, the Primary Health Care Act (1972), the Act on Specialized Medical Care (1991) and the Health Care Act (2010), primarily set the framework for regulation and governance of health services.[2] The system is funded by multiple funding sources: municipalities, government, employers, and through taxation of residents, and service fees for services users.[2,4] Funding channels are separate for primary and specialized health care. If medications are needed as part of the treatment, they are partially or fully reimbursed by the public social insurance for outpatients according to a disease-based scheme that is the same to all permanent residents. If medicines are needed in inpatient care, they are covered by the fixed day care fee (the fixed day care fee covers all expenses).

All residents are equally entitled to public municipal primary care.[2,4] Health centers provide the primary care which covers 1) ambulatory curative care, both for acute and chronic patients, 2) preventive services, including maternity and child clinics, 3) home nursing for older people or for selected groups of chronic patients, 4) dental health services, 5) rehabilitation in various forms, and 6) mental health and substance abuse services.[2] The population segments as major users of primary health care services are the very young and old, and those with lower socioeconomic or educational status. Majority of working-age people use occupational health care services, which are part of the benefits. They can be contracted from public or private providers.

National health portal to implement evidence-based care

Primary and secondary care form regional patient care pathways that apply national Current Care Guidelines.[2] The national health portal Terveysportti (http://www.terveysportti.fi) is the key in implementing evidence-based practices throughout the health care, including community pharmacies.[2,5,6] The portal provides a wide range of databases and tools that assist in clinical decision-making. It also contains a comprehensive set of medication risk management tools to prospectively review individual patients' medications.[5-7] These tools, evolving since 2004, cover such risks as drug-induced adverse reactions, interactions, anticholinergic and serotonergic loads, potentially inappropriate medications for older adults, and medication safety during renal or hepatic failure, pregnancy, or lactation.[5-7]

Ongoing social and health care reform

Finland has been undergoing a remarkable social and health services reform during the last decade.[2,8] The reform has been challenging as there is a desire to combine social and health services that have been separately administered causing fragmentation and additional preventable costs. Thus, the reform wants to improve coordination and integration of care, ensure equal access to care, while balancing continuously growing health care costs. Among the major goals is to manage challenges caused by sociodemographic changes of the population: ageing, migration within the country and concentration in highly populated areas, while rural areas are losing residents and resources to maintain their infrastructure.[2,8,9] The special emphasis is on heavy users of social and health services: they need to be identified so that the services they need can be better planned and coordinated. This will be achieved by enhancing use of patient-specific care plans, including pharmacotherapy. The care plan procedures are currently under development as part of implementation of the national electronic patient information system Kanta.[10]

Social and health care reform and digitalization

To overcome challenges in the continuity of patient information transfer, Finland has been building up a national electronic health record system, Kanta, maintained by the National Social Insurance Institution Kela, since 2010.[2,10] Kanta allows centralized archiving of electronic patient data, as well as active use and storage of the data. Therefore, Kanta is the cornerstone of digitalization in the Finnish health services. It is an entity of digital services used by citizens, health care units, and pharmacies. It covers all public and private health care providers. Social care units are expected to join Kanta services in 2021.

The Patient Data Repository in Kanta plays a key role in sharing information between healthcare service providers.[2,10] Since 2017, all prescriptions have been issued and dispensed electronically via Kanta in Finland. This has facilitated dispensing of prescription medicines via online services of pharmacies. Citizens can browse their own medical records and prescriptions and e.g., order repeat prescriptions in the online service (My Kanta Pages). They can also enter their health information in Kanta, e.g., from smart phones and bracelets, to support disease self-management. Furthermore, Kanta provides information about individual pharmaceutical products, their prices, reimbursement status and interchangeability for generic substitution.

The Kanta system is continuously evolving.[2,10] Currently under way are features turning the deposit of electronic prescriptions of each individual person to a personal up-to-date medication file where people themselves can enter information about the use of OTC-medicines and food supplements. Progress is also underway to improve structured documentation of medication use process to form a closed loop, e.g., documentation of medication reviews and their outcomes will enable use of the findings in other points of care, including pharmacies.

While national Kanta functions well, local patient information systems cause fragmentation in information transfer.[2] There are ongoing projects to build up new ecosystems that combine social and health care services such as Apotti at the Helsinki University Hospital District.[2,11] These systems are planned to offer new opportunities for patient care and secondary use of patient data in evidence-informed decision-making and academic research. Use of data-lakes and real-world data in clinical and administrative decision-making has been supported by national government-funded programs to identify core indicators to evaluate quality, safety and (cost)effectiveness of care and allocation of resources.[2,10] This concerns also pharmacotherapies both in primary and secondary care.[12,13]

Social and health care reform: reinforcing primary care

The current government has set a priority to develop public primary care services and their integration with social care services from consumer/patient perspective.[2,8] The focus will be shifted from secondary care to primary care and preventive work with social services being emphasized to a greater extent than previously. This reform is carried out under the national program "Social and Health Center of the Future" during the years 2020-2022.[8] The program has 5 main goals:

1) Improving equal access, timeliness and continuity of services
2) Shifting the focus from heavy use of services to preventive and proactive work ("health problems are easier to manage before they grow big")
3) Improving the quality and effectiveness of services
4) Ensuring the interdisciplinarity and compatibility of services
5) Curbing rising costs

The purpose of the program is to establish large-scale social and health centers in Finland, from which people can smoothly receive services they need.[8] The program aims to improve the customer-orientation by introducing digital and mobile services and by expanding weekend and evening reception activities, as well as low-threshold service points. The division of labor between social and health care professionals will be developed so that the clients will be served by interprofessional teams. The staff will be supported by specialist consultations and new procedures utilizing digitalization. Customer orientation and employees' professional development and well-being are planned to be supported by evidence-based methods. Research and development activities will be introduced as part of normal practice (research, development and innovations ecosystem). The program will be implemented through regional development projects financed by state subsidies. The implementation of the measures will be monitored semi-annually. The "Social and Health Center of the Future" Program is one of the four major packages for developing social and health services. The other packages focus on services for children and families, working age people and older people.

Social and health care reform: Rational Pharmacotherapy Action Plan

Rational Pharmacotherapy Action Plan was established in 2018 by the Ministry of Social Affairs and Health as part of the Government Program.[12] The Action Plan was developed by involving a wide range of stakeholders, pharmacists as stakeholders playing an important role in formation of the contents. The contents were influenced by the Medicines Policy 2020, systems-based medication safety research and practice development, e.g. the breakthrough of clinical pharmacy services in hospitals.[5,14-16] Lessons learnt from the national medicines information strategy and the national program to optimize medications of older adults through collaborative practices, both coordinated by the Finnish Medicines Agency, also guided the contents.[17-20]

The Action Plan 2018-2022 aims to have cost savings for patients and society by optimizing medication use.[12] The goal is that people take only the medications they need, according to instructions. This can be achieved by developing medication use processes and evidence-based practices. The Action Plan emphasizes better coordination of the medication use process with the help of electronic patient records and medication lists, partnerships in implementing pharmacotherapies and secondary use of patient data to inform decision-making at all levels of care. Steering will be based on national policies. Regions will have effective structures to ensure interprofessional cooperation between various stakeholders in steering of pharmacotherapy. Electronic decision-making support systems and reliable medicines information sources will be widely available.

Medicine users will be increasingly supported in taking responsibility for self-managing their medications, within the limits of their resources and possibilities.[12] The Action Plan defined the tasks and responsibilities of patients and different professionals in the patient-centered, partnership-based medication use process. The tasks of community pharmacists were defined as medication counseling, supporting self-management and assisting in the selection of the most affordable drug, and assisting in the selection of an appropriate self-medication when self-medication is needed. According to the Action Plan, community pharmacists also participate in monitoring the effects of medications and in identifying and resolving medication-related problems.[12] They contribute to medication reviews and, if necessary, to making medication changes. The pharmacy also collects pharmaceutical waste for municipal disposal.

The Action Plan emphasizes the importance of evidence-informed decision-making at all levels of implementing pharmacotherapies in social and health care.[12] Therefore, the Action Plan also contains a research strategy by 2022.[13] The research strategy is based on Donabedian's model and identifies research areas in structures, processes and outcomes of pharmacotherapies.[21]

From Action Plan to Roadmap: defining future of community pharmacies

The Action Plan was adopted by the current government in 2019.[22] For that purpose, the Ministry of Social Affairs and Health built up a "roadmap" carrying the Action Plan beyond periods of individual government programs to ensure long-term development of the pharmaceutical sector to promote rational pharmacotherapy.[22] As the Action Plan was drawn up in a situation where the future health and social services structures and legislation were in the process of being prepared, the first phase of the roadmap focuses on alternative structures of organizing access to medicines in inpatient and outpatient care and funding their use as part of health care expenditures.[22]

During 2021, the tasks and income generation for community pharmacies will be defined in this roadmap framework for legislative changes.[22] The preparation has a strong consumer perspective and a rational pharmacotherapy perspective. The roadmap emphasizes ensuring adequate regional availability and accessibility of

medicines, regardless of the future pharmacy system. It also emphasizes importance of strong regulation on pharmacy business operations and sale of medicines to ensure medication safety. At the same time, the roadmap requires that the new regulation must enable implementation of new patient-oriented services and procedures, and further promote the use of digitalization in service provision.[22] The regulation should enhance competition and balance of funding, e.g., through price competition, but manage the risk of pharmaceutical market concentration. Work is currently under way to allow price competition for nonprescription medicines (public hearing in November 2020).

Health care costs and funding

Finnish healthcare expenditure was EUR 21.1 billion in 2018 increasing by 1.2% in real terms from the previous year.[23] Expenditure per inhabitant was EUR 3,829. The ratio of health care expenditure to GDP was 9.0% which was 0.1 percentage points less than in the previous year. Public funding for health care expenditure accounted for 75.8% and private funding for 24.2% in 2018. The share of public funding increased by 0.5 percentage points from 2017.

Expenditure on specialist care (EUR 7.7 billion) and primary health care (EUR 3.3 billion, including outpatient primary care, inpatient care, oral health care, occupational health care and student health care) accounted for about half of 2018 health care expenditure.[23] Expenditure on specialist care increased by 3.4% in real terms from 2017. Regarding to long-term care services for the elderly, institutional care expenditure continued to fall sharply (-15.1%). Correspondingly, expenditure on housing services with 24-hour care continued to grow, rising by 2.5% from the previous year. Expenditure on medicines and other medical consumables (EUR 2.6 billion) rose by 7.4% in real terms. The most remarkable growth in costs concerned specialized care costs (3.4%) and prescription medicine costs in outpatient care (8.6%).

OPPORTUNITIES AND CHALLENGES FOR COMMUNITY PHARMACIES: WHERE DO THE PROFESSION/PHARMACY OWNERS WANT TO GO?

Opportunities of the Finnish community pharmacy system relate to its infrastructure: pharmacies have capacity to operate as part of the social and health services system. Long-term emphasis on patient safety and quality of care in health policy has created an opportunity for pharmacists to take responsibility for medication safety in both institutional and outpatient care.

The major challenges relate to the difficulty of 1) making the community pharmacy economy more service-based, and 2) forming functional integration with social and health services, even though medicines policy has long strategically supported pharmacy operations as part of social and health services.

Opportunities: The community pharmacy infrastructure for care-oriented practice

Finland is the only Nordic country where community pharmacies have remained as the sole source of prescription and nonprescription medicines to outpatients, with the exemption of nicotine replacement therapies that were released to open market in 2006.[24,25] Community pharmacy is seen as a health care unit responsible for medicines supply and distribution to the public in outpatient care, as well as ensuring their safe and rational use (Medicines Act 395/1987).[14]

To fulfill these duties, pharmacy operations are subject to licensing and a pharmacy owner must have at least a MSc (Pharm) degree (Medicines Act 395/1987). In addition to the main pharmacy, the owner can run a maximum of three subsidiaries, online pharmacy services, and an unlimited number of licensed service points. At the end of 2019, the number of pharmacy outlets was 819 of which 623 were main pharmacies and 196 subsidiaries.[26] Pharmacies also operated 148 service points and 134 pharmacies had online services. Chains are not allowed, but many pharmacies belong to marketing groups that help individual pharmacy owners in organizing marketing campaigns and continuing education. To ensure availability of medicines and pharmaceutical services, the Finnish Medicines Agency has recently increased the number of licenses for new main pharmacies, particularly in the metropolitan area and in connection with large secondary care hospitals. Availability is also increased by increasing online services and service points.

Community pharmacies have made their operating processes electronic and automated so that the pharmaceutical personnel can concentrate on dispensing and serving customers in their health and wellbeing matters. On average, one pharmacy employs ten people, of whom seven has a degree in pharmacy (including pharmacy owner).[26] All pharmacies and their subsidiaries routinely use electronic systems in prescription processing, patient data management, medication counseling, logistics, stock control, procurement, reimbursement management, administration and business planning.[5,6,26,27] Also, medication risk identification and medication review tools and databases are available in almost all pharmacies.[5-7] Their use has been made feasible by integrating the tools into pharmacy prescription processing systems. Having access to the same databases and tools with other health care professionals facilitates community pharmacists' active involvement in medication risk management.[5-7,28-30] To make better use of these resources, practising pharmacists have indicated need for developing competences in applied pharmacotherapy, particularly in geriatric care.[7,30]

Status of service provision by Finnish community pharmacies

While dispensing, community pharmacists are obliged to review the prescriptions to confirm the dose regimen and indication, identify duplicates, control overuse, particularly of psychotropic and chronic medications, and ensure the medicine user is aware of how to use the medicine safely and appropriately (Medicines Act 395/1987).[6] Pharmacists have had a duty to counsel since 1983, concerning both prescription and nonprescription medicines (Medicines Act 395/1987).[18] Medication counseling has been a priority for strategic development ever since, even more systematically since the early 1990s.[18] As an outcome of a long-term

commitment to counselling services community pharmacists have become the main source of medicines information to medicine users, along with physicians and statutory package leaflets.[18,31]

In addition to medication counseling, pharmacies provide a wide range of other services that support rational pharmacotherapy (Figure 1). Many of these services have been developed and standardized by the Association of Finnish Pharmacies.[26,32,33] Although intended to a large-scale national implementation, the services are still provided by a small number of pharmacies on an experimental basis, mainly without compensation. The services are usually targeted to individual medicine users, e.g., health screenings and checks, inhalation technique checks and medication reviews.[33] The services are extending to social and primary care units, particularly to geriatric care units (e.g., automated dose dispensing, audit-based development of safe medication practices in nursing homes, personnel training).[26]

So far, automated dose dispensing (ADD), launched in Finland in 2002, is the most widely implemented health-oriented service provided by community pharmacies throughout the country (Figure 1).[33,34] The number of patients using the service has continuously increased, being 54,500 at the end of the year 2018.[34] Most of the ADD service users are older home-care clients or nursing home residents. For the first time, the service was officially recommended by the Ministry of Social Affairs and Health in 2007 in its guidance to municipalities to ensure safe medication practices for older primary care patients.[35] In 2016, the Ministry published guidelines for providing the ADD service.[36] The guideline is primarily targeted to social and healthcare institutions (for nurses and practical nurses), community pharmacies (pharmacists) and primary healthcare (general practitioners, home care services' personnel) to standardize the ADD practice. The guideline describes the whole ADD process in detail, also the medication review that should be conducted when the ADD service is initiated to the patient and regularly at least once a year thereafter.[36]

Along with digitalization, multichannel services have become common combining services based on personal visits to the pharmacy with digitalized online services.[26,37-40] As online sales of both prescription and non-prescription medicines must be accompanied by counselling by a pharmacist, this is mostly carried out by a phone call after receiving the order, although use of more innovative solutions, e.g., chat and secured virtual connections, is growing.[37-40] Secured virtual connection by a mobile application simulates personal visit in the pharmacy and an encounter with the pharmacist. In addition to virtual dispensing and counseling, it is possible to have online

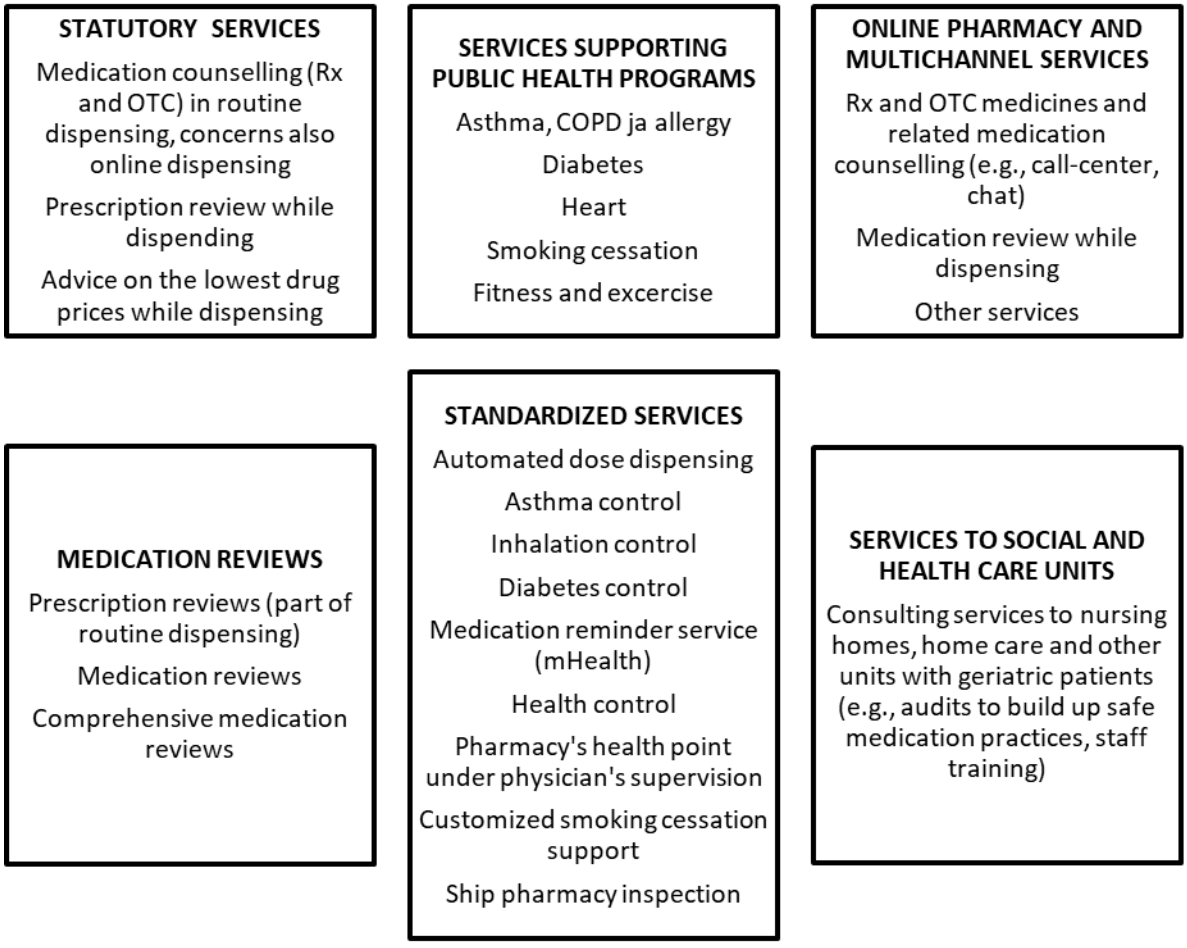

Figure 1. Statutory and other health care-oriented community pharmacy services available in Finland and coordinated by the Association of Finnish Pharmacies.[26,37-39]

medication reviews in some pharmacies. Evolution of virtual dispensing and counseling services has been fast, particularly during the last year after the Covid-19 pandemic outbreak.

Opportunities: Prospective medication risk management in primary care

Developing community pharmacy operations need inputs from outside the profession. National public health programs have provided a broader perspective on the function of pharmacists as part of the social and health services system since the late 1990s.[37,39,41,42] Based on these programs and inspired by the EuroPharm Forum, The Association of Finnish Pharmacies established special programs for community pharmacies (Figure 1).[25,37,39,41-43] Therefore, almost all pharmacies have today an asthma and allergy liaison, a heart disease liaison and a diabetes liaison. They maintain knowledge of these diseases and their treatment at their workplace, develop counseling services, and co-operation with local health care providers.

The implementation of these programs was promoted in the early 2000s with a government-funded 4-year project (TIPPA) aimed at improving medication counseling by community pharmacists.[44,45] The primary goal was to support each pharmacy to establish a long-term development plan for improving their counseling practices. During the Project, it became evident that many of the problems and risks inherent in the medications of outpatients could not be solved by counseling the patients in the pharmacy: a more comprehensive review of medication therapy in collaboration with the patient and professionals involved in their care was needed. This initiated a long, ongoing journey towards implementation of collaborative medication reviews in Finland, which have evolved into various practices for different healthcare settings.[15,30,46-49]

Over the last decades, a great deal of research has described risk situations and errors caused by medicines in hospitals and outpatient care in Finland.[15,46,48,50-55] This has laid the groundwork for finding ways to prevent the risks and problems posed by medications, especially at home, where majority of the medication use occurs.[5-7,18,29,30,34,35,44-46,48,52] At the same time, the focus has shifted to prospective risk management, especially in the pharmacotherapy of older adults, as they are the most vulnerable to clinically significant medication risks and problems.[5,19,20,29,30,34-36, 46,48,49,56] The goal has been to make better use of the existing resources in care units and community pharmacies in prospective medication risk management.[5,6,12,15,22,29,30,33,34,37,38,48,49]

Systems-based patient safety work has provided pharmacists an opportunity to get involved in healthcare planning nationally and locally.[15,16,30] Community pharmacists have been actively involved in national collaborative initiatives, e.g., in the National Patient Safety Program (National Institute for Health and Welfare 2011-2014). These programs have targeted to two major goals: 1) to promote medication safety within community pharmacies by improving their internal systems and processes, and 2) to influence medication management systems and processes in primary care so that the actions taken can lead to improved medication safety. Community pharmacies have been actively developing new tools, services and collaborative procedures that reflect systems thinking in preventing medication-related risks (i.e., building up systemic defenses).[5,6,26-28,34,37,38,46,57]

As many medication safety tools already exist, the current mission is to enhance their implementation and use in routine practice.[5,6,26-28,32-34,37,38,46,57] This has been carried out through the national coordination group for professional community pharmacy practice development (AATE, since 2000), pilot implementation projects, undergraduate education, specialization, accreditation and other forms of continuing education, and creating awareness of systems approach to medication safety in primary care and community pharmacy contexts. Also, development of information technology has supported medication risk management (e.g., databases assisting in medication reviews).[5,6,18,26-30,34,37,38,49] An essential element has been research to inform progress in medication safety and indicating high-risk patients, medications, practices and processes needing further improvement.[6,7,13,15,20,54-57]

Challenges: Remuneration systems for products and services

It is estimated that maintenance of the current community pharmacy system accounts for 2.7% of the total national health care expenditure.[23] The finances of community pharmacies are mainly based on the sale of medicines, particularly prescription medicines.[26] In 2019, prescription medicines accounted for 80% of the sales, nonprescription medicines 14% and other sales 6%.[26] These figures may be slightly misleading as many pharmacy owners run a separate company for sales of products other than medicines. Of the pharmaceutical euro, the pharmacy's margin is 20.3%, taxes 15.5%, and the remaining 64.3% is a share of the manufacturer and wholesaler.[26] Community pharmacies also pay a progressive pharmacy tax that aims to balance differences in profitability of small and large pharmacies.[26,58]

The prices of medicines and profit margins of community pharmacies are regulated by the government.[26,59] The government's medicine tariff is based on setting prices for pharmaceutical products. The only labor rates relate to the dispensing fee per prescription and compounding fees, although compounding no longer takes place in the pharmacy.

So how are pharmacy services paid for or remunerated? Medication counselling is considered to be included in the retail price and the dispensing fee for the prescription medicines. For nonprescription medicines, counselling is covered by the retail price. These tariffs also apply to online services. The major third-party payer, the national Social Insurance Institution Kela, compensates pharmacies for the administration of drug reimbursements so that customers receive reimbursements directly from the pharmacy.[60-62] This task also includes counselling medicine users about prices of medicines to ensure they will be dispensed the best price products in terms of generic substitution and reference price system being in force since 2003 and 2009, respectively.

The only service partly reimbursed from public funds is automated dose dispensing for older adults.[34,60] Since 2006, ADD has been reimbursed by Kela for home-dwelling patients >75 years regularly taking six or more prescription medicines suitable for ADD.[34,60] The ADD service needs to be prescribed by the physician and the patient's drug regimen needs to be reviewed by the physician before initiating the service. ADD service is available clearly in more pharmacies than other services.[33] At the end of 2018, 493 out of the 616 community pharmacies (80%) provided the ADD service (Finnish Medicines Agency, unpublished).[34]

Healthcare services in Finland are publicly funded and arranged by the municipalities, but municipalities can procure services from privately-owned healthcare providers.[34,63] Most municipalities and privately-owned healthcare providers procure the ADD service from the community pharmacies.[34] The ADD service is more commonly put out to tender to buy the service at a competitive price. In these competitive tenders both qualitative (e.g., comprehensiveness of medication review) and quantitative (e.g., service fee) conditions may be set and the pharmacies could set the price for the ADD service freely.

A new type of service model is the pharmacy's health point, which provides paid health services to individual customers.[26,37,38] Pharmacy health points are private health care companies that have a permit issued by the regional government agency for the provision of health care services in their area and have a designated responsible doctor. The health point employs a nurse who can vaccinate, treat wounds, remove stitches and perform other small procedures such as ear rinses. The range of services also includes lifestyle counseling and health screening. The health point is becoming more common, currently available in about 20 pharmacies.

Other pharmacy services targeted to individual customers are pilot services that have not been charged or have been charged a small fee that does not cover expenses.

The current paradox in Finland is that pharmacy owners are willing to extend provision of health-oriented services, but services are not remunerated.[32,33,37,38,43] The only exception is automated dose dispensing which is most widely provided.[33,34] Pharmacies have available several standardized service procedures that have been developed within long time frame, the development being nationally coordinated by the Association of Finnish Pharmacies (Figure 1).[33,37,38] The need for these services is exacerbated by the facts that the Finnish population is aging fast, polypharmacy is common, and medicines can be currently prescribed for 2 years' supply without clearly stating who is responsible for monitoring the effects of the medications. This has created patient safety risks, which have recently escalated especially in geriatric care in home care and nursing homes. Therefore, public and private institutions have begun to purchase medication risk management services and training services from community pharmacies.

It is evident that the current government-regulated pricing policy of pharmaceuticals and dispensing fees is not in line with the present pharmacy operations and their development needs to promote rational pharmacotherapy.[32,33] The income generation of community pharmacies should be considered when reforming the medicine tariff and drug reimbursement system. They should provide incentives for those pharmacies that want to provide integrated and effective services to improve outcomes of pharmacotherapies.[32,33]

Challenges: forming functional integration with social and health services

Recent policy documents by the Ministry of Social Affairs and Health guiding development of community pharmacy system in Finland extend role of pharmacists beyond traditional dispensing to promote rational pharmacotherapy.[12,13,14,39] They provide a strategic promise, as well as potential tasks to integrate community pharmacies into social and health services system. The challenge is how to make these principles work in practice: how to form functional integration with social and health services?

We have evidence that Finnish community pharmacists can actively contribute to medication risk management and systematically use their surveillance systems for identifying patients with clinically significant medication risks and problems.[5,6,28-30,34,41,42,46] We have feasible methods for solving these risks and problems, utilizing existing community pharmacy and primary care resources.[5,6,34,46,49] We have also found that organizations and health care units operate in silos, where no specific team members take holistic responsibility for patients and their medications.[5,6,20,30] Even though the therapeutic outcomes of the intervention studies may not have always been optimal, the value of these studies is to obtain real-world experiences of implementing new practices.[29,30] Our evidence indicates that practitioners in Finnish health care are not well acquainted with systems thinking, a fact which needs to be addressed in the future.[29,30] Further studies are needed on care culture and other contributing factors to high prevalence of potentially inappropriate medication use and other risks for clinically significant drug-related problems, particularly in older adults.[29,30] Further investigation is also needed on system-based factors contributing to situations where identified preventable clinically significant medication risks are left unsolved.[6,29,30]

CONCLUDING REMARKS

Community pharmacists' contributions to rational pharmacotherapy and medication safety, particularly in older adults, should be better utilized in the future, as there are promising demonstrations of effectiveness of their interventions. There is also a broad consensus on the future role and tasks of community pharmacies, the consensus extending beyond the pharmacy profession. The social and health care actors involved in the planning of the Rational Pharmacotherapy Action Plan identified the following range of operations and services suitable for community pharmacies in the new social and health services system, considering effectiveness and feasibility: dispensing, support for self-care and self-medication, medication counselling, medication reconciliation and review, training of health care personnel and support for the work of physicians and home care staff.[12,39]

The Association of Finnish Pharmacies presented quite the same four major goals in their strategy "New Pharmacy" which are in line with the government policies and plans: 1) pharmacy as part of health care (ensuring successful use of medicines and supporting treatment monitoring; services supporting health care and self-care of minor ailments, referral to GP when needed), 2) pharmacy as a forerunner in digitalization (a national electronic medication list to support medication management; online pharmacy, pick-up boxes and home delivery to facilitate access to medicines), 3) a reformed pharmacy licensing system (private ownership by pharmacists; more pharmacy licenses while maintaining location control), and 4) a more efficient public drug reimbursement system (a simpler, more transparent and fairly targeted system).[38]

The Covid-19 pandemic has already boosted this strategy by facilitating breakthrough of online pharmacies and services, as well as showing community pharmacists' importance as frontline professionals in emergencies.[38] We are in the process of reforming traditional dispensing practices: people in need of medicines and related advice and monitoring want to have them administered digitally using virtual connections. Similarly, the risk management of drug therapies will soon be revolutionized with artificial intelligence systems using mass screening triggers, customized patient counseling and self-care support/guidance, where smart straps and apps will revolutionize therapeutic monitoring at home and its integration into the patient information system. Technology is already here, whether as a profession we are ready for a new digital age with increasingly demanding care tasks. Another question is how can we communicate our service potential to stakeholders and health care funders?

The challenge that should be solved relates to the finances of community pharmacies: income generation should be in line with pharmaceutical policies so that pharmacy practice can in evolve as part of the social and health service system. Nothing has been lost in this regard yet. The next pharmaceutical policy decisions currently being prepared will be crucial for the future of the Finnish pharmacy system. Does short-sighted price competition weigh more than public health?

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CONFLICT OF INTEREST

Of the authors, Lenita Jokinen, Eeva Savela, and Stina Parkkamäki work as proprietary pharmacists and Charlotta Sandler works as a director of pharmaceutical affairs at the Association of Finnish Pharmacies. Their contributions to the article are based on their expertise in pharmacy practice research.

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