# Home care clients' medication guidance according to pharmacists and home care nurses

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# Laurea University of Applied Sciences Laurea Otaniemi Bachelor of health care and social services Degree Programme in Nursing

**Abstract** 

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In Finland, the most frequent users of home care services are the elderly who take medication on a consistent basis. According to law, health care professionals must provide medication guidance in connection with the use of medicinal products to clients. The purpose of this study is to find out how pharmacists and home care nurses, working in Espoo region, perceive the medication guidance provided to home care clients.

This study has been conducted by using the qualitative research method. The data was collected through individual interviews with three registered nurses from Espoo region (N=3) and four (N=4) pharmacists from Tapiola Pharmacy. The interviews were conducted in April 2010 and were recorded. Qualitative content analysis using deductive research design was the method for data classification.

The informants described their own perceptions on medication guidance and its importance in their own field of health care. The findings were that medication guidance is needed in home care but it is not provided as effectively as it should due to several reasons; 1) there is no proper co-operation between the pharmacists and home care nurses, 2) the nurses do not necessarily have all the latest information regarding medication, 3) not all the home care clients are able to receive medication guidance and 4) the pharmacists do not directly meet home care clients. Combining nursing experience and knowledge together with the pharmacists' expertise regarding medication would improve the medication guidance process.

In the discussion it was concluded that registered nurses provide most of the medication guidance since they are the home care client's closest health care professionals. Since the pharmacists do not encounter the clients on a daily basis, providing medication guidance becomes challenging for them. There is a need for more effective and intense co-operation between nurses and pharmacists which would increase the quality of medication guidance given to the clients. Also providing medication education for nurses would enhance the guidance process. This study is to be used by our informants for developing and re-organizing the present medication guidance system.

Key words: pharmacists, home care nurses, medication guidance

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Lääkkeitä säännöllisesti käyttävät vanhukset kuluttavat Suomessa suurimman osan kotihoidon palveluista. Lain mukaan terveydenhuollon ammattilaisten tulee antaa lääkeohjausta lääkkeitä käyttäville asiakkaille. Tämän tutkimuksen tavoitteena on selvittää, kuinka Espoon alueen farmaseutit ja kotihoidon sairaanhoitajat ymmärtävät kotihoidon asiakkaiden lääkeohjauksen.

Tämän kvalitatiivisen tutkimuksen aineisto on kerätty haastattelemalla kolmea (N=3) sairaanhoitajaa Espoon alueelta ja neljää (N=4) Tapiolan apteekin farmaseuttia. Nauhoitetut haastattelut on toteutettu huhtikuussa 2010. Aineisto on luokiteltu käyttämällä kvalitatiivis- deduktiivista sisällönanalyysiä.

Haastateltavat kuvailivat omia käsityksiään lääkeohjauksesta ja sen merkityksestä omalla terveydenhuollon alallaan. Tämän tutkimuksen tulokset osoittavat, että lääkeohjaus on tarpeellista kotihoidossa, mutta sitä ei tarjota tarpeeksi tehokkaasti. Tähän on useita syitä: 1)farmaseuttien ja sairaanhoitajien välillä ei ole kunnollista yhteistyötä, 2) sairaanhoitajilla ei välttämättä ole viimeisintä lääketietämystä, 3) kaikki kotihoidon asiakkaat eivät pysty vastaanottamaan annettua lääkeohjausta ja 4) farmaseutit eivät tapaa kotihoidon asiakkaita kasvotusten. Hoitajien kokemuksen ja tiedon yhdistäminen farmaseuttien lääkkeitä koskevaan ammattitaitoon parantaisi lääkeohjausprosessia.

Tutkimuksen johtopäätösten mukaan sairaanhoitajat antavat suurimman osan lääkeohjauksesta, koska he ovat kotihoidon potilaiden lähimmät terveydenhuollon ammattilaiset. Farmaseuteille lääkeohjauksen tarjoaminen on haastavampaa, koska he eivät tapaa asiakkaita päivittäin. Tutkimus osoitti, että entistä tehokkaampi ja tiiviimpi yhteistyö sairaanhoitajien ja farmaseuttien välillä parantaisi asiakkaille annetun lääkeohjauksen laatua. Myös sairaanhoitajille annettu lääkekoulutus edistäisi asiakkaiden lääkeohjausprosessia. Tämä opinnäytetyö on tehty tutkittujen tahojen hyödynnettäväksi, jotta he voisivat kehittää ja uudelleenorganisoida tämänhetkistä lääkeohjausprosessia.

Avainsanat: farmaseutit, kotihoidon sairaanhoitajat, lääkeohjaus

# Table of contents

1. Introduction	7
2. Home care nursing	8
2.1 Home care	8
2.2 Home care in Finland	10
3. Nursing guidance	11
3.1 Characteristics of providing good guidance	12
3.2 Guiding methods	14
4. Medication guidance	16
4.1 Pharmacy in Finland	16
4.2 Pharmacy's status in providing medication guidance	18
4.3 Tools for supporting medication guidance	19
5. Purpose of the study and research questions	20
6. Methodology	21
6.1 Qualitative research	21
6.2 Informants	21
6.3 Arrangements to the data collection	22
6.4 Data collection	23
6.5 Data Analysis	24
7. Findings: pharmacist perceptions on medication guidance	25
7.1 Description of medication guidance of home care clients	25
7.2 Importance of medication guidance for home care clients	26
7.3 Sources of medication guidance for home care clients	28
7.4 Co-operation between pharmacists and home care nurses and clients	28
7.5 Development of the medication guidance and co-operation between ho	me care nurses and
pharmacists	30
7.6 Pharmacists' evaluation of the study	33
8. Findings: perception of home care registered nurses on medication guidance	35
8.1 Description of medication guidance of home care clients	35
8.2 Importance of medication guidance for home care clients	36
8.3 Sources of medication guidance for home care clients	37
8.4 Co-operation between pharmacists, home care nurses and clients	39
8.5 Development of the medication guidance and co-operation between ho	me care nurses and
pharmacists	41
8.6 Home care nurses' evaluation of the study	44
9. Trustworthiness and Ethics	45
10. Discussion	48

References	52
Appendices	56
Appendix 1 Informed consent of the informant	57
Appendix 2 Haastattelusuostumus	57
Appendix 3 Interview questions	59
Appendix 4 Haastattelu kysymykset	60

### 1. Introduction

In the last few decades life expectancy has increased tremendously. The amount of elderly inhabitants among the total population is gradually rising and is expected to increase more in the future. This indicates a raise in the quantity of older individuals, depending on the care. Furthermore, disability, worsening of chronic conditions and death of significant others due to aging will also increase needs of people with non-communicable diseases, people with mental disorders and dependent children with severe health problems. All of this will result in an increase in the need of home care services which will necessitate further study in the field. (World Health Organization 2008, 1.)

Even though few studies have been conducted, most of them aimed at describing services provided to home care clients, co-operation of care providers, and desired and necessary changes in home care organizations. (World Health Organization 2008, 1.) Guidance on medication is either shortly referred to or not mentioned at all, although good medication guidance impacts effectiveness of clients' treatment (Innovation report, 2010); hence research in this area is needed.

Older people and individuals with chronic conditions, who consume medications regularly, are the most common clients of home care services. Home care nurses are involved in the activities associated with medication administration. Each nurse is expected to develop and maintain competence in regard to all aspects of medication management. Education on medication products should be provided to a client and explained in a way that is accessible and understandable for him or her. (A Board Altranais 2007, 7-13.) Therefore, it is important and interesting for us, as nurses, to know how the process of medication guidance occurs in home care settings outside hospital environment.

According to the research conducted by The Association of Finnish Pharmacies (2007), 87% of all participants stated that they receive medication counseling more often from the pharmacists than from other health professionals. Therefore, for our research the view points on the medication guidance of the pharmacists will be of great interest.

The purpose of this study is to find out how pharmacists and home care nurses, working in the Espoo region, perceive the medication guidance provided to home care clients. The research has been carried out by interviewing the pharmacists from the Tapiola pharmacy in Espoo, and the home care nurses working in Espoo region. This study was made by using qualitative research method.

Semi structured interviews were conducted with pharmacists from the Tapiola pharmacy, and home care nurses, working in the city of Espoo. The data was then analysed by using qualitative content analysis.

Our thesis is a part of the Research and Development (R&D) project "Empowering path" at Laurea University of Applied Sciences, which is conducted in co-operation with Tapiola pharmacy and Espoo home care. The aim of this project is to promote self care of the clients who use medication treatment, as well as to create co-operation between pharmacy and home care institutions.

# 2. Home care nursing

### 2.1 Home care

Home care is a social and health care service entity which assists clients whose function is temporarily or permanently impaired, in their own homes. The aim of home care service is to enable secured and good life for clients despite their weakened capacity or illnesses. Home care services include home help service, home nursing and supporting services. (Ikonen & Julkunen 2007, 14-15.)

Current home care is based on the Public Health Act (1972), where a municipality has an obligation to provide medical care. (Laaksonen-Heikkilä & Lauri 1997, 6.) All age groups are allowed to use home care services, but currently the amount of elderly service users is growing exponentially. In the year 2008, 11.2 % of the Finnish population (75 years or older) were using home care services. (Stakes 2008.)

In different countries equilibrium between informal and formal care varies significantly. In northern Europe local municipalities are responsible to provide extensive personal care and domestic services (e.g. home help), whilst informal care tends to offer companionship and social support. In southern Europe, on the contrary, informal care is the dominant source of home care. Studies have also shown that in the Scandinavian countries, such as Finland, elderly clients prefer to have their intimate personal care and support needs supplied formally by employed care workers instead of their close relatives. The selection of tasks, levels and types of activities undertaken by informal careers differs widely both within and between European countries. (World Health Organization 2008, 12.)

Many clients can be happy in assisted-living facilities, retirement communities or nursing homes, and for many people these are better options. However there are several good reasons for choosing home care to any other alternatives. For many people home associates with posi-

tive emotions, memories and comfort, and leaving it can be disruptive and depressing for some individuals. Home care helps families stay together, which is very important in times of illness. In contrast to institutions, which are regulated environments, home care allows maximum freedom for the individual, because care is personalized and is adjusted to the specific needs of each client. The goal of home care is to promote recovery and prevent or delay institutionalization. (World Health Organization, 2008.)

Home care supports clients to remain living in their homes, despite of age or impairment, instead of using residential, long-term, or institutional-based care. Clients feel less anxious and more comfortable when health care services are delivered straight to their homes. The services offered include a mixture of professional health care services and life assistance services. Professional home health services include medication and disease education, wound care, pain management, medical or psychological assessment, physical therapy, speech therapy and occupational therapy. Life assistance services, on the other hand, involve help with daily tasks such as meal preparation, light housework, errands, shopping, medication reminders, transporting laundry and fellowship. Different service providers do perform regular home care visits depending on a client's specific needs. These providers represent a combination of professional and non-professional individuals like nurses, therapists (speech, occupational and physical), home care assistants, social workers, physicians, dietitians, associates and volunteers. (Laaksonen-Heikkilä & Lauri 1997, 51-52.)

The biggest group of qualified home care employees is composed of nurses. As a rule, nurse's responsibilities include assessing home care clients, developing health care plans, providing expertise nursing care and verifying needs for other services. Quite often the nurse's work is challenging, due to the fact that clients are discharged from acute care institutions to their homes and communities early in the recovery process and with more complex needs. Most of the clients are elderly, and many have multiple medical and nursing diagnoses and various health problems that require acute and intensive nursing care. As a result, the home care setting would require nurses to work independently, to obtain decision-making skills, high-level assessment skills, critical thinking, in a setting where other health care professionals are not available. Nurses' duties also include providing holistic care through constant co-ordination, management and collaboration of an interdisciplinary team that includes other professionals such as other nurses, home care assistants, social workers, physical, speech, and occupational therapists, psychologists, pharmacists and physicians. Furthermore, home care nurses educate clients receiving home care and their significant others on the best use of the available care assistance. (World Health Organization 2008, 10-11; Smeltzer et al. 2008, 12.)

# 2.2 Home care in Finland

In Finland the concept of home care became more commonly used in the beginning of 1990's when home help services and home care nursing were combined. (Tepponen 2009, 17.) The integration of home care services has increased the co-operation between different healthcare professionals, allowed more efficient utilization of resources, have avoided duplication of care services and enabled continuation of the services and reduced the expenses. (Heinola 2007, 65.) As a rule, the separation between social and health care systems depends on the nature of the services provided at home. In Finland, home care lies between the health care system and the social system, and has its own characteristics within each. (World Health Organization 2008, 13.)

Home care clients are mostly elderly with complex diseases and individuals with terminal illnesses. For that reason health care systems often provide the following home care services: support, health-promoting or disease-preventive and technical nursing care, both for chronic and acute conditions, occupational therapy, rehabilitation and physiotherapy. (World Health Organization 2008, 13.)

The social service sector commonly substitutes and stimulates informal care. It usually offers home help services such as: delivering personal care (help with bathing and dressing), socializing activities (going for walks), household duties (cleaning, cooking, shopping) and administrative paperwork (filling in forms and paying bills). These services could also provide moral and psychological support, such as counseling and advice for the care receiver and his or her significant others. (World Health Organization 2008, 13)

In Finland, the municipalities are the main service providers. In case the municipality cannot produce services due to a lack of resources, clients can buy services from a private sector. When a client receives home care nursing services, health care professionals (most often a nurse) draw up a care plan. (Ikonen & Julkunen 2007, 44.) Occasionally a plan for rehabilitation is added there as well. (Alzheimer Europe Office 2010.)

Different health professionals work in home care such as housekeepers, practical nurses, social worker, social directors, physiotherapists, registered nurses, public health nurses as well as gerontologists. A registered nurse is a significant member of the home health care team and who is the specialist for nursing care. The nurse's expertise is based on nursing science which focuses on health promotion, disease prevention, rehabilitation and restoring maximum health function. Home care nurses duties include planning and implementation of the nursing care, controlling the drug therapy, providing information, guidance and support to the clients as well as for the family members. In home care, nurses mainly work independently but also as in multi-professional teams. (Ikonen & Julkunen 2007, 144.)

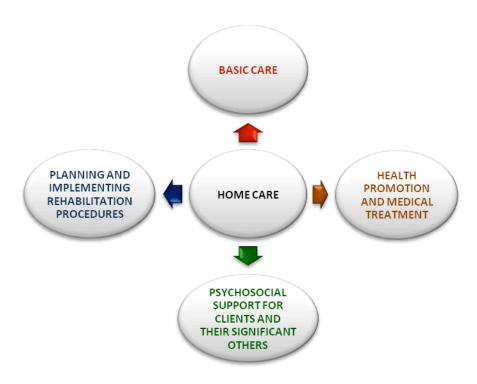


Figure 1. Home care (Ikonen & Julkunen 2007, 17.)

In the city of Espoo, in Southern Finland, home care is offered regionally, in five different areas of the municipality. Each area is further divided into smaller areas. Each of these smaller areas consists of a few teams, made up of a few practical nurses, and one registered nurse. (Ikääntyvien asuminen Espoossa 2010.)

Home care nurses should know the social and health care services and their principles, since they are the ones who give guidance as well as are the closest health care professionals to a client. Continuous co-operation, constant co-ordination and networking among all health care providers involved in care are vital in meeting client's needs. (Ikonen & Julkunen 2007, 145-149.)

# 3. Nursing guidance

It is difficult to identify the term guidance in the nursing profession, as there are different concepts in use and they are often not exact. Even if the concepts can be distinguished from each other, they are joined in practice. (Onnismaa, 2007, 23.) According to Onnismaa, guid-

ance means providing information, time, attention, respect and counseling. At best, "guidance is a negotiation between the counselor and the counselee". (Onnismaa 2007, 7.)

The term guidance is an active and goal oriented activity between a client and a nurse, in which both of the participants' backgrounds affect the guidance process. (Kääriäinen & Kyngäs 2005, 250-258.) Guidance should enhance the client's capacity in a way that enables him or her to improve own life. The structure of guidance is more systematic than in a normal verbal conversation: a client acts as an active problem solver. The relationship between a client and a nurse is equal. Several counseling times are required to gain successful results. (Kyngäs, Kääriäinen, Poskiparta, Hirvonen & Renfors 2007, 25.)

Guidance provision takes an essential part in a client's treatment process. Nowadays, shorter treatment times in hospitals reduce the nursing guidance process. According to Hayes & Buffum, clients should have enough knowledge regarding their illness to be able to care for themselves following hospitalization. (Hayes & Buffum 2001, 54-57.) Therefore, guiding the clients throughout the caring process is necessary. (Kääriäinen, Kyngäs, Ukkola & Torppa 2005, 10.)

The client's psychological, social, physical and environmental backgrounds are linked to client-oriented counseling. Every client has individual needs, which should be necessarily taken into account, even if nurses' and clients' perceptions of them are contradictory. For example, quite often the client's family members are not taken into consideration, although they occupy an integral part in a client's guidance process. (Echlin & Rees 2002, 35-41.) Guidance process occurs in two-way interaction: a client is listening and waiting for encouragement from a nurse and also has an opportunity to express own feelings, which are associated with illness. Positive feedback from a nurse is always required and desirable. A nurse should be able to detect a client's needs and through interaction support him or her in handling the situation. The inability of a client to express his or her feelings or to get encouragement can complicate building of nurse-client relationship. (Mattila 1998, 144-152; Soohbany 1999, 35-40; Stenman & Toljamo 2002, 19-25.)

# 3.1 Characteristics of providing good guidance

In a process of guidance provision, the client is an expert of his or her own life and the nurse is an expert of providing guidance. The nurse's role is to identify and assess the client's needs together with the client. The starting point for guidance is to have a situation, feeling and a goal. The aim is to end up with a situation, which is different from that in the beginning. The resulting situation is always linked to nurse's and client's background factors, which are starting points for guidance. (Kääriäinen & Kyngäs 2005, 250-258.) The guidance process is affected

by background factors, which are age, sex, experiences, expectations, needs, learning styles, motivation, disease type, health status and beliefs. (Kyngäs et al. 2007, 29-37.) (See Figure 2)

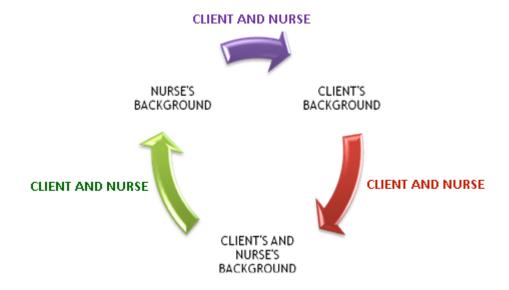


Figure 2. Clients and nurses background factors- the basis for guidance (Kääriäinen & Kyngäs 2005, 250-258)

It is important to identify what a client knows, wants and needs as well as how she or he utilizes most things in order to gain successful results for a guidance process. When the guidance is based on the clients and the nurses common vision about the treatment, there can be improvements of the clients satisfaction and commitment. (Kyngäs et al. 2007, 47.)

The environment and the actual guidance situation can have an influence on the outcome. The best environment to give guidance is peaceful, quiet and there are no disruptions. Hastiness can influence the structure and the quality of interaction and can decrease the clients and nurses interaction. An active guidance process requires well planned operation. (Kyngäs et al. 2007, 37.)

To be able to produce the best possible guidance situation for the client, there are general requirements to bear in mind (Kyngäs et al. 2007, 87-88):

- Guidance should be provided by a health care professional, when the client requests
- The client should be listened to carefully, whenever he/she gives signals.
- Guidance is based on the clients needs.

- The client should be an active member of the conversation where he/she tries to find a solution to problems.
- Guidance is based on the client's and nurses co-operation, without which it does not
  exist.
- Too personal conversations, which threaten the clients identity or expertise should be avoided.
- Nurses' action towards the clients problems should be completely neutral.

# 3.2 Guiding methods

Gaining good results in the provision of guidance requires that the guidance methods are selected according to their purpose and the person providing guidance is aware how the client assimilates matters. According to statistics, clients remember 75% of what they see and only 10% of what they hear. On the contrary, the clients recall approximately 90% when using the eyesight and auditory sense together. (Kyngäs et al. 2007, 73.) A number of different guiding methods are then desirable. (Martens 1998, 341- 348; Kääriäinen et al. 2005, 10-15.) Regardless of the manner in which the client assimilates things, the key is to repeat the facts. Always the first and last matter is remembered in the end. (Divertie 2002, 18.)

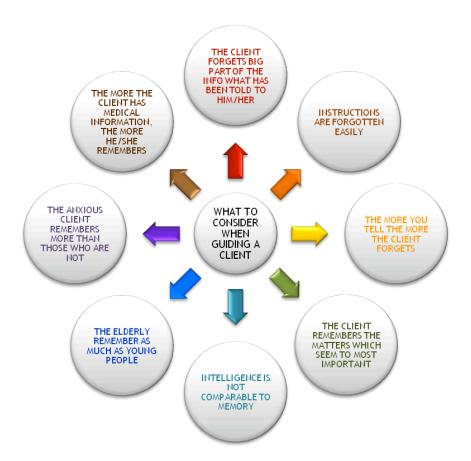


Figure 3. What to consider when guiding a client. (Kyngäs et al. 2007, 74.)

The interaction has been regarded as a cornerstone of guidance, therefore guidance is most often provided orally. According to Kyngäs et. al the clients value guidance given individually since it focuses the guidance towards the client needs, supports the activity and motivation, provides continuous feedback as well as an informal atmosphere. Providing individual counselling is the most effective method for the client to learn. (Kyngäs et al. 2007, 74-87.) (See Figure 3) Most often guidance provided in home care is given orally during the home care visits. The idea is for example a review of the client's medications which were started recently, what they are and for what purpose they have been prescribed. According to Rantanen (2010) also demented clients are interested about their own medications and for what reason they are prescribed. In Finland, about 93 thousand people are suffering from dementia and half of them are home care clients (Sulkava, 2005).

Often forgetful old seniors resist drugs, and then the medication guidance is particularly important. The nurse needs to provide medication guidance based largely on the positive effects of drug enhancement and support the implementation of medication. Without face-to-face oral conversation between the nurse and the client where the nurse is an active information provider regarding the client's medications, the client could possibly refuse to take these medications. (Rantanen, 2010.)

Phone control has become widespread and more popular a few years ago when the new changes in health care law became valid. The starting point for phone counseling is to provide instructions to clients. (Kyngäs et al 2007, 117). According to Rantanen (2010) some of the home care clients do phone the nurses and ask about their own medications for example if there are any side-effects, is it worthwhile to stop taking the medications, what to take when there are feelings of discomfort and pain. Rantanen explains that since the nurses carry mobile phones with them at work, the client has easy access to contact the nurse and ask for guidance at any time. Usually the client's problem is solved just by consulting the nurse but if there is a dilemma the nurse cannot solve, she or he will consult the physician or pharmacist.

Written guidance material means instructions and guidebooks. Providing guidance in written form is very good when the time for oral counselling has reduced. According to clients opinions different instructions regarding their treatment is good to be available in written form as well. Written instructions should be suitable according to the client's special needs which should support the guidance process. Material must not be too superficial. (Kyngäs 2003, 744-751.) Clients do need written instructions especially due to their illness and medications. (Kyngäs et al 2007, 124). Written instructions in home care are used a bit less that other methods of giving guidance. According to Rantanen (2010) both methods of oral and written guidance, given

simultaneously are very effective. The clients do not have to remember everything at once but they can recall the information later from the written guidebooks.

# 4. Medication guidance

"There are several terms how medication guidance has been expressed over the years. The terms used simultaneously in English are drug information, client information, client education, client communication, client's consultation, medication consultation, client interaction, client instruction, counseling and advise giving. Medication guidance is providing information and instructions to the client". (Vainio, 2004.)

Drug therapy is an essential and important part of pharmacological cure. One of the main things which belongs to nursing is to provide adequate medication therapy. At best, medical treatment is multi-professional co-operation between different operating units and organizations. Drug therapy is based on the collaboration between the physicians, clients and health care personnel (who are carrying out drug therapy treatment). (Ministry of Social Affairs and Health 2006, 36.)

According to Finnish law and regulations, the client has a right to get knowledge and guidance regarding her/his health and any possible medical treatment and their effects. (Laki potilaan asemasta ja oikeuksista, 17.8.1992/785.) All the health care professionals (who have completed the medication training) are responsible for providing medication guidance. But the pharmacists have the equal as well as the essential responsibility of offering medication guidance to clients. (Ministry of Social Affairs and Health 2006, 59.)

Providing good medical advice is a sum of many factors. It requires information about medicines and medical treatment. Furthermore therapeutic skills are needed to be able to communicate with different customers on various issues. It is also important to know the local care policy in health care and adjust the own medication counselling to support that. Implementation of medication guidance requires an understanding of clients counselling needs, prescription and non-prescription drugs; it is a combination of guidance and ensuring expertise of the staff. (Kari 2000, 11-16.)

# 4.1 Pharmacy in Finland

The Finnish pharmacies have encountered the same adjustments as other pharmacies in Western countries. The pharmacist prepared the most medications spontaneously in the beginning of last century. The pharmaceutical industry started to produce medicines only about

100 years ago. After that the structure of the pharmacy system has changed since the number of prescriptions began to rise. Preparing medicines and providing medication guidance became more important for pharmacies. (Peltonen 1987.)

In Europe, the Finnish pharmacy system has been identified as a major pioneer. The reason behind it is that the pharmacy tries to be more involved with the public health care as well as carry out the clients' medication therapy. (The Association of Finnish Pharmacies 2005, 4.) Finland is integrated with the European pharmacy surveillance system and the idea is that Finland could have more cooperation with Europe in the future. (Ministry of Social Affairs and Health 2003.)

Finland has the densest community pharmacy network compared to other countries in Scandinavia. This means that there is one pharmacy for 6 600 inhabitants in Finland. There are all together 807 pharmacies, 613 main pharmacies and 194 subsidiary pharmacies. (The Association of Finnish Pharmacies 2009.) The National Agency for Medicines (2006) regulates the pharmacy business and controls the number, location and ownership of the pharmacies. They also admit the pharmacy-license.

The ministry of social affairs and health (2003) states that the goal for medical care is to provide the necessary medicines at reasonable cost as part of the health care. The goal for the year 2010 is to maintain and provide a good medication safety and availability for the people. Pharmaceutical legislation determines the tasks of pharmacies in health care, and defines the framework. The Health care Act determines the rights and responsibilities of the pharmaceutical staff. The Finnish pharmacy is well known for implementing the tasks that have been assigned to it. (The Association of Finnish Pharmacies 2005, 4.)

The pharmacy creates an integral part of the finish health care system. It is also a part of the nursing care chain, taking care of the clients' drug therapy. Additionally, pharmacy is an important mediator of health education related to prescription and non-prescription medicines, preventing pharmaceutical harm. The current pharmacy system ensures a comprehensive regional availability of medicine. The sale of medicines, including prescription and non-prescription, will continue to take place in pharmacies. (The Association of Finnish pharmacies 2005, 8.)

The apothecary leads the pharmacies in Finland. They are the private owners as well as they are responsible for all the activities of the company. The National Agency for Medicines defines the qualifications for the apothecary and they are also responsible for selecting a new apothecary when the previous has retired. The apothecary's mandatory retirement age is 68 years. (Lääkelaki, 10.4.1987/395.) The selection is affected by past experience as an apothecary as well as having had head dispensers qualification. What is also considered; the

previous management positions, or past experience working for pharmaceutical factory service as well as other operational qualifications. The apothecary's nearest subordinates are head dispensers who work as superiors in the pharmacy. Their responsibilities include training of staff, sustaining the development of the pharmacy and drug manufacturing. (Tapiolan apteekki 85vuotta 2008, 60.)

Pharmacists are health care professionals who specialize in medicines. The community pharmacists have a wide range of responsibilities which include administering non-prescription and prescription medicines, guiding clients and preparing pharmaceutical products. (Kansanaho 2006, 17.) They also monitor the health and progress of those clients to verify that they are using their medications safely and effectively. The pharmacists' task is to ensure that the customer receives a true and sufficient amount of information related to their medication to guarantee the treatment success. (United States department of Labor 2009.) Only persons with a master's or bachelor's degree in pharmacy are allowed to provide guidance to clients, deal and prepare medicines. (Lääkelaki, 10.4.1987/395.)

# 4.2 Pharmacy's status in providing medication guidance

Medication guidance is an integral part of the pharmaceutical work. The character of pharmaceutical industry has changed over the years from manufacturing to supplying pharmaceutical products. That has been the starting point for developing new pharmaceutical procedures. When the medication is delivered to the client, it contains the right drug, revision of the right dosage, as well as the guidelines to proper use of the medicine. (Tippa-Projekti 2000-2001, 10-11.) According to the law, when delivering medication from the pharmacy, the personnel must ensure that the drug consumer is aware of the correct and safe use of the medication. Furthermore the pharmacy personnel must provide information which can affect the choice of medication. (The Association of Finnish Pharmacy 2005, 8.)

Pharmacies provide professional and well-informed counselling on medication. Through this they can promote the efficient, safe and economic success of the pharmaceutical care. The medical guidance, that has been professionally carried out will reduce the misuse of the medication which is a common cause for needing hospital treatment. Costs arising from medical errors can be significant. (The Association of Finnish Pharmacy 2005, 8.)

The pharmacy's duty is to motivate customers to use drugs regularly and correctly.

The purpose is that the customer is aware of the medicines they consume. They know the affecting agent, duration of action and whether the medication has injurious or synergic effects. Through pharmacy information system, the clients have a possibility to get safe medical guid-

ance information on the various forms of drug use which may enhance the client's health. (The Association of Finnish Pharmacy 2005, 8.)

# 4.3 Tools for supporting medication guidance

Practical information tools have been developed to support the medication guidance process provided by the pharmacists; by using these tools the pharmacists are able to guide the clients properly and in a way that serves their needs best. Only in recent years there has been discussion about the necessary communication skills, in which the information getting across to the user is ensured. (Tippa Projekti 2000-2001, 20-21.)

One of the most well-known effective tools for boosting the medication guidance is the TIPPA-project (Tarkoituksenmukainen Informaatio Potilaan Parhaaksi Apteekista = The appropriate information for the best of the client from the pharmacy). The Tippa-process-modell is based on the client -oriented model which is divided into four phases; starting the counseling session, contents, communication method and finishing the counseling session. The pharmacists follow this client oriented model when guiding the client. (Nyyssönen 2006, 23). In addition, a variety of methods have been developed to measure the quality of counseling, such as the shopping which is a tool to measure quality of service. Mystery shoppers acting as normal customers perform specific tasks—such as purchasing a product, asking questions or behaving in a certain way - and then providing detailed reports or feedback about their experiences. (Puumalainen 2005, 38-39.) The Tippa-project aims to seek improvements in medical counseling as well as develop individual customer service. (Nyyssönen 2006, 23.) It also promotes the clients realistic medicinal use with the help of the pharmacist, reduces the unnecessary and wrong use of self-care drugs and through this cuts down the costs in health care which can be significant. (Tippa Projekti 2000-2001, 24.)

The first real "tool" produced by the Tippa-project is the Tietotippa database. Tietotippa is a user-friendly memory aid, which consists of the prescription medication and their safe and correct usage. This facilitates the health professional to provide oral medical information as well as to conceptualize the integral part of the information contents. The Association of Finnish Pharmacies and The Finnish Pharmacists Association have created the database. (Tippa Projekti 2000-2001, 13.)

# 5. Purpose of the study and research questions

The purpose of this study is to find out how pharmacists and home care nurses, working in the Espoo region, perceive the medication guidance provided to home care clients. The research has been carried out by interviewing the pharmacists from the Tapiola pharmacy in Espoo, and the home care nurses working in Espoo region.

This study was made by using the qualitative research method. There are two research questions in this work. The first research question is "How is the home care client's guidance on medication described from the point of view of pharmacists?" The second research question is "How is the home care client's guidance on medication described from the point of view of home care nurses?"

The study aims to unveil the thoughts of the home care nurses and the pharmacists and enables them to share their observations with the reader. The interviewees can reveal their ideas on the quality of the present medication guidance system, and possible improvements for the future.

### 6. Methodology

# 6.1 Qualitative research

Qualitative research aims to gain a holistic picture of a study. (Gray 2007, 320.) The purpose is to determine the truth of the phenomena which are being explored and structure the reality to more manageable form. (Leino-Kilpi 1997, 222-232.) The researcher plays a significant role in gathering and interpretation of qualitative data. He becomes a tool of the study (Polit & Beck 2004). The research data is an interviewee's experience, where the meanings of the words are interpreted. In the qualitative study the individual's comprehension of events or circumstances is a top priority rather than the interpretation made by the researcher. (Nieswiadomy 1998, 150). The structure of the research questions determine whether the study is quantitative or qualitative. Qualitative research in nursing focuses on words rather than on figures. It is important for the researcher to be aware of the fact that people's experiences are unique, although their ability to understand and reason can be influenced by the shared worldview and valued perceptions created by others. (Talbot 1995, 92-93.)

The study aimed to describe the pharmacists' and home care nurses' experiences, thoughts and observations about the medication guidance provided to home care clients. Therefore, the qualitative research method was chosen for this study, since it covered interpretations, explorations and descriptions of certain context in human experience. The descriptive method was used because there was a need for detailed illustration of the home care nurses' and the pharmacists' perceptions. The data in this study was collected through face-to-face interviews with semi-structured open-ended questions and then examined with qualitative content analysis.

### 6.2 Informants

The term informant is defined as an individual who voluntarily provides information to researchers about a particular phenomenon. (Polit et al. 2001, 463.) Since our purpose was to describe and include as well as understand the activity of the phenomena or event, It was important that the person from whom the information was collected knew as much as possible about the phenomenon or had experience in the field of his/her expertise. In this sense, we did not choose our informants randomly but the selection was prudent and appropriate. (Tuomi&Sarajärvi 2007, 85-86). The informants for our study were chosen according to special criteria related to work experience, qualifications as well as knowledge. (Tuomi & Sarajärvi 2002, 75-76.)

In this study we had two groups of informants. The first group consisted of three (N=3) home care registered nurses in the Espoo region. The sample selection was made as follows. The

manager of the Espoo home care asked on their team's meeting someone to attend the interview of their free will, or a particular nurse to participate in the study. The selection of the informants was based on voluntariness. It was required from the home care nurses to be connected by work with Tapiola Pharmacy services, in order to provide necessary information for our research. The sample size selection was made in co-operation with the tutors of this research. The number of informants (N=3) was considered to be sufficient to gain suitable and comprehensive data. In qualitative research the interpretation and depth of the data are more crucial than the number of informants. (Eskola & Suoranta 1998, 12; Eskola & Suoranta 2000, 61-63.)

The second group included four (N= 4) pharmacists, working in the Tapiola Pharmacy in the city of Espoo. The informants were selected by our contact person working in the Tapiola Pharmacy. The pharmacists were asked in their team's meeting to participate in the study on their free will. The selection of the informants was based on voluntariness and the informants were given the possibility to withdraw from the research at any time. It was required from the pharmacists to have a working connection with the home care clients and home care nurses, so they could provide necessary information for our research. The sample size selection was made in co-operation with the tutors of this research. The number of informants (N=4) was considered to be sufficient to gain suitable and relevant data. (Eskola & Suoranta 2000, 61-63.)

To be able to conduct reliable research and to get valuable information for this study, additional criteria for both of the informants groups was introduced. It was required from the participants to have Finnish as a mother tongue. Considering Finnish as a native language was used to lessen the possible language confusions and misunderstandings between the informants and the researchers during the interviews. According to Gray when conducting the interview the language must be applicable for the informants. (Gray 2004, 223.)

After the thesis contract was accepted in April 2010, the head of Espoo home care and the head of the Tapiola Pharmacy were contacted in order to receive research permission. We had appointments with both of the project coordinators. In the meetings we have introduced our thesis idea and received immediate oral approvals for the interviews to be conducted in Espoo Home Care office and in Tapiola Pharmacy workstation.

# 6.3 Arrangements to the data collection

After the study plan was accepted, we contacted the head of Espoo Home Care and the head of the Tapiola Pharmacy again, and after introducing them our study once again, the application for research permission was handed to them. According to the study plan, our research permission included three interviews in Espoo Home Care and four interviews in Tapiola Pharmacy. It was considered to be beneficial for the research that aimed to receive as much valu-

able information as possible from the informants, and ethically acceptable that the informants were familiarized with the questions beforehand. (Tuomi& Sarajärvi 2009, 73). Therefore, the letters to the pharmacists and the home care nurses, including the themes of the interviews, for further redirection to the potential participants. In addition to the introductory letters, the informed consent form and the background information form were administered to the informants. We contacted the respondents one week before the interview and made sure that the informants were still available and there were not any last minute concerns. (Gray 2004, 222.)

### 6.4 Data collection

Approval for the request of the research permission was orally received from the heads of Espoo Home Care and Tapiola Pharmacy. The interview dates were discussed and organized after our thesis plan was accepted. The data of this research was collected through face-to-face interviews with semi-structured questions. This allowed the informants to express their thoughts and experiences about the medication guidance, provided to home care clients. It also allowed the researchers to respond to the participant's ideas, develop them, speak more widely and therefore deepened the issues of investigation. (Denscombe 2003, 167.) Later on, this developed into detailed descriptions of the participant's perceptions. Furthermore, our thesis topic was not researched before, hence the use of the semi-structured open-ended interview guaranted that nothing essential delimited the scope of the investigation in advance (Kylmä & Juvakka 2007, 80.)

The purpose of conducting the interview is to receive as much beneficial information as possible. The informants were given a possibility to well-acquaint with the interview questions beforehand since it was considered as being beneficial for receiving rich data. This would give the informants a possibility to be prepared in advance, thus it would be easier for the informants to form a deep and interactive conversation about the themes. The questions were visible to the informants throughout the whole interview. (Tuomi & Sarajärvi 2009, 73-74.)

The interviews were carried out within a two week period of time in April 2010. The interviews of the home care nurses took place at their office in Espoo home care and the interviews for the pharmacists were held in the Tapiola Pharmacy work station. It was important to conduct the interviews in the places that offered privacy, were adequate for recording, and in which the informants felt comfortable and were familiar with the settings that offered privacy (Polit & Beck 2008, 399). The appropriate places for the interviews were arranged beforehand by the heads of the organisations. During the planning stage we had the requirement of having Finnish as a native language of the informants but later we discovered that the pharmacists were willing to do the interviews in English and since our second researcher is a not finish, we decided to conduct two of our interviews in English.

All the informed consent forms were received in written form. The average duration of the interviews was forty-five minutes. In the beginning of the interview we explained simply who we are and why the information is being collected and how it will be used (Gray 2004, 222). Two digital voice recorders were used during every interview to assure that all the data will be received for further analysis. Moreover, some notes were taken during the interviews to support the audio recording and make the analyzing stage easier. (Gray 2004, 227.) Overall, the interviews were informative and meaningful.

### 6.5 Data Analysis

In this study, qualitative content analysis and the deductive approach were used to examine the gathered data. Content analysis is known as a systematic and objective process that consists of fitting the data together, processing it and integrating it according to themes and contents (Polit, Beck & Hungler 2001, 383). It is used when documents are analyzed systematically and objectively. The purpose of content analysis is to get a description of the phenomenon of interest in a condensed and general form. (Kyngäs & Vanhanen 1999, 3-12.)

In the deductive theory building technique, the classification is based on an earlier framework which can be a theory or concept system. The analysis is then guided by a theme or mind map. When using deductive content analysis, the first stage is to create a base for the analysis. (Sarajärvi 2002, 51.) The matters which will fall within the analysis frame will be collected. Our framework is semi structured so we collected only the matters which fell into those categories. In this way, the theory or concept structure can be tested in a new context. (Marshall & Rosman 1995, 23-41; Latvala & Vanhanen-Nuutinen 2001, 21-43.) (See Figure 5.)

The semi-structured open ended questions were used to collect our data. We transcribed our interviews into the written text and after that familiarized ourselves with the data. Since we used the deductive method for our analysis, we separated the irrelevant data from the relevant and only collected the information which fell into categories created during the thesis plan stage. Our original plan was to form an inductive analysis but since we created the categories before collecting the data and the material fell into those categories, our analysis changed from inductive to deductive.

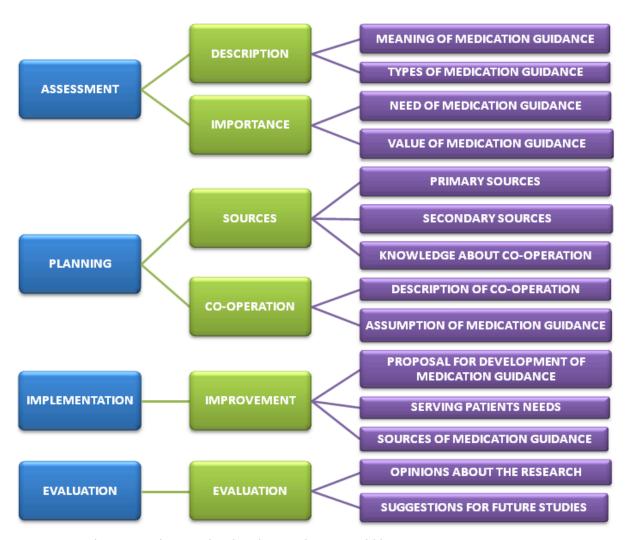


Figure 5. Deductive analysis (Whitehead, Weis & Tappen 2007)

# 7. Findings: pharmacist perceptions on medication guidance

In this chapter the purpose is to describe the pharmacists view points about the medication guidance they provide to home care client. The informants' answers are based on their personal and professional view points.

# 7.1 Description of medication guidance of home care clients

In the pharmacists point of view, everyone should receive medication guidance. In their opinion, both nurses and pharmacists should make sure that the client knows how to take the medicine correctly and that the clients do not consume medications which affect each other. The clients also should be aware of why they are consuming these specific medications. They also pointed out that a lot of the medications cannot be taken with food, particularly with milk

products, since the medication might loose its function and the client needs to be aware of that. Antibiotics are especially that type of medications when the client needs medication guidance. Since medications occasionally have side effects, the health care professional should provide information so the client can be aware of it.

- "...varmistetaan että asiakas osaa käyttää oikein lääkettä ja mitä muita lääkkeitä on käytössä samaan aikaan ja että ne sopii keskenään yhteen... asiakas tietäis miksi hän käyttää sitä lääkettä ja mihin se on tarkotettu..."
- ("...to make sure that the client knows how to use the medicine correctly and also what other medication are in use at the same time and do they fit together...the client knows why he/she is consuming that medication and what reason...")
- "I think some guidance should be provided, at least the minimum information what the medicine is, how should you take it (morning, evening, several times a day), do you take it with food and of course how is it with other medications that the person has and are there any side effects".

("Minun mielestäni ohjausta pitäisi antaa, kertoa ainakin vähimmäismäärä siitä mitä lääke on, kuinka sitä tulisi ottaa (aamulla, illalla, useita kertoja päivässä) tuleeko se ottaa ruuan yhteydessä ja tietysti kuinka se sopii yhteen muiden lääkkeiden kanssa, joita henkilö käyttää ja onko sillä sivuvaikutuksia.")

# 7.2 Importance of medication guidance for home care clients

From the pharmacists opinion it is essential to be concerned about each client individually. If a person does not feel well, it is important to ask him or her about the health condition and the way he/she consumes the medication. If a client has several medications, it is vital to know the counteractions between each other or with the food and drinks. Even if a client does not ask about the medication, it is crucial to make sure he/she knows how to take the medication properly, especially In the case of home care clients, who are mostly the elderly and are weaker than the younger people and the interaction between the medications can be severe.

- "...it is important to look at the clients individually, how medicines affect her..."
- ("...on tärkeää hoitaa asiakasta yksilöllisesti, kuinka lääkkeet vaikuttavat häneen...")
- "...old people are much weaker than the younger ones. And the interaction between the medicines are severe, than for the healthy people, those medicines, that have no effect on the younger person, has an affect on the older one, that's why it is important to have guidance."
- ("...vanhemmat ihmiset ovat paljon heikompia kuin nuoremmat. Ja lääkkeiden väliset interaktiot ovat vakavampia sairaille ihmisille kuin terveille. Niillä lääk-

keillä, joilla ei ole vaikutusta nuoriin, voi olla vaikutusta vanhempiin ihmisiin ja siksi on tärkeää saada ohjausta.")

"Even if the patent does not ask, it is still important to provide the information, at least to ask are you familiar with the medication, did you use it before, do you have any questions about it, has it caused any problems?"

("Vaikka asiakas ei kysyisi neuvoa, on silti tärkeää tarjota ohjausta tai ainakin tiedustella oletko perehtynyt lääkitykseen, oletko käyttänyt sitä ennen, onko sinulle kysymyksiä koskien tätä lääkettä, onko se aiheuttanut ongelmia.")

Pharmacists concluded that clients outside home care, who come to the pharmacy, appreciate the guidance they receive. They are interested in getting the correct and sometimes new for them information about the medications they did not receive from their physician. Clients are thankful and often say this aloud directly to the pharmacists.

"We get oral feedback. We get it when we serve the clients here...they say thank you very much for the information.... they are interested in getting right information."

("Me saamme suullista palautetta. Saamme palautetta silloin kun palvelemme asiakkaita täällä... he kiittelevät paljon saamastaan informaatiosta... he ovat kiinnostuneita saamaan oikeaa tietoa.")

"...at least here at the pharmacy I can see that they are very satisfied with the guidance and they have an opportunity to ask us about the medication, because quite often when they come from the physician...they don't want to disturb him, or ask too many questions, so they can ask us."

("...ainakin täällä apteekissa näen että asiakkaat ovat tyytyväisiä saamaansa ohjaukseen ja heillä on mahdollisuus kysyä meiltä lääkkeistä koska useimmiten kun he tulevat lääkäristä...he eivät ole halunneet häiritä lääkäriä tai kysellä liikaa kysymyksiä joten he kysyvät sitten meiltä.")

However, there has been no feedback from the home care clients, due to the fact that they do not have direct contact with the pharmacists, because they receive medication either from the home care nurses or from the relatives.

"Ei oo kyllä tullut palautetta kotihoidon asiakkailta..."

("No there has not been any feedback from the home care customers...")

# 7.3 Sources of medication guidance for home care clients

Sources of the medication guidance can be categorized into primary and secondary. Under the primary sources pharmacists assumed physicians, home care nurses, pharmacists, relatives, who also take care of the clients, and with whom clients can connect either face to face or via phone. Although it was just a hypothesis, in which pharmacists were not sure.

Under the secondary sources pharmacists mentioned neighbors and friends, most of whom are people of the same age group using the same medication, internet, booklets, which they get from hospital, nurses or pharmacy, instructions from the medication packages and the information from the back side of the dispensers.

"If they don't get it from the physician or from the pharmacy, for home care clients it should be a nurse, relatives, who take care or help in taking care after the client. We have couples of sons or daughters, who may call pharmacy and ask about the medication, but that is not often."

(" Jos he eivät saa sitä lääkäriltä tai apteekista, se pitäis olla sairaanhoitaja tai sukulaiset jotka huolehtivat potilaasta. Meillä on muutama omainen, joka saattavat soittaa apteekkiin ja kysyä lääkkeistä mutta ei usein.")

"...ehkä joku voi käyttää internettiäkin ja kattoo sieltä..."

("...maybe somebody can use internet and look from there...")

The ability of the client to receive information on medication depends on his or her health condition. The client uses mostly secondary sources if his/hers health condition allows it.

".it depends on the condition of the client. If a client is in good condition of course you have the information on the tablets, attached to the tablet boxes, so they can read the text. But if you are in bad condition, you have to get the information from the person, for example she cannot read, hear, or has Alzheimer, then the client needs to be taken care of, giving the guidance or at least controlling that they take the medication properly."

("...Se riippuu potilaan voinnista. Jos asiakas on hyväkuntoinen niin he pystyvät lukemaan lääkepurkkeihin liitetyn tekstin. Mutta jos he ovat huonossa kunnossa, heidän tulee saada ohjausta henkilöltä, esimerkiksi jos henkilö ei pysty lukemaan, kuulemaan tai hänellä on alzheimer, joten potilaasta tulee pitää huolta, tarjota ohjausta tai ainakin kontrolloida että he ottavat lääkkeensä kunnolla.")

According to the pharmacists, there is almost no co-operation between the Pharmacy and Home care organizations. The only time, when they meet is during the exchange of the medication bags, which happens twice a week on Tuesdays and Thursdays. Home care nurses bring the empty medication bag with the prescriptions to the Pharmacy where it is filled with the medication according to the clients' prescriptions. Then the bag is given back to the home care nurses, who deliver it further to the clients. During this exchange, no verbal medication guidance is given to the nurses from the pharmacists unless the nurses request it. Sometimes nurses may call Pharmacy and ask medication information from the pharmacists.

"Communication between us and nurses is almost none, because they have the bag, we feel the bag and then they get the bag. And that's all we have in common usually."

("Meidän ja sairaanhoitajien välillä ei tapahdu tiedonvälitystä, koska me vain täytämme lääkekassin, jonka he vievät mukanaan. Se on ainut asiaa mikä meillä on yhteistä useimmiten.")

"...joskus he soittavat ja kysyvät lääkeohjausta, mutta ei usein..."

(".sometimes they call and ask about the guidance on the medication, it is really seldom")

Pharmacists mentioned having two meetings in the past with the home care nurses. But after that no meetings were organized between these two parties.

"We don't have meetings with the nurses nowadays. There was one to two occasions, when the pharmacy owner and two pharmacists meet and inform the nurses how they work, what we can offer."

("Meillä ei ole tapaamisia sairaanhoitajien kanssa nykyisin. Joskus oli muutama kerta, jolloin apteekkari ja kaksi pharmaseuttia tapasivat ja kertoivat mikä oli heidän työnkuvansa, mitä he pystyvät tarjoamaan...")

"...ehkä niinkun jotain pieniä tapaamisia on ollut, mä en oo ollu sellassiissa mukana mutta ihan sellasia kokouksia ja sen tyyppisiä missä on ollut joku henkilö meiltä niinkun. Pitänyt jotain infoo vähän lääkkeistä ja annosjakelusta on puhuttu ja sellasista, mutta aika harvakseltaan on näitä kokouksia ollu."

("...perhaps sort of something small meetings has been, I have been there but so those kind of meetings and other kind of where has been a person from our team. There we had some information from the medications and single dose delivery has been talked about but there have not been meetings that often.")

According to the pharmacists there is almost no co-operation between them and home care clients. Although occasionally some home care clients might call or even come, if they are able

to do so to the Pharmacy and ask about their medication. Pharmacists concluded that the major way for them to co-operate with the home care clients is through the nurses without giving direct medication guidance to the clients. Pharmacists regretted that they are unaware of the medication guidance home care nurses provide to their clients. Pharmacists assumed that the clients probably get the basic instructions from the home care nurses on how to use the medications and how to utilize other medical appliances, such as administering insulin injections and asthma inhalations.

- ".we don't meet home care clients...The only connection that might be they can call and ask about their pills... but really rare..."
- ("...me emme tapaa kotihoidon asiakkaita. Ainut linkki on saattanut olla että he soittavat ja kysyvät heidän lääkkeistään... mutta todella harvoin...")
- "...there are some clients that might come during the weekend to get some medications if they are able to walk themselves. But otherwise it is a nurse, who comes, collects the bag, and brings the medicines to the client... it is not a pharmacist who is giving guidance."
- ("...on muutamia potilaita, jotka saattavat tulla viikonloppuna hakemaan lääkkeitään jos he pystyvät kävelemään. Mutta muutoin sairaanhoitaja tulee ja hakee lääkelaukut ja vie lääkkeet potilaille... farmaseutti ei anna lääkeohjausta.")
- "...hoitajat varmasti antavat sitä ohjausta mut en mä nyt konkreettisesti tiedä et miten se tapahtuu sitten..."
- ("...they will probably give guidance but I am not sure how that happens...")
- "...mä oletan että he kertovat nämä perusasiat mitä lääkkeiden ottamiseen kuuluu..."
- (".I assume that the nurses will tell the basic matters what belongs to taking the medication.")
- 7.5 Development of the medication guidance and co-operation between home care nurses and pharmacists

Pharmacists concluded that they don't know that much about the work of home care nurses, but they are willing to get familiar with that, because the well-being of the client is influenced by both of the parties, therefore co-operation is required.

- "...I think nurse-pharmacist co-operation should be good for the clients, because we will have more communication."
- ("...Minun mielestäni sairanhoitajien ja harmaseuttien välinen yhteistyö on potilaalle hyväksi, sillä silloin meillä olisi enemmän tiedonvälitystä keskenään.")

"It would be nice if the study can make the co-operation between nurses and pharmacists better."

("Olisi hyvä jos tämä tutkimus lisäisi yhteistyötä sairaanhoitajien sekä pharmaseuttien välillä.")

Due to poor co-operation between home care nurses and pharmacists, pharmacists are unaware of whether the client gets any guidance on medication. One of the main roles of the guidance is to teach the client to administer medications correctly. Mistakes in improper medication use may lead to health problems, inefficiency of the medication and hence be expensive for society. In the pharmacists' opinion present medication guidance is not in an adequate level.

"Ei se lääkohjaus nyt varmaankaan niin liian hyvä ole eikä ehkä hyväkään oikeestaan."

("The medication guidance is not too good or not good at all actually.")

A few ideas on how to develop present medication guidance system was suggested by the pharmacists. First of all it was proposed that the physicians, home care nurses and pharmacists would share the same database. This will allow the health care professionals to communicate with each other as well as see the latest updates of each of the parties.

"...I think same database for physicians, nurses and pharmacists will connect us."

("...Minun mielestäni sama tietojärjestelmä lääkäreillä, sairaanhoitajille sekä pharmaseuteille yhdistäisi meitä.")

Secondly, pharmacists offered an idea of having a separate pharmacist for the whole Tapiola area. It was suggested by the pharmacists that the physicians don't pay much attention to the home care clients, who have been using and combining the same medications for a long time. The home care pharmacists would check the medication counteractions for each individual client deliver the medication, educate the home care nurses well as home care clients, and contact the physician and the client's own nurse.

"Usually it does not change anything, even if we call the physicians, because they say, oh yes, the client has combined and been eating them for many years already." ("Useimmiten sillä ei ole mitään vaikutusta vaikka soittaisimmekin lääkärille lääkepäällekkäisyyksistä, koska he sanovat vain että, oi kyllä, asiakas on yhdistelly ja on syönyt niitä jo monta vuotta.")

"It is good that pharmacists get the prescriptions and they look whether there are any interactions between the medications..."

("On hyvä että farmaseutit saavat reseptit ja katsovat onko lääkkeillä keskenään vaikutusta toisiinsa...")

Thirdly, pharmacists suggested a single doze delivery (it is a service offered by pharmacists where the clients medications are mechanically loaded into small plastics bags. The clients name, the content and the data is printed into the plastic bag), which would reduce the medication errors, and prevent problems, which might arise from different medication interactions. The client would take the medication at the right time since there is a concrete time on the bag. Single doze delivery could reduce the home care nurses work load.

"The other solution is single doze delivery, because when we do that we check the medicines, that there are no interactions with other medications..."

("Toinen ratkaisu on annosjakelupussit koska siloin kun me laitamme lääkkeet me katsomme että lääkkeillä ei ole vaikutusta keskenään...")

Fourthly, pharmacists suggested having meetings with nurses, on which they would discuss each client's health condition. They can also talk about the client's reaction to the medication, if it is a new drug. At the meetings nurses could consult pharmacists directly and make future suggestions and improvements to the work of each other in order to make the home care clients' care better.

"We should have some kind of meetings with home care nurses...and discuss about their clients and about the medication."

("Meillä pitäisi olla tapaamisia kotihoidon hoitajien kanssa. ja keskustella heidän potilaistaan ja lääkkeistä.")

Fifthly, pharmacists proposed an idea of being present during the first health care team meeting, when a client is becoming a home care client. Together with other health care professionals as wells as the client and his/her significant others, pharmacists could discuss the client's medications.

"...farmaseutit on mukana kun kotihoito käy asiakkaiden luona tekemässä arviointia. Käytäs läpi niitä lääkkeitä, onko kaikki tarpeellisia ja tuleeks ne oikein, käytäs vähän niinkun tarkemmin ne yhdessä läpi."

("...the pharmacists are together with the home care nurses when they are doing the clients evaluation. We could go through the medications, are everything needed and are they correct, we could go through together more precisely.")

Sixthly, pharmacists wished for providing medication counseling for the home care nurses. Since this can be time consuming, and disturb nurses from their work, it was suggested to educate one nurse, who could inform other home care nurses and through that their clients.

"...maybe we should give the information to one nurse and then she gives it to other nurses."

("...ehkä meidän pitäis antaa ohjausta yhdelle hoitajalle ja hän sitten antaa sitä muille hoitajille.")

And finally some pharmacists recommended that some extra notes, which point out some vital information about the medications, could be added to the medication bag in addition to the instructions the clients might already have. This information would provide additional knowledge on medication, especially if it is new. Due to the fact that a single nurse is usually responsible for more than twenty clients, it is demanding for him or her to remember every single medication description, so written precise and simplified instructions would ease this task.

"Suulliset tiedot voi mennä tavallaan ohi et sellanen kirjalliset ohjeet sinne hoitajille olis ihan hyvä."

("The oral information can be easily forgotten so the written information to the nurses would be quite good.")

# 7.6 Pharmacists' evaluation of the study

According to the pharmacists the primary source from which home care clients should get medication guidance is the physician. This is because the physician is the health care professional, who prescribes the medication and therefore is responsible for providing medication guidance. The second main source for the medication guidance is a home care nurse. He/she is the closest health care professional the client contacts almost daily. The home care nurse is a link between a physician, a pharmacist, and a home care client. Due to the fact that all the medications are delivered from the pharmacy, then the pharmacists are also a source of medication guidance that home care clients can use. The clients can either call or go directly to the Pharmacy.

- "...physician is the first person the client meets, and should explain why this medication is needed..."
- ("...lääkäri on ensimmäinen henkilö jonka pitolas tapaa ja hänen tulisi kertoa miksi tämä lääke on tarpeen...")
- "...there is a nurse between us and client, the nurse should give the guidance...they are the ones who know the clients more..."
- ("...sairaanhoitaja on meidän ja potilaan välissä, sairaanhoitaja tulisi antaa ohjaus... he tuntevat potilaan parhaiten...")

Pharmacists mentioned that there were no previous research studies done in the area of medication guidance between the organizations of home care and pharmacy. Therefore our thesis was quite desired.

"This is important. I don't know if anyone has done this kind of research before."

(" Tämä on tärkeää. En tiedä onko kukaan tehnyt tällaista tutkimusta aikaisemmin.")

Pharmacists had several view points about this research. They thought that our study might suggest ideas for developing, organizing and improving the medication guidance system for home care clients.

- "... I think there are a lot of things that should be made better...it is really worthwhile thinking how to organize medication guidance, because nothing happening about it at the moment..."
- ("...Mielestäni on paljon asioita jotka voitaisiin tehdä paremmin...on todella syytä ajatella kuinka järjestää lääkeohjaus, koska mitään ei tällä hetkellä tapahdu sen suhteen...")

In the pharmacists opinion proper medication guidance might influences the clients' health. It can also influence the economy of the society. By reducing medication errors, it is possible to lessen the costs of the medication as well as to diminish counteraction between the drugs that might lead to further hospitalization.

- "... it is always better for the health and more cost effective for the society that there are no unnecessary drugs in use..."
- ("... onhan se aina terveydelle parempi ja yhteiskunnalle taloudellisempaa, että ei ole mitään turhia lääkkeitä käytössä...")

For the future research pharmacists suggested further studies about the co-operation between nurses and pharmacists. It was also proposed to expand the study by involving physicians' points of view.

- 8. Findings: perception of home care registered nurses on medication guidance
- 8.1 Description of medication guidance of home care clients

The home care nurses thought that providing medication guidance is crucial and that every home care clients right is to get medication guidance due to the drugs they consume. The nurses found it very important that the clients are aware what kind of medications they are taking and for which illness. They were emphasizing the importance of the drug counteractions and how important it is to take it into consideration since most of their clients are consuming several medications at the same time. Since the home care clients are staying home and the nurses are not continuously present, they were accentuating the significance that the clients know the importance of taking their medication, and what are the pros and cons if they refuse to take the drug. The nurse's duty in home care is to make sure that the client gets the most effective outcome of the drug. Therefore it is vital that the medication is taken correctly.

- "... mitä lääkkeitä annetaan mihin vaivaan, miten se vaikuttaa, ja tärkeys ottaa se lääke tai mitä tarkottaa jos ei ota sitä lääkettä ja se vastuu sitten jos jättää sen ottamatta..."
- ("...what medications are taken for what disease, how does it effect, or what does it mean if not taking that drug and responsibility if not taking taking the drug...")
- " Asiakkaan on tärkeää tietää onko niissä lääkkeissä sellasta huomioitavaa tai yhteisvaikutuksia."
- (" It is important for the client to know if there is any to be noticed or if there are any counter effects.")

According to the nurses, the medication guidance includes going through the clients' medication list every time when there is a new home care client. Also if there are any changes in the client's current medications or if the physician prescribes new medication to the client, medication information is provided. The nurses considered it very important to keep the clients medications up to date and to follow the client's medication consumption. Usually when the physician has prescribed a new drug, the nurses will start to monitor for example side-effects, blood pressure due to current situation. The reason why they found it very important for the

client to know about the side-effects is that the clients could independently interpret their own sensations and inform the nurse about any symptoms related to a specific drug.

- "...kun tulee uusi asiakas niin katotaan yhdessä läpi se lääkelista..."
- ("...when there is a new client we go through the medication list together...")
- "...ja sit jos joku uus lääke alkaa niin sitten niissä on yleensä tällanen seuranta, esim verinäytteiden tai verenpaineen seuranta jotka liittyy siihen uuteen lääkkeeseen..."
- ("...and when there is a new medication prescribed we usually start to monitor it fro example by taking blood samples or measuring blood pressure which has a connection to the new drug.")
- "...lääkeohjaus on enemmänkin sellasta asiakkaan oireiden kartoittamista."
- ("...medication guidance is more like tracking the client's symptoms.")

# 8.2 Importance of medication guidance for home care clients

The reason why it is important for home care clients to be aware of their medications and their effects is that they could recognize the symptoms and then contact their own nurse. The nurses considered the medication guidance as being vital for their clients because without it the client cannot interpret his/her own sensations and since the nurse only visits the client for a short period of time, they cannot necessarily notice everything. The nurses also mentioned that since the home care nurse is the closest health care contact for them, the clients most often ask guidance or advice from their own nurse so the unnecessary contact with a physician can be avoided. Or if the nurse does not have the answer, then they will escalate the case for example to physicians. The overall opinion on medication guidance medication guidance was that it is a security factor for the home care clients, they know the reasons why they are consuming these specific medications, they are aware where they get the assistance from in case of any occurrence. According to our informants, due to client's overuse of for example pain killers, the clients do not necessarily have the sensation of pain due to excessive use of pain killers earlier and might unintentionally take an overdose. That is why it is important for them to be aware of the correct dosing. The nurses also commented that occasionally medication are taken in a wrong way or using the incorrect technique. Every now and then the nurses also notice that the clients are finishing their medication course too early due to client's wrong beliefs.

<sup>&</sup>quot; Monta kertaa me voidaan antaa hyvä vastaus johonkin kysymykseen että se välttää sen turhan lääkärikontaktin"

<sup>(&</sup>quot;Quite often we can provide a good answer to a clients questions which then avoids the unnecessary physician contact.")

- "No aika paljon sattuu just tätä et lääkkeitä otetaan väärin tai väärällä tekniikalla tai vääriä määriä tai lääkekuuri lopetetaan kesken tai yliaikasin".
- (" Quite often happens that medication are taken wrong or by using incorrect technique or wrong dosages or the medicine course is stopped right in the middle or too early.")
- "Se on sellanen turvallisuustekijä heille että he tietää että sä vastaat miks he käyttää tätä lääkettä tai ei käytä ja se et jos he saa meiltä sen vastauksen se riittää heille."
- (" It is a kind of security factor from them so they know that you will answer for what reason they are using or not using this medication and if they get the answer from us, it is good enough for them.")
- "...asiakkaat osaa sitten arvioida itseään ja omaa oloaan".
- (" ... the clients can evaluate themselves and their own condition".)
- "...joillakin asiakkaille ei tavallaa oo sitä kivuntunnetta et minkälainen olo niille tulee kun ottaa vähän liikaa ja siksi niitte on hyvä tietää lääkkeistä"
- ("...some of the clients do not have the sense of pain meaning that what kind of feeling they will have incase of overdose of medication and that is the reason why they should know more about the medications.")

The opinion about the importance of medication guidance were different; some of the nurses considered that the clients did not appreciate the medication guidance enough, or it was not important for them.

# 8.3 Sources of medication guidance for home care clients

The sources of medication guidance were categorized into two separate areas; primary and secondary sources. The nurse's mutual opinion was that the registered and practical nurses were the first source of medication guidance to the clients since they were the closest contact in health care from whom the client can ask advice or guidance. A physician was also a source of medication information during the clients visit but it was not considered that effective or memorable from the client's point of view. The informants revealed that the clients actually did not remember what the physician has been explaining during the visit. Also the other reason was that the client did not dare to ask anything extra from the physician due to hierarchy and the reason that they did not want to bother him/her. It was mentioned that also significant others like family members (husband/wife) were a source of medication guidance to the client. The nurses of course doubted the trustworthiness of how relevant the medication guidance from the family members can be and they mentioned that it can even do more harm than good when the family members are the guide givers since they are not health professionals and the information can be fallacious. It was suggested that pharmacists could be a good source of

providing medication guidance to the clients considering that they have the most resent information due to medication. But because the home care clients are not able to visit the pharmacy as a result of their poor health, the guidance getting from the pharmacy was considered as been problematic.

"No me hoitajat annetaan ohjausta ja sitten niinku lääkäri"

(" well we nurses do give guidance and then the physician")

- "...lähinnä lääkeohjausta saa meiltä kotihoidon työntekijöiltä, myös lähihoitajilta, harvemmin valitettavasti apteekista kun eihän nää meiän asiakkaat käy siellä apteekissa jossa se tietämys tietysti sitten olisi mutta lähinnä siis meiltä. Ja sitten omaisilta, mutta se on sitten vähän kyseenalaista sitten onks se tieto paikkaansapitävää lääkeohjausta sitten."
- ("...Primarily the home care registered nurses provide the medication guidance as well as practical nurses; unfortunately less frequently the guidance comes from the pharmacy since our clients do not visit the pharmacy in where the know-how is, but most likely it comes from us. Also from the family members but it is questionable if the knowledge is accurate. ")
- "Kun lääke on määrätty niin kyllä se lääkäri aina pienen lyhyen infon antaa miksi lääke aloitetaan ja kenelle se sitten jää mieleen ja kenelle ei. No meidän asiakkaat hyvin harva käy itse apteekissa. Kun he tulee tänne niin he ovat melkein siinä kunnossa että he eivät kodin ulkopuolella liiku."
- ("When the medication has been prescribed then the physician usually gives information about why they have been prescribed and some people remember it, some do not. Very few of our clients do visit the pharmacy. When they become our clients, they are pretty much in that shape that they cannot move outside of their home.")

The nurses also stated that they did not give guidance to their clients spontaneously if it was not required. Usually the guidance is given only when there is a new medication prescription or changes in the current medication list.

- "No en mä oikeestaan jos ei sitä kysytä niin en mä lähe sitä edes tarjoamaan tai ohjaamaan näistä lääkkeistä. Jos alkaa uus lääke niin sillon kans sama juttu et kerrotaan et nyt alkaa tää lääke, kävitte lääkärissä, todettiin se ja se ja mihin vaivaan tää nyt on ja aluks sit vähän seurataan sitä vaikutusta ja sit jos se toimii niin sit jatketaan sillä."
- (" If the client do not ask anything about the drug I am not going to offer or provide any guidance. In case of new drug, it is pretty much the same thing that we tell to the client that this medication has been prescribed, you went to the physicians and the physician discovered the problem where he/she prescribed the correct medication. At first we will follow the effect of the drug and if it works, we continue with that. ")

The secondary sources the nurses mentioned were the same aged friends who had the similar diseases and with whom they were exchanging information and comparing medications. It was also suggested that the clients were looking for the information from the Internet but since the majority of home care clients are elderly, only a small percent of them actually own a computer so it is questionable how much information actually comes from online. Some of the client's also got some information from the paper leaflets but according to the nurses that is not so often used. Since there are a few home care clients who are able to run their own errands, they go to the pharmacy and get their own medications as well as deal them daily. It was told that the pharmacists were providing guidance related to those specific medications.

"He saavat keskenään ystäviltään missä tulee kans sitä rinnakkaisvertailua"

(" They get if from their friends so the parallel comparison what comes with it.")

"Ehkä näillä nuoremmilla on se netti käytössä josta he sitten osaavat hakea googlesta.... Suurin osa on niin vanhoja että heillä ei ole mitään nettiä."

("Perhaps the youngsters have the internet from where they can search in google...most are so old that they do not have internet...")

"Annetaan mainoksia ja sit omatoimisesti apteekista."

("We give advertisements and then the clients get guidance independently from the pharmacy.")

The nurses were describing that when they were busy dealing the clients medications to the dispenser, during that they provided guidance to their clients.

"...yleensä se on se lääkkeenjakotilanne kun me laitetaan dosettiin niitä lääkkeitä ja sit katotaan et mitä muita lääkkeitä on käytössä kun ne dosettiin jaettavat..."

("...usually it is the time when we deal the medication to the client's dispenser and then we will also take a look what other extra medication the client have than the ones we deal...")

8.4 Co-operation between pharmacists, home care nurses and clients.

The nurses explained that the interaction between the pharmacists and clients does not exist that much since they do not encounter each other so it is not possible that medication information will be exchanged. It was suggested that sometimes the client might call the pharmacy and ask advice due to their medications. Some of the nurses did not want to guess anything since they were not sure how much the pharmacists provide guidance but they thought it is anyways quite minimal. Most of the informants agreed that the medication guidance is mainly received from the nurses. Only a small percent of the home care clients do get guidance from the pharmacists due to the fact that they do not generally visit the pharmacy.

- "...se on kyllä tosi vähästä koska farmaseutit ja meidän asiakkaat eivät kohtaa missään vaiheessa..."
- ("...the intercommunication is very limited since pharmacists and our customers do not meet at any stage...")

The co-operation between the nurses and pharmacists does not happen that much if at all. The nurses order and pick the medications up weekly from the pharmacy. Occasionally they might exchange some information while there but not often. The nurse pondered whether the face-to-face co-operation is really needed since the home care has its own physician who prescribes the medications. The nurses keep them updated, order the medication form the from the pharmacy and deliver them to the clients. Occasionally when the nurses visit the pharmacy, they ask about the counteractions of different medications as well as what is the effect on the client. They also ring the pharmacy quite often and ask the advice. They were also describing that in case the client needs medications immediately, the pharmacy prepares it instantaneously so the service for the nurses is excellent.

- "...no ei oikeestaan hirveesti yhteistyötä ole. Meillähän on omat lääkärit jotka tekee ja kirjottaa ne reseptit ja me huolehditaan et ne pysyy ajan tasalla."
- ("...actually there is not that much co-operation. We have our own physicians who will do and write the prescriptions and our nurses' duty is to keep them up to date.")
- "...joskus on joku uusi lääke niin saatetaan kysyä farmaseutilta sopiiko nää yhteen keskenään ja semmosta mut ei oikeestaan hirveen paljon."
- ("...occasionally there is a new medication we might ask the pharmacists can these two medications go together but not that often.")
- "...aika vähäistä se yhteistyö kyllä on. Tilataan kirjallisesti lääkkeet, käydään hakemassa ne valmiit pussit pari kertaa viikossa sieltä. Jos tulee joku uus lääke niin kyl heiltä voi kysyä et mikä tää on. Tai sit voidaan soittaa sinne. Kyllä auttavat kun puhelimitse soittaa..."
- (" ...our co-operation is quite limited. We order that the medications in written, pick them up twice a week. In case of a new drug, we can ask the pharmacist

more specific guidance. Or we can give them a call. They always give phone counseling...")

"...sieltä voi hakea lääkkeet koska tahansa ja saadaan se heti...tosi hyvä palvelu kyllä meille on."

("...we can pick up the medications any time and we always get it immediately...the servis is always excellent.")

8.5 Development of the medication guidance and co-operation between home care nurses and pharmacists

The nurses did not have a clear opinion about how to develop medication guidance. It was suggested that maybe the co-operation with the pharmacist could somehow enhance the medication information provided to the clients. It was also said that since the medicine packages include descriptions, that is quite enough information for the client and it is the physicians obligation to give the guidance in that stage already, not the nurses or the pharmacists duty. One idea was proposed that there should be a home care pharmacist who could be responsible for all the medications and have a connection with the nurse and physician.

- "...tota kyl yhteistyö apteekis kanssa jos sitä saatais yhtään lisää niin tietysti auttais huomattavasti asiaa."
- ("...if there would be more co-operation with the pharmacy that would be helpful...")
- "...kyl ihan kohtalaisesti toimii näinkin..."
- ("...it works moderate like this...")
- "...Espoossa oli semmonen tarkotus että et jossain vaiheessa meille tulis kotihoitoon farmaseutti ja ajatus on tosi hyvä..."
- ("...Espoo home care was supposed to have a pharmacist already earlier and I liked the idea...")

The informants had different view points about the necessity of co-operation. Some of them thought that co-operation is not necessary in home care since the nurses as well as physicians are responsible for providing medication guidance and possibly there would not be anymore room for another party in the home care client's health care chain. On the other hand, it was also considered that creating an integral co-operation between these two health care facilities

could improve the quality of medication guidance although the nurses could not give any exact solution how the co-operation would enhance the medication guidance.

- "...Ihan jos mä ajattelen vain sitä kotihoitoa niin ei tässä tarvita..."
- ("...if I only think about the home care so that wont be needed...")
- "...no se on vaan semmonen yks lenkki lisää et kun lääkärit määrää ja ne sit siellä kattoo et ne lääkkeet sopii hyvin yhteen keskenään ja sit me saadaan reseptit ja me tilataan sen mukaan."
- ("...it is only a one link more since the physician prescribes the medications, the pharmacists will check that the medications go together and then we get the prescriptions and order them...")
- "Yhdessä tekemällä saataisiin parempia tuloksia."
- (" By working together we would achieve better results")

The nurses described their ideas for development which were that the pharmacists could communicate with the nurses more often and tell their view points about the medication guidance. Then it was suggested that the pharmacist could add more detailed information on the side next to the physician's order. It was also proposed that the nurses and pharmacists could have meetings occasionally where they could talk about current affairs meaning what is happening in both fields. Written clear instructions which could come along with the medicine package were also desired. That would be beneficial from both the nurses and clients point of view since they could both check the instructions. During the interviews, one of the nurses remembered that there was a proposal for a home care pharmacist in Espoo city who could look after all the home care client's medications. For some reason the proposition was not approved yet the nurses though that idea was great and should be implemented.

- "Et ois kiva tietää et mitä ne toivoo tai sanoo et sillee pidemmän päälle ois hyödyllistä, et ei sieltä nyt ainakaan mitään konkreettista ole tullut."
- (" I would be nice as well as beneficial to know what are they wishing or saying, at least now they have not said anything." )  $\,$
- "...meil itseasiassa oli kerran Tapiolan apteekin kanssa semmonen tapaaminen. Se oli tosi hyvä mut se oli vaan kerran et niit vois olla vaikka enempikin. Et siel voi niinkun molemmin puolin ottaa asioita esiin."
- (" ...once we had a meeting with the Tapiola pharmacy. It was very nice but only once so they would be arranged much more. Different issues could be raised for both sides.")
- "...et jos tulee ohje niin se vois olla vaikka puolikas a4 kirjallisena et miten menee jotkut tietyt antibiootit."

- ("...If there is instruction about some specific antibiotic, it could be for instance half a4 in written.")
- "...Espoossahan oli semmonen tarkotus jossain vaiheessa että meille tulis kotihoitoon farmaseutti. Mutta se ei tullut että en tiiä mitä siinä on tapahtunut mutta tällanen idea on ollut ja sehän on tosi hyvä."
- ("...in some point Espoo was supposed to have a pharmacists working in home care but for some reason it never happened but I think the idea was good.")

The general opinion about the current medication guidance and how it serves the clients needs at the moment were that the nurses thought it was quite fine at the moment and that the clients do get the medication guidance that they desire and require. The clients trust the nurse's expertise and are satisfied with the knowledge they get from nurses.

- "... kyl mä luulen et se niinkun riittävästi palvelee että he saa sen tarvittavan ohjauksen, kyl mä luulisin sitten näin. Et kyl mekin sitten otetaan selvää jos me ei tiedetä ja nyt ainakin sen perusteella mitä asiakkaat meiän kanssa nyt juttelee niin se on kutakuinkin riittävää."
- ("...in my opinion it serves well and the client gets the necessary guidance, I would imagine it is like that. We will find out in case we do not know something and according to our clients feedback they do get the necessary guidance.")

According to nurses, the primary source of medication guidance is a home care nurse and the secondary source is a pharmacist. They stated that the pharmacists have the best and most up dated knowledge about medications. Since the clients are not able to visit the pharmacy, the nurse is the closest person to provide the information. But, it was also said that if the nurses are the only ones to provide the guidance, there should be more medication training.

- "...apteekkihan on se paras asiantuntija mutta se tulee aika paljon meiltäkin että me saatetaan laittaa lääkärille viestiä että onks tässä tämmönen et nää ei oikein sopis. Mutta meiän tieto ei ole riittävä siinä ollenkaan, siinä farmaseutti olisi tosi kiva."
- ("...the pharmacist is the best specialist but we also consult and inform the physician if something does not go together. But our knowledge is not adequate enough; there a pharmacist would be handy.")
- "...yleensä ne kysyy eka meiltä ja kyl me sit osataan aina vastata et ei ne lähe niinkun keltään muulta kysymään...kyl he luottaa meiän ammattitaitoon."
- ("...mainly the clients do ask us first and we can give them a satisfactory answer, so they wont ask anyone else...they do trust our professionalism.")
- " Aika paljon me ollaan saatu lääkekoulutusta, mutta sitä pitäs olla paljon enemmän et jos se meiän huoleksi jää tämä lääkeohjaus niin koulutusta pitäis olla vieläkin enemmän."

(" We have had quite much medication training, but there should be much more if it is our duty the provide medication guidance.")

# 8.6 Home care nurses' evaluation of the study

The opinions related to this study were positive. The nurses commented that this study is an awakening call for them professionally meaning that our research has a positive influence towards maintaining the nurse's expertise. The study revealed that the nurses started to reflect their own learning and the level of knowledge and that they could get more education related to medication and grow professionally. Through this research co-operation would be created between the pharmacy and home care.

- "Se varmaan ehkä herättelee ajattelemaan just sitä oman tietämyksen tasoa että aika paljon pystyy itekin ottamaan selvää asioista mutta se on kuitenkin tärkeetä et ne lääkkeet on ja et ne lääkkeet menee oikein. Et sitä omaa ammattitaitoaan pystyy lisäämään."
- (" It does makes us to ponder our own level of knowledge so that we can find out matters on our own but what is important is that the clients do have the medications and they have been deal correctly. We can increase our own professionalism.")
- "...Kyl mä luulen että on hyötyä että ja ehkä tää saa ainakin meiät niinkun vähän miettimään sitä just mitä me apteekin kanssa voitais tehdä enempi yhteistyötä et vähintään se hyöty on ilmanmuuta. Et se tieto jotenkin kohtais oikeessa paikassa.
- ("...I think this is beneficial for us and it will make us to think how we could create more co-operation with the pharmacy. So the knowledge would meet at the right place.)

It was said that this research is very much needed especially in home care because there is only the one nurse who deals the medications and the clients do not necessarily pay attention to what they take daily from the dispenser. The number of medication errors could be avoided just by increasing the medication guidance so the clients are aware of what they consume. Also the clients detect side-effects more often due to medication guidance.

- " Ilman muuta on hyötyä tästä tutkimuksesta"
- (" this study is certainly useful")
- "...nimenomaan sitäkin tässä kun kotihoidossa kun jaetaan lääkkeitä et he tietäis ettei tulis tavallaan meille sitä että nää on väärin tai et täällä on ollut virhe et jos on ollut joku muistamaton asiakas niin se tablettivirhe ei tule esille et tavallaan se lääkeohjauksen lisääminen enemmän ja enemmän konkreettisesti estäis virheet et kun asiakkaat tietäis lääkkeistään mahdollisimman paljon."
- ("...Since we are dealing the clients medications to the dispenser, our errors do not necessarily be revealed if there is a forgetful client so by increasing the

medication guidance would prevent errors if the client would be aware more about their medications. ")

The ideas suggested about the future research were that there should be research done regarding the single dose delivery, what are the positive and negative sides. Also the nurses were considering how problematic it is occasionally when the clients are keeping their medications at home and storing them incorrectly.

- "...annospussit, mitkä ovat positiiviset ja mitkä ovat ne negatiiviset puolet. Hyödyt ja haitat. Siina on paljon plussaa mutta siinä on paljon myös haittaa kun asiakkaat eivät tiedä että mikä mikäkin on. Ja jos tulee vaikka väärä pussi niin eihän siinä mitään ja he niinkun vaan ottaa sen."
- ("...what are the negative and positive sides about single dose delivery. Pros and cons. There is a lot of plusses but also disadvantages when the clients do not know what medication is what. And if the client has a wrong medication bag, they will take it anyways. ")
- "...kotona lääkesäilytys, kun täällä on vähän jääkaapin päällä, jääkaapissa, jääkaapinalla."
- ("... storing the drugs at home since the clients keep their medications above the fridge, inside the fridge, under the fridge")

#### 9. Trustworthiness and Ethics

Trustworthiness and ethics go side by side in qualitative research. These two concepts affect each other. Ethics concerns the quality of the research. When conducting nursing research, it is vital to follow ethical principles that are used to justify actions and assist in the resolution of moral dilemmas. (Tuomi & Sarajärvi 2009, 127.) There are four different ethical principles which are guiding the research. Those are autonomy, nonmaleficence, beneficence and justice. (Talbot 1995, 36.)

Autonomy gives the individual a choice to participate in the study and it must not be compulsory or there should not be threat of harm. This principle also includes the terms voluntariness, understanding and disclosure. The informants have an option to withdraw from the research at any time without a penalty or loss of privilege. The principle of nonmaleficnce explains that the individual won't face any harm from participating in the research study. Beneficence states that the individual acts to prevent harm, remove harmful conditions, and promote positive benefits for others. The benefits should defeat any associated risk. According to Talbot the principle of justice obligates there should be a fair selection when choosing samples and populations for research study. A principle of justice also includes the participants' right to fair treatment and their right to privacy. (Talbot 1995, 36-37.)

We followed the ethical guidelines throughout our research process. The confidentiality was considered while doing the interviews. We tried to stay neutral and understandable. The participation in our research was voluntary so the informants were informed that they could withdraw from the study at any time even though they had assigned the consent form. The interview questions were sent to all informants in advanced before signing the inform consent form. We ensured that all the data given to us will stay anonymous and will be destroyed according to the regulations after publishing the thesis. When collecting the research data, it is important to pay attention to confidentiality meaning that the recording is not done secretly (Eskola & Suoranta 1998, 56.) We only started to record the interview when we had the permission from the participants.

The permission letter was sent to the manager of Espoo home care as well as to Tapiola pharmacy for the permission to conduct the research. Our thesis plan and the consent forms were sent via post to parties, registered nurses and pharmacists. The consent forms as well as the interview were translated in both languages to avoid misunderstandings. And the reason why both languages English and Finish were used in this research was because one of the researchers is Finnish and the other is an English speaking person.

There were a few difficulties during the interviews which had an effect on the reliability of the thesis. Our tape recorders were too far away from the informants so it was challenging to transcribe the interviews into written text. Also during the one interview, there was an outsider in the same room listening to the interview which we did not notice immediately, so that might have an effect towards the participant's answers.

The trustworthiness of the study is based on the researcher's skills to apply accurately the scientific process. (Tuomi& Sarajärvi 2007, 127, 132.) It includes four aspects, which are credibility, transferability, dependability and conformability, and can be widely secured by following all of them. (Talbot 2995, 487-488.)

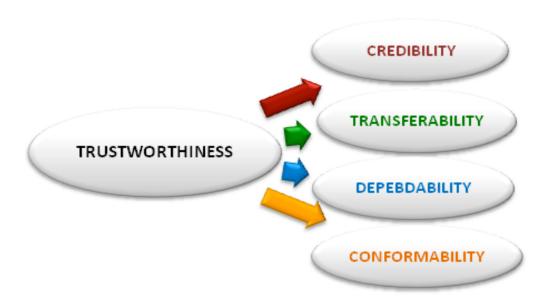


Figure 6. Trustworthiness (Talbot 1995, 487-488)

Credibility confirms that the researcher has developed reasonable analysis and conclusions. (Talbot 1995, 487). The principle of credibility can be achieved by for example staying in the field for a relatively long time, peer debriefing, in which the peer tests the researcher, and providing the informants with possibility of reviewing the interpretations and conclusions. (Talbot 1995, 487-488; Kylmä & Juvakka 2007, 128.)

The informants in this study were all professionals in their own field. The participants in Espoo region were all registered nurses and they had a minimum of two years of work experience in home care. The pharmacists professional experiences ranged from 20 years to 25 years and they also had a connection to home care. The interviews were translated into both languages Finnish and English to avoid misunderstandings. We conducted two of our interviews in English and rests of five were in finish. The interviews were also tape recorded and transcribed into written format. We were consulting our thesis supervisors through all the stages of the thesis process. Although those two informants were native Finnish speakers it was fair towards the researchers have some of the interviews done in English. On the other hand, the informants were not able to express themselves clearly when not using their own mother tongue so that might have an effect towards our results.

Transferability refers to the generalization of the data or the extent to which the findings of the study are suitable in a similar type of setting. The principle of transferability can be followed by providing a sufficient amount of information about the informants and the environment. (Talbot 1995, 487-488.)

According to Kylmä & Juvakka (2007, 129) dependability refers that someone outside of the research can follow the major features of the study process logically. Our aim was to describe the study process meticulously in order to make it easier for anyone to follow. Two supervisors with extensive academic experience provided us with some guidance and tutoring throughout our thesis process.

Confirmability refers to the objectivity between the researcher and the informant about the data's accuracy, relevance, or meaning. All of our results were derived from the data provided by our informants. The researcher's self with individual values and beliefs is an integral part of the analysis and cannot be completely eliminated from the study process. (Talbot 1995, 487-488; Polit & Beck 2008, 196.) Although we had some preconceptions about what the informants will say during the interview, that did not have an effect on the results of the study.

The participants were informed that the research is a part of the curriculum's final bachelor thesis (Appendix 1 and Appendix 2), and that the research approval was obtained from the institution's administration prior to the interviews. A consent form (Appendix 3), as a written agreement of the participants to take part in the study, as well as a written verification of understanding of their rights, was given to the informants before the start of the interviews. Throughout the study, confidentiality and anonymity were maintained in the way that the names of the participants or any other information of the interwees', were not be published anywhere. A copy of this bachelor thesis will be sent to Espoo Home Care, Tapiola Pharmacy and Laurea University of Applied Sciences after being published. The researcher by no means caused any harm to the participants mentally, socially or physically (Talbot, 1995, 37). The study was based on voluntary participation, and the informants were free to withdraw from the interviews whenever they wished to do so (Polit et al. 2001, 82).

### 10. Discussion

The findings of the study describe nurses' and pharmacists' points of view on the home care client's medication guidance. In this study we aimed to open up the thoughts of the home care nurses and pharmacists and share our observations with the reader. The topic of our research was chosen for a reason. After a preliminary literature search and the consultation with the project co-coordinator and the interested party, we concluded that there was no previous research done in this area. Although the information is needed, desired and could be utilized by the interested party. For this study the qualitative research method was used. The data was collected through face-to-face interviews with structured open-ended questions and later on examined with qualitative content analysis using the deductive approach.

Good medication guidance impacts effectiveness of the client's treatment. It is crucial for the individual to know how to take the prescribed medication. Improper medication administration may lead to health problems, inefficiency of the medication and therefore is expensive for the society. (Innovation report 2010.) Both pharmacists and nurses agreed on that.

Client guidance is an important part of the treatment process as guiding a client through- out the caring process is necessary (Kääriäinen et al. 2005, 10). The main sources of medication guidance for home care clients, according to our informants, are home care nurses and sometimes relatives. A registered nurse is a connective link between the client and the health care providers. She or he ensures constant co-operation and networking of all health care providers involved in a client's care, which is essential in meeting the necessities of the client. (Ikonen & Julkunen 2007, 145-149.)

Each client has his or her own control needs and it is important to concern clients individually. Pharmacists pointed out the importance of asking the client of his or her health condition, which may be affected by the medication, especially in the case of elderly, who are the main clients of home care. Nurses admitted the fact that the client's awareness of the medication is a security factor for themselves. By being able to interpret his or her sensations and to recognize the negative symptoms, the client could contact the health care professional immediately and hence avoid possible incidents. Pharmacists insisted on the fact that even if the client does not ask about the medication it is crucial to ensure that the client knows how to consume the medication properly. Clients do need instructions especially regarding their illness and medications, which would be suitable, according to client's special needs. (Kyngäs 2003, 124, 744-751.)

Due to the fact that all medications for the home care clients are delivered from the pharmacy, pharmacists can also be a source of medication guidance for home care clients. But since the pharmacists know nothing about the home care clients, except for their lists of prescriptions, it is impossible for them to provide optimal guidance on medication like the pharmacists deliver to their every day customers. Furthermore, according to the law, when delivering medication from the pharmacy, the personnel must ensure that the drug consumer is aware of the correct and safe use of the drug. (The Association of Finnish Pharmacies, 2005.)

Pharmacists admitted that they don't know what happens to the medication after it leaves the pharmacy, how nurses deliver it to the clients, what medication guidance, if any, home care clients receive from the nurses. Furthermore, both pharmacists and nurses concluded that they know little about the professional responsibilities of each other. During the working hours they have few minutes' intersection with each other twice a week and have no mutual gatherings.

There were two opposite opinions about the current medication guidance system and the necessity of face to face co-operation between the home care nurses and the pharmacists. Some of the participants admitted that the medication guidance is not in an adequate level and therefore the co-operation is required for the well-being of the clients and could improve the quality of medication guidance. The informants are willing to get familiar with the work of each other.

The other part declared that the present medication guidance system is quite fine and there is no need for an additional party in the client's health care chain. Arguments for that were, first of all, the presence of a home care physician, who prescribes, checks the medication and provides necessary guidance either straight to the client and/or through the home care nurse. Secondly, each medication package contains a medication description, which is clear and is quite enough for some clients.

Since the pharmacists are health professionals specialized in medicines they do have the most up dated knowledge about medications. The pharmacists wished that they could be more involved with providing the medication guidance since it is one of their most important tasks. Although all of the participants also wished a physician were a main source of medication guidance, in practice it is not always possible. As a result a home care nurse is often the closest professional to provide the medication guidance; hence it was suggested by both the pharmacists and the nurses that if a nurse would be the only provider of the medication guidance, he/she should receive an additional medical training. (The Association of Finnish Pharmacy 2005, 8.)

A few other suggestions on the medication guidance system were proposed by the informants. Firstly, a shared data base for all home health care professionals was introduced. This would allow better communication between the care givers. Nowadays there is a shared database only between a nurse and a physician, pharmacists are outside the field of care. (Tippa Projekti 2000-2001.)

Secondly, pharmacists and home care nurses could have more collaboration as well as common meetings, which would allow better co-operation. On the meetings they could discuss each client health condition, share ideas on the care improvement and consult each other. Pharmacists could also provide nurses medication counseling. (Ministry of Social Affairs and Health 2006, 36.)

A third idea was a single dose delivery, which would reduce the medication errors by allowing the pharmacists to check the possible medication counteractions and save time for the nurses, although this idea had limitations from the nursing point of few. In their opinion while dispensing the medications themselves, nurses know the name and the appearance of the medication, which is important. (The Association of Finnish pharmacies 2005, 8.)

A fourth idea suggested was having separate pharmacists for the whole Tapiola area, who would control each client's medication list regarding possible medical counteractions, contact the physician and the nurse if necessary, deliver the medication, and provide medication guidance to both the client and his or her nurse.

Fifthly, pharmacists could be present during the first home health care team visit in order to check a new client's medication list and discuss it with the client and/or the client's significant others. (Ministry of Social Affairs and Health 2006, 36.)

And finally, pharmacists recommended writing some extra notes vital information for the nurses on the new medication delivered from the pharmacy. This would make it easy for a nurse to remember crucial information later on when she transports the medication to the client. (Rantanen 2010.)

Pharmacists' and nurses' opinions about this study were positive. Some participants related our research to their professional awakening, suggesting that it might be a first step towards some possible positive changes in their work, such as additional education and co-operation with other health care professionals. It was admitted that this research is needed, especially for the clients, most of whom are not even aware of what they consume.

Our participants proposed several suggestions for future research. Home care nurses will be interested to know the positive and negative sides of a single doze delivery bags. They would also like to find out how to correctly store medications at clients' homes. Pharmacists suggested more studies on nurse-pharmacist co-operation as well as what is the physicians role in the health care team.

We would suggest including home care clients medication guidance into the University of Applied sciences (AMK) studies. It would be also interesting to find out home care clients opinions about the services provided to them. We would also recommend the future researchers to expand the research area and interview nurses from other municipalities. To know the influence of the participant's work experience and age on the study results would be beneficial for future researchers.

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**Appendices** 

Appendix 1 Informed consent of the informant

18.02.2010

#### INFORMED CONCENT OF THE INFORMANT

By signing this consent form I state that:

- I have read the information about the study being conducted by Anni Heinonen and Ekaterina Kosinova of the Laurea University of Applied sciences, Otaniemi, Espoo.
- I have had the opportunity to ask all questions related to this study and received satisfactory answers to my questions, including any additional details that I wanted.
- I agree of my interview session being audio recorded as well as written down.
- I am aware that the direct loans from the interview will be included in the findings session of the thesis. All the direct loans will be anonymous.
- I know that I am free to withdraw my consent from the study at any time.
- I participate in this study of my own free will.
- I am informed that whenever I have any comments or concerns resulting from my participation in the study, I could contact the researchers: Anni Heinonen and Ekaterina Kosinova.

Informant's Name	
 Informant's Signature	
imormant s signature	
Place and Date	

Appendix 2 Haastattelusuostumus

18.02.2010

#### **HAASTATTELUSUOSTUMUS**

Allekirjoittamalla tämän haastattelusuostumuslomakkeen täten vakuutan että:

- Olen lukenut tutkimukseen liittyvän aineiston, jonka tuottajina toimivat Anni Heinonen ja Ekaterina Kosinova Laurea Ammattikorkeakoulusta, Otaniemen yksiköstä, Espoosta.
- Minulla on ollut mahdollisuuus kysyä tutkimukseen liittyviä kysymyksiä ja saada riittävästi tietoa kysymyksiini.
- Hyväksyn että haastattelut nauhoitetaan ja että muistiinpanoja saa tehdä haastattelun aikana.
- Olen tietoinen että haastatteluista tulleita suoria viittauksia tullaan käyttämään opinnäytetyössä. Kaikkia suoria viittauksia käytetään nimettöminä.
- Olen tietoinen siitä että voin vetäytyä tutkimuksesta milloin tahansa.
- Osallistun tutkimukseen omasta vapaasta tahdostani
- Olen tietoinen siitä että jos minulle tulee epäilyksiä, kommentteja, kysymyksiä osallistumisestani tutkimukseen, voin ottaa yhteyttä tutkijoihin Anni Heinoseen tai Ekaterina Kosinovaan

Tutkimukseen osallistujan nimi			
Tutkimukse	en osallistujer	ı allekirjoitus	
Aika ja päiv	ämäärä		

## Appendix 3 Interview questions

#### **ASSESSMENT**

# 1. Definition/Description of Medication guidance

- 1.1. What do you understand by medication guidance?
- 1.2. What kind of medication guidance you provide to home care client?

# 2. Importance of Medication guidance

- 2.1. Why do you think it is important for the home care clients to receive guidance on medication they consume?
- 2.2. Do you think clients perceive the medication guidance? Please specify you answer.

#### **PLANNING**

# 3. Sources of the Medication guidance

- 3.1. From whom or from where do the home care clients get medication guidance?
- 3.2. Where else do/can clients get medication guidance?
- 3.3. How can pharmacist/home care nurse provide medication guidance to home care clients, please describe?

# 4. Cooperation between home care nurses and pharmacists

- 4.1. What do you know about the medication guidance home care client receives from Tapiola pharmacy/home care nurses?
- 4. 2. Can you explain your cooperation with home care nurses/pharmacists?
- 4.3. What kind of medication guidance do you expect home care nurses/pharmacists provide to home care clients?

#### **IMPLEMENTATION**

## 5.Improvement of the Medication guidance

- 5.1. Do you have any suggestions on how medication guidance can be improved?
- 5.2. Could you please describe how you think present medication guidance system work to serve clients needs?
- 5.3. Whom or where would you prefer the home care client to get the guidance on medication from? Why do you think so?

# **EVALUATION**

# 6. Evaluation of the research

- 6.1. What do you think about this research?
- 6.2. Do you have any general ideas/suggestions about medication guidance home care clients receive?

### Appendix 4 Haastattelu kysymykset

#### **ARVIOINTI**

## 1. Lääkeohjauksen määritelmä/ kuvaus

- 1.1 Miten ymmärrät lääkeohjauksen?
- 1.2 Minkälaista lääkeohjausta tarjoat kotihoidon asiakkaille?

# 2. Lääkeohjauksen tärkeys

- 2.1 Miksi ajattelet että kotihoidon asiakkaiden on tärkeää saada lääkeohjausta lääkkeistä joita he käyttävät?
- 2.2 Arvostavatko potilaat mielestäsi saamaansa lääkeohjausta? Olkaa hyvä ja täsmentäkää vastaustanne?

#### **SUUNNITTELU**

### 3. Lääkeohjauksen lähteet

- 3.1 Keneltä tai mistä kotihoidon asiakkaat saavat lääkeohjausta?
- 3.2 Mistä muualta kotihoidin asiakkaat saavat/ voivat saada lääkeohjausta?
- 3.3 Kuinka farmaseutti /sairaanhoitaja voi tarjota lääkeohjausta kotihoidon asiakkaille? Olkaa hyvä ja kuvailkaa.

# 4. Sairaanhoitajien ja farmaseuttien yhteistyö

- 4.1 Mitä teidät lääkeohjauksesta jota kotihoidon asiakkaat saavat Tapiolan apteekin farmaseuteilta / kotihoidon sairaanhoitajilta?
- 4.2 Voitko kuvailla yhteistyötänne sairaanhoitajien/ farmaseuttien kanssa?
- 4.3 Minkälaista lääkeohjausta oletat sairaanhoitajien/ farmaseuttien tarjoavan kotihoidon asiakkaille?

#### **TOTEUTUS**

## 5.Lääkeohjauksen kehittäminen

- 5.1 Onko teillä minkäänlaisia ehdotuksia kuinka lääkeohjausta voisi parantaa?
- 5.2 Olkaa hyvä ja kuvailkaa kuinka tämän hetkinen lääkeohjaus palvelee asiakkaan tarpeita?
- 5.3 Keneltä tai mistä kotihoidon asiakkaan olisi suotuisinta saada lääkeohjausta? Miksi ajattelet näin?

# **ARVIOINTI**

# 6. Tutkimuksen arviointi

- 6.1 Mitä ajattelette tästä tutkimuksesta?
- 6.2 Onko teillä yhtään ideoita ja ehdotuksia liittyen kotihoidon asiakkaiden saamaan lääkeohjaukseen?