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Are comprehensive and individually designed care and service plans for older people's home care a vision or a reality in Finland?

ABSTRACT

The global population is ageing and many older people want to continue to live in their own homes, supported by home care services. The basis for comprehensive care is real-time care and service plans, but more knowledge is needed about these plans to ensure that older people benefit from individual and comprehensive home care. Our aim was to describe the contents of older home care clients' care and service plans by using the Finnish Care Classification (FinCC), version 3.0, which includes the Finnish classification of nursing diagnoses (FiCND) and the Finnish classification of nursing interventions (FiCNI).

The data were collected during spring 2018 from 71 anonymised care and service plans provided by 47 registered and practical nurses who worked for one government-funded home care organisation in an urban region of Finland. We analysed the data using descriptive statistical methods. The documentation focused on daily activities, but was based on a narrow view of individual needs and comprehensive care planning. In addition, we found a statistically significant association between documented clients' needs (FiCND) and nursing interventions (FiCNI) in secretions, fluid balance, respiration and skin integrity. The client's age, gender, how long they had been receiving home care and the number of home visits they received each week were all associated with certain documented needs and interventions. Our findings provide new knowledge about inconsistent documentation related to clients' needs and nursing interventions. Collaboration between technical and home care professionals is needed to develop and test specific content in the FinCC related to home care. The contents should also take into account the views of older people on how they want their care and services needs to be planned and delivered so that they can lead independent and fulfilling lives.

KEYWORDS: care and service plans, client records, home care, home care professionals, older people

What is known about this topic?

- Well-organised care planning is needed to ensure that older people receive timely home care services that meet their multidimensional needs.
- Effective care and service plans are vital.
- No standardised global documents exist for comprehensive care and service planning.

What this paper adds?

- It is crucial that we make the improvements needed to provide our ageing population with effective home care in a timely manner.
- The documentation we studied focused on health issues and daily tasks, rather than clients' individual needs, and this did not promote comprehensive care planning.
- Documents need to be based on structures and classifications that are relevant to home care services and staff need greater document and care planning skills.

INTRODUCTION

The current goal of home care for older people is to support them to live independently at home and enable them to benefit from the best possible health outcomes. From an ethical perspective, it is important to remember that older people have equal rights and these include living in their homes for as long as possible. Older people have autonomy when it comes to making decisions and setting goals about their care and services (Jacobs, 2018; Zhang et al., 2011) and they should be provided with timely care and services that are tailored to their individual needs. These care and services should be formulated in collaboration with home care professionals and relatives (de Carvalho et al., 2017; Parry et al., 2013).

The client-centred approach to older people's care refers to respect and the development of reciprocal relationships between the client, home care professional and relatives (Broderick & Coffey 2013; de Carvalho et al., 2017). Older clients' opportunities to take part in care planning and service decisions have been shown to have direct consequences on their quality of life and well-being (Daly 2017; Molony et al., 2018). Care planning and the services delivered to older people have been described from the viewpoint of client-centred approaches (Carrier et al., 2015; Daly, 2017; Schellinger et al., 2018). This paper extends the concept of client-centred care to the documentation, that is required to recognise the individual's needs and resources and support their goal to continue to live independently at home. Life expectancy is increasing in most countries and the number of older people with chronic diseases and often complex conditions and care needs will grow. These older people will need help with everyday activities, including basic hygiene, taking care of medication, nutrition and household chores (Sherman et al., 2012). In addition, home care services must take into account that clients need social activities and relationships to maintain a good quality of life and psychological well-being (Bökberg et al., 2015; Tan et al., 2016; Turjamaa et al., 2015). Well-organised care planning is needed to enable them to receive timely home care services that recognise their multidimensional needs (de Carvalho et al., 2017; Mariani et al., 2017).

The basis for comprehensive care and service planning, is a real-time care and service plan. This should include assessing the client's needs and goals, planning interventions and evaluating expected outcomes (Charalambous & Goldberg, 2016; de Carvalho et al., 2017). The interRAI Home Care Assessment System (HC) is an international system that is used to evaluate what care and services older home care clients need. The Finnish government recommends that this tool is used to evaluate the needs of older people living at home (Finnish Institute for Health and Welfare 2020). The assessment system is centred around clients and it guides professionals and helps them to determine what comprehensive care and service planning are needed to provide older people with high-quality home care (Hirdes et al., 2009). The basis for this client-centred approach is to provide older people with care and services that respect their individual life situations. Therefore, client-centred documentation, including the way that care and service plans are structured,

should adopt a holistic approach to older clients' health, well-being and functional ability. The documentation should also include the needs, individual resources, wishes and goals of older clients (de Carvalho et al., 2017; Molony et al., 2018).

However, the results of these systematic evaluations should be documented by using standardised structures to achieve the best possible benefits for clients. The Clinical Care Classification (CCC) has been developed to standardise structured documentation (Saba, 1994) and it has been used internationally (Saba, 2017). The FinCC encompasses elements of the CCC and it has been shown to be suitable for daily documentation in hospitals (Liljamo et al., 2012). However, there are no global standardised forms available for caring for older people in their own homes. That is why it is difficult to compare different countries, as the style and the content of the documentation differs (Bökberg et al., 2015; Turjamaa et al., 2015). It is also clear that the variations in the individual documentation of care and service plans between countries are needed. This is because of the differences in how older people live and are housed across the world and this is reflected in the differences in the care and services they receive (Bökberg et al., 2015; Charalambous & Goldberg, 2016). The main content of these plans should be based on healthy ageing models that are developed in collaboration with the client and their families. They should include what interventions will be supplied and the outcomes that are needed to achieve and maintain the client's goals (Parry et al., 2013; Saba, 2017).

However, it has been recognised by earlier studies that care and service planning has been based on a task-oriented approach. It has been described from the perspective of home care professionals and there has been less focus on the client-centred approach (Mariani et al., 2017; Turjamaa et al. 2015; Westerberg et al. 2016). Furthermore, the documentation has tended to focus on an illness-centred approach that emphasised clients' diseases and functional and cognitive disabilities (Turjamaa et al., 2015). This means that the professionals' documentation has tended to be based on routine tasks, such as intimate hygiene, dressing and eating. In addition, medication has played a strong role in documentation, but has focused on the mechanical tasks of administering drugs and making sure that the right doses were delivered (Bökberg et al., 2015; Mariani et al., 2017; Turjamaa et al., 2015). This practical daily living approach to documentation has meant that the plans have not focused on the clients' comprehensive needs in their home environment.

More knowledge and understanding of the contents of care and service plans is clearly needed so that the documentation associated with plans is based on the clients' individual needs and comprehensive situations. The aim of this study was to describe the contents of anonymised care and service plans that were provided by staff caring for older people in their own home in 2018. To do this we used the FinCC, which includes the Finnish classification of nursing diagnoses (FiCND) and the Finnish classification of nursing interventions (FiCNI).

The specific research questions were:

- 1) What types of clients' needs and nursing interventions were documented in care and service plans according to the FinCC framework?
- 2) To what degree did documented nursing interventions follow the documented clients' needs?
- 3) What client or home care service characteristics were associated with increased or decreased odds of clients' needs (FiCND) or nursing interventions (FiCND) being documented?

METHODS

Study design

We chose quantitative cross-sectional study methods to describe the content of documentation related to the older clients' care and service plans (Grove et al., 2013) and the FinCC as the framework for the analysis. Document analysis was chosen as the research method as this enabled us to achieve retrospective and objective knowledge of the research subject. The analysis included both quantitative and qualitative phases and was suitable for identifying, selecting and synthesising data from the care and service plans (Bowen, 2009; Corbin & Strauss, 2008; May, 2011.).

Research environment

We collected the data from a government-funded home care service in an urban region of Eastern Finland during spring 2018. Home care services in Finland are organised in collaboration with local municipalities and other organisations, such as private companies and the not-for-profit sector. The services that regular home care clients receive are based on legally required care and services plans, which should be drafted in collaboration with the client, their relatives and the home care professionals (Act 980/2012). These plans are stored in electronic nursing documentation systems and they are updated at least once a year, or sooner if necessary.

The government-funded organisation employs 80 full and part-time registered nurses and practical nurses to provide home care. In Finland a practical nurse is someone who has completed vocational college and training in the field of social and health care and gained 180 professional credits. We chose this particular organisation because its employees had taken part in training on how to handle documentation. The study population were clients of a government-funded home care service for older people. Although many studies use age to define the term "older people", Finnish legislation takes into account a person's age, but also looks at different physical, psychological, cognitive and social functional changes that appear as they age (Act 980/2012). Thus, the study population included some people who may not have been considered as "older

people” in other countries. In this study, we defined an older home care client as a person who had reached 63 years of age, as that is when people can claim their state pension in Finland.

Data collection

We collected the data in collaboration with the study organisation’s home care professionals. After receiving ethical approval from the Research Ethics Committee of the University (date 15.12.2015, Dnro 453/13.02.00/2015) and permission from the study organisation, one researcher (RT) from the research team provided the home care service manager with information about the study. They, in turn, provided the registered nurses and practical nurses with details of the research, the data collection method and our predetermined criteria for the data selection. In addition to providing the research information by email, two researchers (RT, JP) from the research team attended the monthly home care meetings so that the study participants could ask any questions. Our goal was to obtain, and examine, care and service plans relating to older clients who received home care services regularly. The meetings were held at the end of January 2018 and 47 of the 80 home care professionals attended the meetings. Each home care professional brought one or two anonymised care and service plans to the meetings. As some staff worked with the same clients, we found 10 duplicates, which we removed from the 81 plans that had been supplied. The final research data consisted of 71 care and service plans for older home care clients.

Description of data and analysis

The first step was to read the care and service plans to get an overview of the entire data and the 71 plans comprised 153 A4 pages. The structure of the plans varied because the electronic nursing documentation software and the nursing documentation didn’t follow any specific classification. Text was written in a semi-structured way using titles, such as the need for care and services, physical, psychological and social aspects. There were also sections within those titles where the staff could record any extra information they thought was relevant.

The second step was to develop a structured analysis framework to organise the data, based on the 17 components of the FinCC (Liljamo et al., 2012) (Table 1). The third step was to extract the data according to the components. The needs (FiCND) and interventions (FiCNI) components were treated as binary variables, for example we awarded a score of one if there was a documented need or nursing intervention and a score of zero if there was not. For example, if the individual care and service plan records stated that the client didn’t have any appetite, which was a diagnosis-related element (FiCND), or their weight was being regularly monitored, which was an intervention-related element (FiCNI), it was recorded under the FinCC *nutrition* component. After we had entered all the notes into the structured analysis frame, we quantified them by adding them up to see how many notes were recorded for each of the 17 FinCC components.

Insert Table 1 about here

We based our analysis on quantitative methods and entered and analysed the data using IBM SPSS Statistics for Windows, version 25 (IBM Corp, NY, USA). We used descriptive statistical methods, such as frequencies and percentages, to describe the background characteristics and the research data. (Bowen, 2009; Grove et al., 2013). Fisher's exact test was used if more than 20% of the cells had an expected count of less than five and Pearson's chi-square test was used to test any agreement between the FiCND and FiCNI components. Spearman's correlation was also reported whenever the agreement was statistically significant and this was defined as a p value of < 0.05 . Logistic regression was used and the odds ratios and 95% confidence intervals were reported to find agreement between the background characteristics and the FiCND and FiCNI components. We ran 17 separate models and continuous variables were not grouped. An odds ratio (OR) above 1.0 meant increased odds and a value below 1.0 meant decreased odds. The analysis was conducted by one researcher (JP) in collaboration with a biostatistician. The final analysis was confirmed by all three researchers.

Ethical considerations

We observed the ethical aspects of the scientific process at every step of the study (Pauwels, 2007; WMA, 2011). Prior to the data collection, we received the permission of the Research Ethics Committee of the University and the organisation we studied.

RESULTS

Background characteristics of the clients and the care and service plans

The data consisted of 71 care and service plans and the majority (69%) were for female clients. The age of the clients varied from 53 to 98 years and their mean age was 83 years. They had been receiving home care for a mean of two years and nine months and the largest percentage of clients (25%) had been a home care client for less than one year. The number of home visits varied from one visit to 42 visits a week and the mean number was 18.73 visits (median 21.00). The main goals of the home care visits were to assist clients with medication (35%) and everyday activities (34%).

Types of clients' needs and nursing interventions documented in care and service plans, according to the FinCC framework

We extracted 1170 notes from the 71 documents based on the components of the FinCC: 532 (45%) focused on the clients' needs (FiCND) and 638 (55%) were about nursing interventions (FiCNI). The top three categories covered by the notes were about *daily activities* (11%), *activities* (10%) and *coordination of care*

(9%). Notes about *respiration* (1%), *metabolic* (2%), *fluid balance* (2%) and *mental balance* (3%) were rarely documented. There was also a lack of notes about the *life cycle* of the older home care client (Table 2).

Insert Table 2 about here

The dependence between documented clients' needs (FiCND) and nursing interventions (FiCNI)

There was also a difference between the number of care and service plans covering clients' needs (FiCND) and the nursing interventions (FiCNI) in almost every component. In 10 of the 17 categories, the percentage of care plans with documented interventions exceeded the documented needs. For example, 94% of the care and service plans contained notes on the *medication* provided, but less than one-third (32%) of the plans contained notes about the clients' *medication* needs. In seven of the 17 categories, the percentage of care plans with documented needs exceeded the documented interventions. For example, clients' needs with regard to *sensory and neurological functions* were noted in 89% of the care and service plans, but only 14% of the plans contained notes about interventions in these two areas (Table 2).

We found a statistically significant correlation between the clients' *secretion* ($p < 0.001$), *fluid balance* ($p = 0.009$), *respiration* ($p = 0.037$) and *skin integrity* ($p < 0.001$) needs (FiCND) and nursing interventions (FiCNI). With regard to single care and service plans, if there was a note about the client's *secretion*, *fluid balance*, *respiration* or *skin integrity* needs, it was also more likely that there would be a note about the matching nursing interventions (Table 3). The correlations were not statistically significant between the needs (FiCND) and the nursing interventions (FiCNI) with regards to *daily activities*, *sensory and neurological functions*, *coping*, *activity*, *coordination of care*, *health behaviour*, *mental balance*, *nutrition*, *safety*, *medication*, *circulation*, *metabolic* and *life cycle*.

Insert Table 3 about here

The dependence between clients' or home care service characteristics and documented clients' needs (FiCND) or nursing interventions (FiCNI)

We found dependencies between the clients' ages and *activity* (FiCNI) and *sensory and neurological functions* (FiCND). As their age increased, the odds of the notes recording nursing interventions relating to *activity* (FiCNI) in their care and service plan decreased ($p = 0.045$). Furthermore, increasing age also increased the odds of notes about clients' needs (FiCND) in relation to *sensory and neurological functions* ($p = 0.026$). The clients' gender affected the dependencies between *fluid balance* (FiCND) and *coping* (FiCNI). There were fewer notes about *fluid balance* (FiCND) for men ($p = 0.028$) and more notes about nursing interventions for *coping* (FiCNI) for women ($p = 0.045$).

The length of time that home care had been provided affected the *metabolic* (FiCNI) category, with longer care periods associated with fewer notes ($p = 0.016$). Greater numbers of home visits per week increased the

odds of their notes mentioning nursing interventions for *coping (FiCNI)* ($p = 0.044$) and the need for *coordination of care (FiCND)* ($p = 0.010$) in the care and service plans. However, the dependence between the background characteristics and the rest of the other 11 components in the FinCC were not statistically significant (Table 4).

Insert Table 4 about here

DISCUSSION

Our study provided new knowledge about inconsistent documentation in relation to notes about older clients' needs and nursing interventions. The documentation that we studied tended to be based on a task-oriented approach that focused on mechanical daily activities. In addition, the documentation provided a narrow view of individual and comprehensive care planning and this meant that the client-centred approach remained unclear. Our findings confirm previous studies in this respect.

We identified three critical issues with regard to the care and service plan documentation we studied. These were the strong focus on the task orientation of the contents, the structure of the documents and the use of the FinCC and the influence of the clients' background characteristics and length and amount of care provision.

The strong focus on task orientation

The care and service plans differed with regard to what areas they covered and how many notes were made. Our results indicate that the documentation we saw was not comprehensive. The documentation in our study mainly focused on *daily activities*, *activity* and *coordination of care*, but also covered *coping*, *nutrition*, *medication*, *safety* and *secretion*. On the other hand, the documentation about *respiration*, *metabolic*, *fluid and mental balance* was poor and the *life cycle* content was missing. These findings showed some similarities to previous Finnish studies (Turjamaa et al., 2015). However, they were different to studies from other countries, with regard to documentation styles and classifications (Kang et al., 2015; Kim et al., 2017).

The results of our study showed that documentation focused on activities from the perspective of planned interventions. For example, in almost all (94%) of the care and service plans there were notes on *medication* interventions, but only about one-third of the plans contained details about the clients' *medication* needs (32%). However, this may be because one client's needs may need to be documented under multiple components, in order to guarantee comprehensive care and services. For example, client's needs related to *medication* could come under both *medication* and *daily activities*. Furthermore, we remained unclear about how much the older client's opinions were considered, since the documentation just detailed what the

professionals did. Our results were similar to previous studies, where documentation focused on daily tasks based on clients' physical needs and highlighted what the professionals did during home visits (Turjamaa et al., 2015; Westerberg et al., 2016). Older people's participation in making decisions about their own care and services has been related to their autonomy (Jacobs, 2018; Zhang et al., 2011). This is an important aspect of home care services, as these should aim to support older clients' autonomy and independence with regard to their daily functions and help them to live at home as long as possible.

The structure of the documents and the use of the FinCC

Although the documentation was task-oriented, there were also inconsistencies in the care and service plans with regard to different clients' needs and nursing interventions. For example, 89% of the care and service plans noted clients' needs with regard to *sensory and neurological functions*, but a much smaller percentage (14%) noted actual interventions in these two areas. This may have been because the care and service plans differed from the structure of the documentation that needed to be filled in by the home carers. The care and service plans were written in an open text format and the content didn't follow any specific classifications, which meant that there wasn't a coherent structure. Our findings confirm previous studies that reported incoherent home care documentation (Dykes et al., 2014; Patiraki et al., 2017). It is necessary to standardise documentation by using universal structures and categories to achieve good quality continuity of care and effective information transfer (Dykes et al., 2014; Kang et al., 2015).

We also found some obstacles concerning the use of the FinCC in the context of home care documentation. The framework was useful for pointing out the less frequently documented areas, but the classification components and categories may not be altogether suitable for these kinds of care and service plans, due to the characteristics of the nursing care provided. We were not sure if this problem related to the inflexibility of the FinCC or because the original data didn't follow any classification. However, this does raise the question about whether there is a significant difference between structured and open format documentation.

The influence of clients' background characteristics and home care provision

This study provided new knowledge about the contents of the documentation on care and service plans in relation to characteristics such as the client's age and gender, how long they had been receiving home care and the number of home visits they received each week. We found that age was negatively associated with documented notes about *activity*, but was positively associated with increased notes about clients' *sensory and neurological functions*. Furthermore, a greater number of home visits per week increased the odds that their care and service plans provided notes about nursing interventions related to *coping* or the need for *coordination of care*. However, studies carried out in various research contexts have stressed that helping older people to function is a crucial element of their lives and helps them to maintain daily living activities (de Carvalho et al., 2017; Fave et al., 2018; Mariani et al., 2017). It has also been reported that when older

people have cognitive disorders and memory problems these have consequences for everyday activities and they have greater care needs than those with other types of disabilities or illnesses. They receive more care, but still have more unmet needs than others (Aaltonen & Van Aerschot, 2019).

It has been noted that using classification-based documentation in previous research contexts has led to a task-oriented approach and inconsistent information (Charalambous & Goldberg, 2016; Turjamaa et al., 2015). This suggests that documentation that is based on an illness-centred approach is not appropriate for home care and that software that considers older people's specific needs in this context is needed. A second essential question concerns documentation skills as a whole. A significant issue for the future is to improve the skills, knowledge and documentation practices of home care professionals in relation to documentation that is based on nursing processes.

It is evident that documentation that adopts a routine approach, uses terminology that focuses on illnesses and disabilities and provides inconsistent information does not promote comprehensive care planning. As our population is ageing, it is even more important that we invest in effective home care that provides timely services. Comprehensive care planning that includes accurate documentation will make it possible to ensure that older people are able to live safely in their own home. Therefore, care planning needs to be based on individually designed care and services, including comprehensive needs' assessments and decision-making in collaboration with older people.

Strengths and limitations

A strength of this study was that it provided valuable information on planning older people's care and services based on documented material. We used document analysis, because it was an objective and reliable way of providing structured, but fragmented, data and quantifying confirmed results. Our findings do not represent the content of all home care clients' care and service plans and, therefore, they cannot be generalised. However, the findings represent care and service plans in the context of older people's home care. In addition, we used the FinCC, which is based on the international CCC system, as a framework for the analysis. Another strength of our study was that the analysis and the findings were confirmed by the research group members and previous studies. In addition, the statistical tests were carried out in collaboration with a statistician.

The limitations of this study included the purposive sample. We recognise that if we had used a randomised sample it might have been possible to capture more diverse and extensive data. There may have also been some bias in the study results, because the staff selected the care and service plans that we used as our research data. However, this decision was made by the researchers to ensure that the data were representative of the cases that the staff handled. In addition, the background characteristics could have been better adjusted using logistic modelling, when it came to determining the influence of client background

characteristics on care and service plans. We should also point out that the documented care and service plans that we analysed didn't follow any classification and it was challenging to make sure that the results were specific. However, we analysed the data by using a structured analysis framework based on the FinCC and have confidence in the results.

CONCLUSIONS

Our study focused on the contents of care and service plans for older people receiving care from a government-funded organisation in Eastern Finland. These were analysed using two elements of the FinCC, which covered the clients' needs (FiCND) and nursing interventions (FiCNI). We found, that instead of a client-centred approach, the documentation adopted a task-oriented view that focused on mechanical daily activities and provided a narrow view of individual and comprehensive care planning. To some extent, logical links were missing between the clients' needs and the nursing interventions that the staff provided. We also found that, to some extent, the characteristics of the client or the home care service could increase or decrease the documentation that was provided on the care and service plans. These characteristics included the client's age, gender, how long they had been receiving home care and the number of home visits they received each week. These results highlight concerns about how comprehensive and coherent the care and service plans were and whether the nurses who were in charge of care planning and writing the care and service plans had the right documentation skills. It may be possible to standardise and increase the coverage of care and service plans by establishing a documentation style based on agreed structures and classifications.

Collaboration with technical and home care professionals is needed to develop and test specific content in the FinCC relating to home care for older people. It is important that the content of care and service plans respect the way that older people want their needs to be identified and met. Any plans should also focus on how they want to live their lives and not just focus on the daily tasks needed to help them live independently. Client-centred documentation on care and service plans brings together the individual needs of older clients, including aspects of their health, well-being, functional ability and different life situations. These aspects form the basis for planned goals and interventions. This comprehensive style of documentation requires that all the factors above are taken into account, even if the client does not have any current needs in all of those areas. The structures and categories used in the documentation should lead home care professionals to provide more comprehensive and client-centred information about clients' life situations.

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Table 1. The definitions of the FinCC components concerning needs (FiCND) and interventions (FiCNI) (Liljamo et al., 2012)

Component	Definition
Activity	Physical activity, sleeping and wakefulness
Secretion	Digestion, urination, bleeding and other secretion factors
Coping	Ability of the individual or family to cope with the changes and challenges involved in health and social interactions
Fluid balance	Volume of body fluids
Health behaviour	Health promotion
Coordination of care	Coordination of multi-vocational care, examinations and care provided
Medication	How medication was used and taken
Nutrition	Ensuring sufficient nutrition and nutrients
Respiration	Lung function
Circulation	Circulation in various organs
Metabolism	Endocrinological and immunological systems
Safety	Safety risks that could lead to diseases and issues in the care environment
Daily activities	Independent initiatives and daily activities
Mental balance	Achieving a good mental balance
Sensory and neurological functions	Sensory and neurological functions
Skin integrity	Condition of the mucous membranes, cornea, skin and subcutaneous layers
Life cycle	Events during the client's life cycle

Table 2. The 1 170 notes from the 71 client care and service plans broken down by the FinCC sections relating to needs (FiCND) and interventions (FiCNI).

Component	Notes		Total n (%)
	FiCND n	FiCNI n	
Daily activities	65	68	133 (11.4)
Activity	55	61	116 (9.9)
Coordination of care	40	71	111 (9.5)
Coping	60	36	96 (8.2)
Nutrition	27	64	91 (7.8)
Medication	23	67	90 (7.7)
Safety	26	61	87 (7.4)
Secretion	31	53	84 (7.2)
Skin integrity	32	48	80 (6.8)
Sensory and neurological functions	63	10	73 (6.2)
Health behaviour	38	31	69 (5.9)
Circulation	0	40	40 (3.4)
Mental balance	31	3	34 (2.9)
Fluid balance	23	4	27 (2.3)
Metabolic	4	18	22 (1.9)
Respiration	14	3	17 (1.5)
Life cycle	0	0	0 (0)
Total	532	638	1.170

Table 3. The dependence between clients' needs (FiCND) and nursing interventions (FiCNI) in the documentation of the 71 care and service plans.

Component	n (%) of plans documenting both needs and interventions		p-value	r
	n	%		
Activity	47	66.2	ns	
Secretion	30	42.3	< 0.001	0.448
Coping	31	43.7	ns	
Fluid balance	4	5.6	0.009	0.353
Health behaviour	16	22.5	ns	
Coordination of care	40	56.3	ns	
Medication	23	32.4	ns	
Nutrition	26	36.6	ns	
Respiration	2	2.8	0.037	0.248
Circulation	0	0	ns	
Metabolic	1	1.4	ns	
Safety	24	33.8	ns	
Daily activities	63	88.7	ns	
Mental balance	2	2.8	ns	
Sensory and neurological functions	8	11.3	ns	
Skin integrity	31	43.7	< 0.001	0.567
Life cycle	0	0	ns	
Total	638			

ns=not significant

Table 4. The dependence between client or home care service characteristics and documented clients' needs (FiCND) or nursing interventions (FiCNI)

Background variables (independent) and FinCC components (dependent)	Odds ratio	P-value	95 % confidence interval	
			Lower	Upper
Client's age in years				
Activity (FiCNI)	0.879	0.045	0.774	0.997
Sensory and neurological functions (FiCND)	1.128	0.026	1.015	1.255
Client's gender male vs. female				
Coping (FiCNI)	3.887	0.045	1.028	13.221
Fluid balance (FiCND)	0.149	0.028	0.027	0.814
How long home care has been in place in months				
Metabolic (FiCNI)	0.928	0.016	0.873	0.986
Number of home visits per week				
Coping (FiCNI)	1.069	0.044	1.002	1.141
Coordination of care (FiCND)	1.097	0.010	1.022	1.178