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Perspectives on medication safety from vulnerable older migrants and their relatives – a qualitative explorative study

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Abstract

Little is known about the combined effect of several risk factors occurring simultaneously, and the perspectives of patients with language barriers or dementia are lacking because these patients are often excluded as research participants. This study aimed at investigating medication safety among older migrants with cognitive disorders who use five or more medications daily from the perspective of older patients and their relatives. Eight semi-structured interviews with patients and relatives were conducted in their homes. The study adopted an inductive hermeneutic phenomenological approach and used both 'Analyzing the present' and 'Systematic text condensation' as inspiration for the analysis. Three main themes were identified: (i) potential medication safety and threats, (ii) communication and missing medication information, and (iii) everyday life with medication. Threats to medication safety included medication perceptions, health perceptions, and cognitive impairment of the patient as well as miscommunication amongst departments, wrong diagnosis and medication, and unlocked medication cabinets. However, most families expressed having no problems concerning medication, which could be a result of limited engagement of the patient and relatives in the medical treatment and limited medication information provided to the families by health care professionals.

Keywords

Medication information, health perception, migrant health, qualitative research

1 Introduction

Medication safety is vital to obtaining the best possible health among patients. However, many factors can affect and threaten the medication safety and, thus, the overall safety of the patient. Polypharmacy, commonly defined as the daily use of five or more medications [1], is associated with potentially inappropriate medication use [2]. Polypharmacy is a rising challenge among older adults [3] and has a remarkably high prevalence among patients with dementia [4]. In general, older patients with cognitive impairment are at high risk of medication-related problems [5].

Multimorbidity is a predictor of medication errors [6]. Patients with multiple chronic diseases are more likely to be treated in several hospital departments and sectors. Sector transitions increase the risk of medication errors for older patients [7–9]. These errors are preventable, but this requires special awareness and potential new workflows in the healthcare system [10]. Multimorbidity and polypharmacy are two concepts often related to each other, as a higher number of medical conditions often results in a higher number of medications prescribed to the patient [11].

Older migrants with cognitive impairment are a vulnerable group of patients due to several concurrent factors. The engagement of relatives in care tasks for older migrants can positively and negatively affect patient safety [12]. Migrants of non-Western origin in Europe are at significantly increased risk of unplanned hospital readmission and lengthened hospitalization compared with the host population [13]. Migrants also have higher mortality due to infections [14], and they are at higher risk of diabetes [15] and obesity [16] compared with the European host population. Language barriers, personal factors, cultural factors, and illness perceptions are also associated with medication adherence among chronically ill patients [17–19].

Older migrants with cognitive impairment exposed to polypharmacy face several medication safety risk factors. These risk factors have been investigated separately but far less is known about their interrelationship within this group of vulnerable patients. To better understand where, how, and why medication problems emerge, it is necessary to further explore this group of patients' perspectives and to gain insight into their perceptions of medication safety. Older and cognitively impaired patients are often assisted by one or more relatives in different aspects of everyday life including medical treatment. This study aimed to explore perspectives on medication safety from older migrants with cognitive impairments using five or more medications daily, together with the perspectives of their close relatives.

2 Methods

2.1 Design

This explorative study was conducted using qualitative semi-structured interviews supported by the interviewer's observations. The study adopted an inductive approach to stay open-minded to all possible factors that might influence medication safety [20]. Hermeneutic phenomenology served as the framework for exploring and reporting the life world experienced by the participants [21]. The phenomenological approach aimed to describe the problems and barriers to medication safety experienced by the patients and their relatives. The hermeneutic approach acknowledged that interpretation of the life world expressed by the patients and their relatives was a critical process of understanding and reporting the knowledge obtained through the interviews. The interpretations of researchers rely on their individual preunderstanding. Characteristics of the participating researchers are described in Appendix 1 (see Supplementary Material) according to "Consolidated criteria for reporting qualitative research" (COREQ) [22].

2.2 Participants

Patients were recruited from the Migrant Health Clinic and Department of Geriatric Medicine at Odense University Hospital Denmark by practitioner gatekeepers at the two departments. The gatekeepers were healthcare professionals (HCPs) at the two departments, who were instructed to identify patients with the following four inclusion criteria: (i) non-Western migrant, (ii) age 65 years or older, (iii) using five or more medications daily, and (iv) having cognitive impairment due to dementia, post-traumatic stress disorder (PTSD), or memory loss. The patient or accompanying relative indicated which relative or relatives were involved in the patient's medication and should therefore be invited to participate in the interview.

The patients and relatives varied in terms of background, life worlds, and life stories. The participating families represented various family structures with different kinds and levels of resources, wishes, and knowledge about healthcare and the welfare system. Participant characteristics are presented in Table 1.

2.3 Setting

The semi-structured interviews and observations were conducted at a location chosen by the patients and relatives, which in each case turned out to be in the patients' homes. Both patients and relatives participated in the interview as a one-family-unit to support each other rather than being each other's opponents as in focus groups. We defined these interviews as family interviews. Professional healthcare interpreters were available by video or telephone but were not used if the family declined and insisted on interpreting themselves. Four interviews were interpreted by a professional healthcare interpreter, three interviews were interpreted by the family, and one interview was conducted in Danish.

2.4 Data collection

Face-to-face interviews were carried out and audio-recorded by the first author (CL) from February to November 2020. Informal observations supported the interviews and were documented as field notes either written notes or records immediately after each interview. The focus was on the interaction between the relatives and the patients, and on how medication was handled in the home. One interview was carried out by video communication using Microsoft Teams to protect the participants from COVID-19. This interview was video-recorded. The interview guide is presented in Appendix 2 (see Supplementary Material) and inspired by clinical and research experiences by all authors.

2.5 Analysis

The analysis of the interviews was inspired by Revsbæk and Tanggaard's 'Analyzing the present' [23] and by Malterud's 'Systematic text condensation' [24]. First, we listened to the interview recordings while keeping the related field notes in mind. While each interview was being listened to, a mind map was drawn illustrating potential and obvious elements concerning the patients' medication and health. The mind maps for all interviews and field notes were discussed between the first (CL) and last author (DN) to reveal similarities, contradictions, and recurring themes in order to formulate the preliminary main themes. The preliminary main themes guided the subsequent systematic text condensation based on the transcriptions of the interviews and field notes. The Danish interpretations and all Danish spoken words of the interviews were transcribed verbatim [25]. First, meaning units were detected in the transcription and coded. The codes were then classified into subthemes. Last, the preliminary main themes from the mind maps were refined to determine the final main themes. The analysis was an iterative process that involved going back and forth between the different steps. NVivo 12 [26] was used to handle the systematic text condensation. Further elaboration of the analysis process is presented in Appendix 1 (see Supplementary Material) in accordance with COREQ [22].

2.6 Ethical considerations

All participants provided informed consent and had the option to withdraw their consent. Before inclusion, all patients were cognitively assessed by a minimum of one clinician to indicate whether the patients were cognitively impaired due to either PTSD or dementia or whether they were too cognitively impaired to give their consent to participate in the study.

The study was approved by the Danish Data Protection Agency (journal no. 19/46044). The National Committee on Health Research Ethics waived registration (case no.20192000-149) due to the qualitative design of the study. The study was conducted in accordance with The Declaration of Helsinki [27] and the BCPT policy for experimental and clinical studies [28].

Issues affecting medication safety or patient safety discovered during the interviews were discussed after the interview to obtain the best possible medication safety for the patient without affecting the interviews.

3 Results

In total, 17 individuals participated in seven semi-structured family interviews and one individual patient interview. The interviews lasted for approximately two hours and covered many aspects of both medication-related topics but also the patient's life stories, family background, and cultural background. Only things with impact on medication safety are presented in the following.

[Table 1]

The analysis revealed three main themes that are crucial to patient medication safety: (i) potential medication safety and threats, (ii) communication and missing medication information, and (iii) everyday life with medication. Appendix 3 (see Supplementary Material) shows an example of a text condensation from meaning units of the transcriptions to main themes.

3.1 Main theme (i) – Potential medication safety and threats

Situations of potential threats to medication safety were identified during the interviews and visits to the patients' homes. Some of these threats were expressed by the families, while others became clear through the observations of the interviewing researcher (CL).

3.1.1 Serious threats

Threats to medication safety included misdiagnosis, wrong medication, lack of support, and misunderstandings. One family reported how a misdiagnosis of a patient led to long-term use of insulin, which caused a life-threatening situation due to hypoglycemia. After that episode, the patient was diagnosed with non-insulin-dependent diabetes. The granddaughter of the patient explained that the episode and unnecessary long-term use of insulin could have been avoided had her grandmother undergone a thorough examination the first time she was diagnosed with diabetes.

"She has been using insulin for many years. No healthcare professionals ever said, 'Let's just check if this works out.' (…) The home care nurse called me because she was fainting, and we called an ambulance. And finally, at the diabetes clinic, they discovered that her body produced insulin, and that she should not have been treated with insulin." Granddaughter IW1

In two homes, the medication was stored in a locked cabinet that could only be accessed by the home care workers. In both families, the relatives had experienced that the patient had forgotten their medication or had taken double doses of the medication due to cognitive impairment, which was the reason for introducing the locked cabinet. However, one granddaughter reported that the home care staff sometimes forgot to lock the medication in the cabinet, which also happened on the day of the interview and resulted in lost medication.

“When the granddaughter arrives, she informs [the interviewing researcher] that the patient is not supposed to have access to the medication herself. The patient is sitting with the pills for the day and drops the lunch and evening doses on the floor.” Field note IW1

The relatives explained that the patient could be very insistent in general and sometimes tried to convince the home care staff to leave the medication on the coffee table instead of locking it in the cabinet. However, the family expressed having a clear agreement with the home care staff that under no circumstances should any medication be left unlocked. The family reported there being many different home care workers and substitutes, which could complicate the communication, agreements, and cooperation between the home care staff and the family.

Medication changes were another threat to medication safety. Several patients in this study identified their medication by the visual appearance of the tablet, which could lead to problems in cases of generic substitution of the medication because two tablets with the same active pharmaceutical ingredient could vary in shape, color, or size. Furthermore, some relatives described how the patient would sometimes hold onto outdated medication and routines due to cognitive impairment and persistence, which could result in medication overdose.

"The heart medication was changed a lot. And she recognizes the pills by their colours, so she could not handle changes in the appearance of the medication. She continued taking the [discontinued] medication no matter what – and took overdoses (…) We found out that there were two different heart medications. One had been discontinued, but she kept taking both the old and the new heart medication.” Granddaughter IW1

Both relatives and patients described trouble with patients recalling whether they had taken their medications at the correct time when the medications were administered by the patients themselves. One patient described how her lacking memory made her uncertain of whether she had taken her medication. The patient expressed concern about what to do in these situations and was aware of the risk of getting a double dose or skipping her medication.

"Sometimes I doubt whether I have taken the blood-thinning medication. Then I ask myself whether I have taken it or not and whether I have taken my medication for allergies or asthma. Then I get tired and just take an extra dose.” Patient IW7

3.1.2 Medication and health perception

Some relatives described how religion strongly influenced patients’ attitudes towards their medication. Some patients believed that God determined their health and illness and therefore they perceived that the medication was of no use to them.

"I will get well if it is God’s will." Patient IW6

One relative expressed that the patient believed that God was helping her more than the medication. At the same time, she was not at all motivated to take her medication every day. This led to the patient deciding to stop taking her medication, which made her very ill.

"She didn't want to take her medication on a daily basis, so she just chose to stop. Afterwards, she developed symptoms such as coughing. We contacted our doctor, who came and performed an examination, and she was given antibiotics, but it didn't help. Eventually, she started taking the daily medication again. (…) We didn't talk to our doctor [about the sudden stop and start of daily medication] because all the medication we needed was in the pharmacy." Daughter IW5

3.2 Main theme (ii) – Depending on relatives and limited involvement

3.2.1 Depending on the relatives

Most families expressed satisfaction with the help delivered by the healthcare system. However, in some situations the patients had been disadvantaged in terms of health and medication safety without additional help from their relatives.

In most families, the primary responsibility for the health and medication relied on one family member who became the primary caretaker. The caretaker role was often designated based on the resources available to the relative. Resources were expressed as time, medical knowledge, and knowledge about the healthcare and welfare system. Some relatives expressed that their educational level and insight into the Danish welfare and healthcare system were vital to the health of the patient.

"If I was not a trained occupational therapist and did not have experience from Odense Municipality, then I would have no idea what to do. And here my grandmother had been taking the wrong dose and she could have overdosed [on some medication]." Granddaughter IW1

Some relatives expressed that they were needed for patients with cognitive impairment to help handle communication and keep track of health information. One patient communicated primarily through one specific relative because of language barriers and because this relative was the only person the patient trusted in terms of health. In another family, the daughter described the difficulties the patient faced in communicating with strangers.

"My mother doesn't like when it comes to strangers [like interpreters], then she doesn't communicate that well. (…) So, it's best if it's someone she knows from the family. (…) Sometimes there is a great risk that everything said to her will be forgotten when she gets home." Daughter IW3

3.2.2 Limited involvement and missing information

Most patients seemed to have a limited influence on the handling of their medication. In some families, the relatives were instructed by the home care nurses on what to do if changes to the patient's medication were made by the GP or the hospital. Other families expressed how the HCPs communicated to each other about the patient's medication without involving the patient or their relatives.

"He [GP] is mainly in contact with the nurses. Then they just let me know what to do if there are any changes in the medication or if she has to stop or start any medication. I get the messages. There are no problems with that. It is, primarily, the nurses who keep an eye on everything."
Daughter IW3

Some relatives expressed feeling relieved when the HCPs handled the coordination of medical information and treatment without involving the relatives. Other relatives expressed that they lacked the resources to coordinate and understand the medical treatment.

CL: "How are you notified if the doctors at the hospital have changed something in the medication regimen?"
Daughter: "We aren't. They [hospital staff] notify the home care staff, and then they pass on the message. We are not involved in that part at all." IW8

In contrast, the relatives in one family expressed being worried about the patient's medication and called for better cooperation and consistency between HCPs. The relatives had experienced several conflicting statements from different hospital departments about the patient's medical treatment, which lowered their trust in the overall medication safety.

"It worries me that the departments contradict each other. One says she should not have had that medication or she should have had another type of medication. As though she's a guinea pig when it comes to the medication." Granddaughter IW1

Some families seemed to be missing medication information. One relative consulted the local pharmacist because the pharmacist could speak and explain to the relative in Arabic when she could not get or understand the information from the prescribing doctor due to language barriers. In another family, the patient's daughter explained that they were seeking medical advice from family members who were educated in healthcare. During other interviews, several families also wanted to consult the interviewing researcher as a pharmacist about their medication and concerns in relation to their medication. During these conversations, it became clear that some patients and relatives had very limited knowledge about the medication, treatment, and organization of the health care system. Especially one family was very concerned if the patient's medication could harm the kidneys and asked the interviewing researcher to go through all tablets and explain why the patient had to take every single tablet and define its side effects and potential harm to the kidneys.

"They don't know what the medication is for. It is new for them that they should consult their GP with all [medication-related] problems and that the GP must also be notified if she [the patient] stops taking her medication." Field note IW5

3.3 Main theme (iii) – Everyday life with medication

3.3.1 How medication is handled in the home

The families had different ways of storing the medication in their homes. Some kept their medication in a locked cabinet, with only the healthcare staff having access to and handling the medication. Some stored their medication in a bedside drawer, others in a shopping net by the dining table, and others in a pharmacy bag in the living room. Two families had dedicated a dresser for the patient's medication, blood glucose meter, injection schemes, syringe boxes, and everything else concerning the patient's medical treatment and personal care. Both families expressed that they as well as the home care staff were pleased about having a medication dresser to help them maintain an orderly overview of the medication, which facilitated medication safety.

"They used to use the dining table. Every time I came by, it just looked like a mess. I got so tired of looking at needles lying around – sometimes it was just so much messier than it needed to be. Then we agreed to move it in here. I cleared this [dresser] and then they got the drawer here. (…) It's like their workplace." Daughter IW8

All participants seemed pleased with their way of handling the medication. However, the field observations revealed that the better the medication was organized in the home, the more it seemed to facilitate medication safety. The organization led to a better overview of the medication in the home, a better overview of when to refill medication before the patient ran out, and a safer environment for both the HCPs and the patient and families without needles or medication in the rest of the home. These families had less questions about the medication and expressed less uncertainties about the medication. These families also tend to have more clear agreements with the home care in terms of medication, responsibilities, and routines.

3.3.2 No worries about the medication

Most of the families expressed no concerns or problems regarding medication. They more frequently articulated other problems such as housing, personal care, or household help. Most of the participating patients had their medication handled by healthcare professionals, and most families seemed satisfied with and confident about that. Most patients trusted that they were being given the right medication, and they did not question or check on the medication they were prescribed and offered.

"I don't think about the medication because it just arrives and is placed on the table. Then I just have to take it." Patient IW9

No families expressed considerable problems with picking up medication at the pharmacy, and most families did not perceive that speaking a common language was necessary to purchasing medication. The families primarily described the pharmacy as a place of medication distribution and experienced that the pharmacy staff knew which medication to dispense based on the patient's social security number.

"I send either my children or my husband [to the pharmacy]. He doesn't have to speak Danish. He just shows the health insurance card and then they [at the pharmacy] know what kind of medication we need." Patient IW7

Several families expressed or demonstrated limited knowledge about the patient's medication, which made it impossible for them to recognize deviations or errors in the patient's medication, which affected the medication safety, as the families were not able to prevent the patient from consuming wrong medication.

"To me it's difficult [to detect errors in the medication], as I don't know her medication regimen at all. I don't know what [medication] she's supposed to take or not supposed to take." IW8 Daughter

4 Discussion

In this study, the majority of families expressed no concerns or problems with the medication. However, we found several threats to medication safety. Some threats were expressed by certain families, and others were observed by the researcher. Some threats were related to the organization of the healthcare system, while others were related to the behaviour of the patient and relatives. Threats caused by the healthcare system included wrong diagnoses leading to wrong medical treatment, breached agreements, and lack of cooperation and communication between healthcare departments. Threats associated with the behaviour of the patients included cognitive impairments, which sometimes led to missed medication intake and confusion about medication management. Some patients held onto outdated medication, which relatives explained as resulting from cognitive impairment as well as personal characteristics such as persistence. Additionally, lack of medication knowledge and limited medication information also acted as a threat to medication safety.

4.1 Perspectives

The observed potential dangers to patient medication safety contrasted most of the families' perspectives on medication, which were often described as being free of problems. This could be explained by the limited knowledge about the medication expressed or

demonstrated by most families. Lacking insight concerning the medication, the relatives and patients had no chance of detecting medication errors. A study on medication discrepancies amongst persons aged 50 years or older exposed to polypharmacy found that the majority of the patients did not detect changes and corrections in the medication [29]. A systematic review among older patients also found that cognitive impairment, multiple prescribers, and problems with storage were associated with poor medication adherence [30]. The same study suggests educating patients about their medication and treatment to improve medication adherence. Medication adherence or compliance have a high impact on the patient's medication safety, as these terms often describe whether the medication is taken as intended. The participants in the current study could have benefitted from receiving education about their medication, as we found that most patients had limited knowledge about their medication. This is in line with another Danish study, which found that older patients exposed to polypharmacy do not know their medication [31]. In addition, a US study with 400 older African Americans revealed that more than half of the participants were unable to identify at least one of their medications [32]. This limited knowledge may be explained by a lack of medication information provided to the patient and relatives by HCPs [33]. In this study, most families received information about medication and changes through the home care nurses, which leads to reduced contact with the prescribing doctor. When prescribers do not communicate medical issues directly with the patient, the patient misses the opportunity to ask about or decline the treatment. Furthermore, we found that some families seek medication information from sources outside of the healthcare system, which may indicate that the needed medication information has not been provided by the prescriber. Negotiation of care has been found to be crucial to the patient safety of older patients with multimorbidity [34]. The same study also suggests interventions that support patients to communicate their needs and concerns more sufficiently to HCPs [34]. Language barriers have a significant impact on the delivery of appropriate, adequate, effective, and quality healthcare, and compromise patient safety [35]. However, patients need to be informed about the therapeutic purpose of their medication to support their knowledge about dosage regimen as this has been strongly associated with higher adherence to frequency and dose of medication [32]. Studies have recommended improving illness perception among migrants to enhance their medication adherence and well-being [19] as well as improving the HCPs' health literacy responsiveness when working with migrant patients [36]. The findings of this study highlight that the combination of language barriers and cognitive impairment can complicate the communication between patients and HCPs and that involvement of relatives in the communication can be the only way to overcome this barrier.

Many families in this study had developed their own way of organizing and structuring both medication management and communication with the HCPs, primarily the home care staff. Home care nurses visit many homes and have the opportunity to discover and collect the best solutions and pass them on to other patients and families. The home care "startup"

conversation could provide an opportunity to introduce medication management strategies in the home. However, in a previous study we found that the home care staff described how they deviated from standard procedures and skipped the "startup" conversation when they encountered language barriers [37].

Implications

Some of the results revealed in our study can be transferable to other older populations. A review from 2016 reinforced that polypharmacy is a multifactorial process, and predictors and inappropriate prescribing are associated with negative health outcomes, like increasing the frequency and types of drug-drug interactions and adverse drug reactions [38]. To our knowledge, no studies have examined the perspectives of older migrant patients with different cultural backgrounds and polypharmacy.

This study contributes with the perspectives of the patients and relatives that have been found to differ from HCPs perspectives, which are often the ones presented in research. The patients' and relatives' perspectives are important to understand, respect, and implement in future interventions to increase the chances of change and improvement in medication safety. Researchers should use the knowledge of this study to understand the gap between HCPs' and vulnerable migrant patients' and their relatives' perspectives on medication safety. Understanding of the patients' and families' perspectives are essential to incorporate in future interventions as well as in the clinical practice to improve the cooperation between patients and HCPs and to improve the outcome of the intended medical treatment.

Limitations

One of the limitations of this study is the relatively low number of included patients. This group of patients is considered to be vulnerable and therefore challenging to recruit for research [39]. Recruitment of patients has been a challenge in this study due to relatively few patients in the target group visiting the two inclusion departments. In addition, older migrants are significantly more under-diagnosed in terms of dementia compared with the general population [40], which could have caused the exclusion of patients who would have been relevant as participants to this study. The absence of male participating patients and relatives is another limitation. The patients identified by the gatekeepers were predominantly women, and the few identified male patients or their relatives did not wish to participate in the study.

Furthermore, the COVID pandemic and the several subsequent lockdowns of the entire Danish society limited the inclusion of patients and complicated the interview sessions. One family participated online because the relative was known by the researcher to have strong resources in technical handling, and the relative expected that the patient could participate in an online interview. The only male patient and relative, who accepted to participate in the study, retracted their acceptance, due to lacking technical skills and the interview could

only be conducted online due to lockdown of the society. Online interviews are not equivalent to face-to-face interviews but have been found to be a valid and trustworthy alternative [41,42].

One patient was interviewed alone with no relatives present because at the time of inclusion the patient reported handling everything about her medication herself. During the interview, however, it became clear that the relatives helped the patient with both medication pick up as well as communication and coordination with the healthcare system. In light of that, it would have been relevant to include the relatives in the interview in order to obtain richer information.

This study was based on interviews primarily conducted with interpreters. We used professional health care interpreters with experience in research interviews and we are very confident in the quality of their interpretation. In the interviews with relatives as interpreters, we prioritized the trust from the families over the risk of compromising the quality of the interpretation.

5 Conclusion

This study uncovered several risks to the medication safety of older migrants with cognitive impairments exposed to polypharmacy. This included wrong diagnoses, wrong medication, medication and illness perceptions, limited access to and provision of medication information from the healthcare system. However, most families expressed having no problems concerning the patient's medication, which could be explained by limited health and medication information owing to the limited involvement of the patient and relatives by the HCPs. Based on our results, we encourage future research to focus on how initiatives can increase medication safety by providing tailored medication information to vulnerable migrants.

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Conflict of interest

We have no conflict of interest to declare.

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Table 1 Patient characteristics

Participant	Relation	Age	Gender	No. of medications	Medication management	Living condition
Patient 1 Relative 1A Relative 1B	- Daughter Granddaughter	80	Female	8	Dispensed and handed out by HCP (locked)	Alone in apartment
Patient 2 Relative 2	- Daughter	82	Female	17	Dispensed and handed out by HCP	Senior residence*
Patient 3 Relative 3	- Daughter	88	Female	13	Dispensed by HCP	With daughter in apartment
Patient 4 Relative 4	- Daughter	82	Female	5	Multi-dose packaging by the pharmacy	With grandson in apartment
Patient 5 Relative 5A Relative 5B	- Daughter Granddaughter	91	Female	17	Handled by relative	With family in apartment
Patient 6	N/A	73	Female	11	Handled by patient	With husband in apartment
Patient 7 Relative 7	- Daughter	66	Female	15	Dispensed and handed out by HCP	Alone in house
Patient 8 Relative 8	- Daughter	67	Female	7	Multi-dose packaging by the pharmacy and handed out by HCP (locked)	Nursing home

*Senior residence: A smaller apartment that is accessible for wheelchairs and located in a community with other similar apartments. Typically attached to a local home care unit.