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Community Areas of Sustainable Care and Dementia Excellence in Europe

Executive report
A retrospective analysis of the ZorgSaam model of long-term home and residential care for older adults

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ZorgSaam

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1. Executive Summary

This report summarises the key findings from the retrospective analysis of the ZorgSaam model of long-term home and residential care for older adults. It aims to highlight influences of delivery strategies and processes (e.g., integrated dementia and person-centred care) on developing a sustainable model of dementia care.

Quantitative and qualitative methods, involving primary and secondary data sources, were used to accomplish this objective. A review of healthcare resource utilisation among two cohorts complimented the analysis of organisational documents.

The findings showed that employee satisfaction is crucial, for this is reflected in the quality of care. Similarly, optimising the safety and comfort of the social and physical environments enhances the wellbeing of residents in long-term care. Coordinating the workforce and environmental aspects of care meets both needs and wishes particularly of people living with dementia. The change from the guesthouse with care concept to small-scale living arrangements for example denoted improvements in the physical environment and number of people living in the space.

Shortages in staff numbers and the required mix of skills are ongoing challenges for ZorgSaam within which the organisation has embraced the use of technology solutions to implement and monitor service improvements.

2. Introduction

ZorgSaam provides integrated health and social care services to all age groups in the Zeeuws-Vlaanderen region and surrounding areas with an overall mission of improving and maintaining the health and wellbeing of the people. ZorgSaam's service composition includes hospital, ambulance and home and residential care for older people. This report is a retrospective analysis of the ZorgSaam model of long-term home and residential care for older adults. It forms part of the larger Community Areas of Sustainable Care and Dementia Excellence in Europe (CASCADE) project.

3. Objective and methods

A retrospective analysis is a review of past occurrences aimed to develop insights into the design of current and future strategies for effective service delivery (Wyche et al., 2006). Several sources of qualitative and quantitative data including primary and secondary sources were used to harmonise past perspectives informing the present form of service delivery. Documents selected for review (Appendix 1) and key informants interviewed (n=2) were pertinent to strategic planning and reporting of outcomes about home and residential care for older adults. The procedure for collating evidence involved identifying and requesting for relevant documentation from ZorgSaam; reading and analysing the most recent data sources; and working backwards to establish the consistency of information. Healthcare resource utilisation during 2018 & 2019 was retrospectively examined for two different groups of people living with dementia to correlate wellbeing outcomes with the care process strategies. Data were analysed descriptively and where possible, changes in resource utilisation patterns and trends were observed. Details of the procedures of the retrospective analysis are included in Appendix 2.

4. Summary of key findings

4.1. Long-term home and residential care workforce

Workforce recruitment and planning

- In 2018, up to 350 employees were predicted to retire within a few years amidst increasing demand for elderly care and people with complex care needs.
- Smaller teams were introduced to match the change from ward like care facilities to small scale living arrangements in 2018.
- The care for people living with dementia was easier to manage when people are clustered in a small-scale living environment because they all receive the same care package.
- Small scale living arrangements enabled residents to see fewer and familiar staff faces. However, for staff, knowing everything about each person in a group of 24 residents was a heavy workload.
- Small scale living focuses on the quality of the person's wellbeing, which staff are currently more enthusiastic about because they can connect with the care experiences of residents.
- ZorgSaam acknowledges that the right skills mix in long-term care is unachievable within circumstances of an ageing population and prolonged absence from work due to long-term illness of the older workforce. Volunteers thus play a crucial role in supporting care assistants with providing residents with companionship for outdoor activities.
- Registered volunteers participate in activities such as supporting church services, music performances, cooking and interactional activities with residents including board games and reading aloud. However, the number of registered volunteers has continued to fall.
- Despite the increase (16%) in the total number of staff ZorgSaam employed in 2020 and an actual increase in the FTE staff, a proportionate decrease in the percentage of FTE staff occurred.
- The COVID-19 pandemic underpinned the sharp rise in rate of staff absenteeism in 2020.
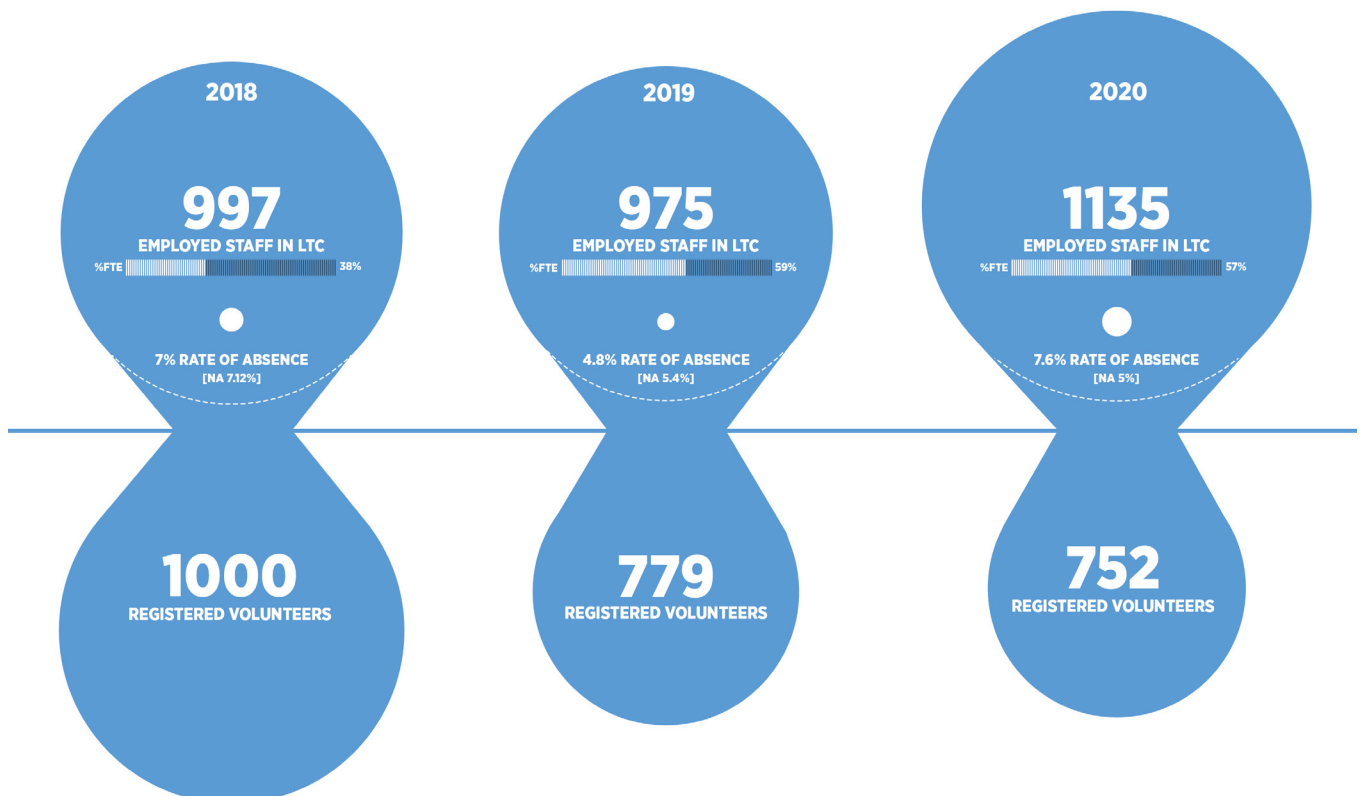- Figure 1 highlights workforce status for 2018 2019 and 2020

Figure 1. Availability of long-term care staff

Workforce learning and development

- A human resources strategic plan was established in 2018 to increase the number of nursing and care trainee places in ZorgSaam as well as opportunities for e-learning to tackle the challenges of the ageing workforce.
- The nursing service plan was expanded to enhance workplace mentoring opportunities for lower-level staff to learn all aspects of nursing care.
- Training for existing ZorgSaam staff was enhanced to grow capacity especially for leadership positions. ZorgSaam subscribed to an e-learning platform which provides continuous professional development recognised for revalidating nursing and caring staff.
- In 2018, nursing students from Flanders joined the ZorgSaam internship programme of caring for older adults. The programme sought to harmonise the differences in nursing training offered in the Netherlands and Belgium to improve the outlook of the competitive labour market.
- The pilot sought to establish the feasibility of deploying a limited number of staff (1-2) to attend to care and respond to emergency calls at night for both care providers.
- The pilot evaluation of the circle of care was promising in counteracting staff shortages. However, the full evaluation results revealed the initiative would be more beneficial if operated on a larger scale to ensure continuity in the physical presence of staff.

Job satisfaction

- A 2021 survey of staff in long-term care generated consistent results across 43 teams for organisational trust, integrity and atmosphere in most teams (35/43) matching the organisational average score (73%).
- However, the question as to whether staff would recommend ZorgSaam to others as an employer largely produced a neutral score (67%) where staff neither agreed nor disagreed. The neutral response tendency (50%) was also noted in the 2019 person-centred practice index survey as to whether the organisation recognises and celebrates positive achievements.
- Areas for improvement identified in the 2021 staff survey report include participation in decision making, overwhelming workloads, role clarity, giving and receiving feedback and support with change.

4.2. The organisation of care for older adults

Caring for people living with dementia

- ZorgSaam is committed to optimal family involvement in the lives of older people and the notion of 'as home as possible' necessitates maintaining relationships and the things that people living with dementia were used to doing. For example, residents and their families are encouraged to decorate the care recipient's room to make it homely.
- People in the later stages of dementia get regular support from contact clowns. ZorgSaam employs two contact clowns who interact with people living with dementia in a meaningful way by tapping into each person's selfhood. Clowning therapy is deemed useful for reducing behavioural and psychological symptoms of dementia considerably particularly in Alzheimer's disease (Kontos et al., 2016).

Principles guiding the ZorgSaam model of long-term residential care

- All choices made in long-term residential care consider the motto 'as at home as possible' to maintain a good quality of life and improvements wherever possible.
- In 2019, emphasis on person-centredness was placed on health and behaviour.
- The health and behavioural goals for residents in long-term care are achieved through environmental care.

Environmental care

- The concept of environmental care represents basic care concerning understanding and knowing the person as well as their wishes, preferences and needs.
- ZorgSaam updated the environmental care plan in September 2020 to refine the levels of care needs and to incorporate COVID-19 infection control measures.
- The domains targeted for environmental care include:
    - o Residential care with treatment
    - o Residential care without treatment
    - o Psychiatric concerns
    - o Palliative care

Implementing environmental care

- ZorgSaam employs environmental care coaches to engrain person-centredness permanently in the staff's ways of working on assumption that person-centred care does not occur automatically to staff, and individuals develop at different paces.
- Environmental care coaches train staff in gaining insights into situations disrupting the care environment and in involving the person and family to achieve a favourable environment for maximising the wellbeing of residents.
- ZorgSaam reported visible improvements in the quality of care at the targeted locations. Components of a favourable environment include:
    - o the physical environment (construction, design of indoor and outdoor spaces)
    - o the service delivery processes (e.g., meals and bedtime rituals)
    - o the treatment (the way care recipients are approached).

4.3 The quality and safety of care

- ZorgSaam promotes a safe working environment to obtain and maintain a culture of collaborative improvements involving openness and feedback.
- ZorgSaam put a lot of emphasis on verifying residents' medication and lessons learned from previous errors were shared not only with the staff concerned but with a large group of staff from different specialities. The purpose was to enable all health and care staff to learn from recommendations centred on transfers, coordination between professionals and working effectively with inbuilt technical and procedural safety risk barriers.
- The quality and safety parameters presented in this report are derived from the ZorgSaam quality reports for long-term residential care produced between 2018 and 2020. Table 1 shows the incidence of medication errors, falls, behavioural symptoms (violence & aggression), pressure injuries and registered calamities.

Table 1. Incidence of care quality and safety indicators

Incident	Total No. Recorded 2018	Total No. Recorded 2019	Total No. Recorded 2020
Medication errors	675 (96*)	752	612
Behavioural symptoms	11*	316	343
Falls	335* (Warmande)	1353	1228
Pressure injuries	15	154 (26% severe)	186
Calamities	1	2	0

Falls

- While falls are not a normal part of ageing, people aged 65 and older are at high risk of falling and suffering fall related deaths.
- The aggregated figures in Table 2 do not accurately represent the whole picture because people who fall more frequently than others cumulatively contribute to the total number of falls recorded.

Medication errors

- ZorgSaam endeavours to maintain rigour in prescribing, dispensing and administration of medication to make sure that these elements are carefully and accurately executed.
- The incidence of medical errors remains high despite a notable fall (18%) in 2020 compared to 2019.
- Medical errors occur mainly through administering the medication or forgetting to take medication.

Behavioural symptoms

- The incidence of behavioural and psychological symptoms of dementia (BPSD) in long-term care increased in 2020 compared to 2019.
- A significant increase (17%) in the use of antipsychotics occurred in 2019 compared to 2018.
- Involving psychologists in the care for people with BPSD resulted in a 20% decline in the use of antipsychotics in 2020 compared to 2019.
- The decline in the use of antidepressants has been gradual without a significant change registered over the three years (2018, 2019 & 2020) particularly in people living with dementia.

Pressure injuries

- One hundred fifty-four (154) out of 594 cases screened in 2019 were diagnosed with pressure injuries.
- The 33 cases at grade 2 or higher were assigned wound plans.
- The number of severe pressure injuries cases recorded in 2020 decreased to 27 cases out of the 612 cases screened, indicating minimal (7%) service improvements.

Responding to care quality and safety assessments

- ZorgSaam planned and implemented several actions to improve the quality and safety of long-term residential care.
- A quality improvement app (KVC app) was launched to monitor actions agreed towards service improvements. Areas for improvement and associated actions are input into the app.
- The designated quality ambassadors monitor progress, and the results are discussed during staff team meetings and with members of client councils. The KVC app was successfully rolled out in all care locations in 2020.
- Using the KVC app led to improvements such as lighting with options to create the desired atmosphere, quiet care handovers and improvements in scheduling residents' activities.
- Other care quality and safety improvement measures implemented comprised:
  o Introducing in house emergency response teams whereby 282 staff completed training in emergency response.
  o Decommissioning five lifting aids during the 2019 annual assessment.
  o Checking the safety of food and drinking water periodically following a predetermined plan.
  o Inspecting the management of legionella twice a year.
  o Instituting a nutrition committee in each care location to discuss and implement improvements alongside residents' preferences.

4.4 Healthcare resource utilisation in dementia

Health care resource utilisation in dementia of a sample constituting two cohorts (n= 56 in 2018 & n= 55 in 2019) at ZorgSaam care locations was examined to illustrate the influence of service changes and improvements on the cost of long-term dementia care.

Demographic characteristics

Age

- Most people living with dementia included in the sample were aged between 90 and 95, with 93 (10.8%) and 92 (9.9%) featuring the majority.
- The median age was 92 years, varying from 73 to 101 years as shown in Figure 2.
- Broken down by year, in 2018 the median age was 92 years, with the youngest person aged 73 and the oldest person aged 100 years. In 2019, the median age was 91 years, with the youngest person aged 75 and the oldest aged 101 years.
- The majority of people across both years were female (73 – 64.9%) as opposed to male (39 – 35.1%). When split by year, there were 21 (37.5%) males and 35 (62.5%) females in 2018; and 18 (32.7%) males and 37 females in 2019 (67.3%).
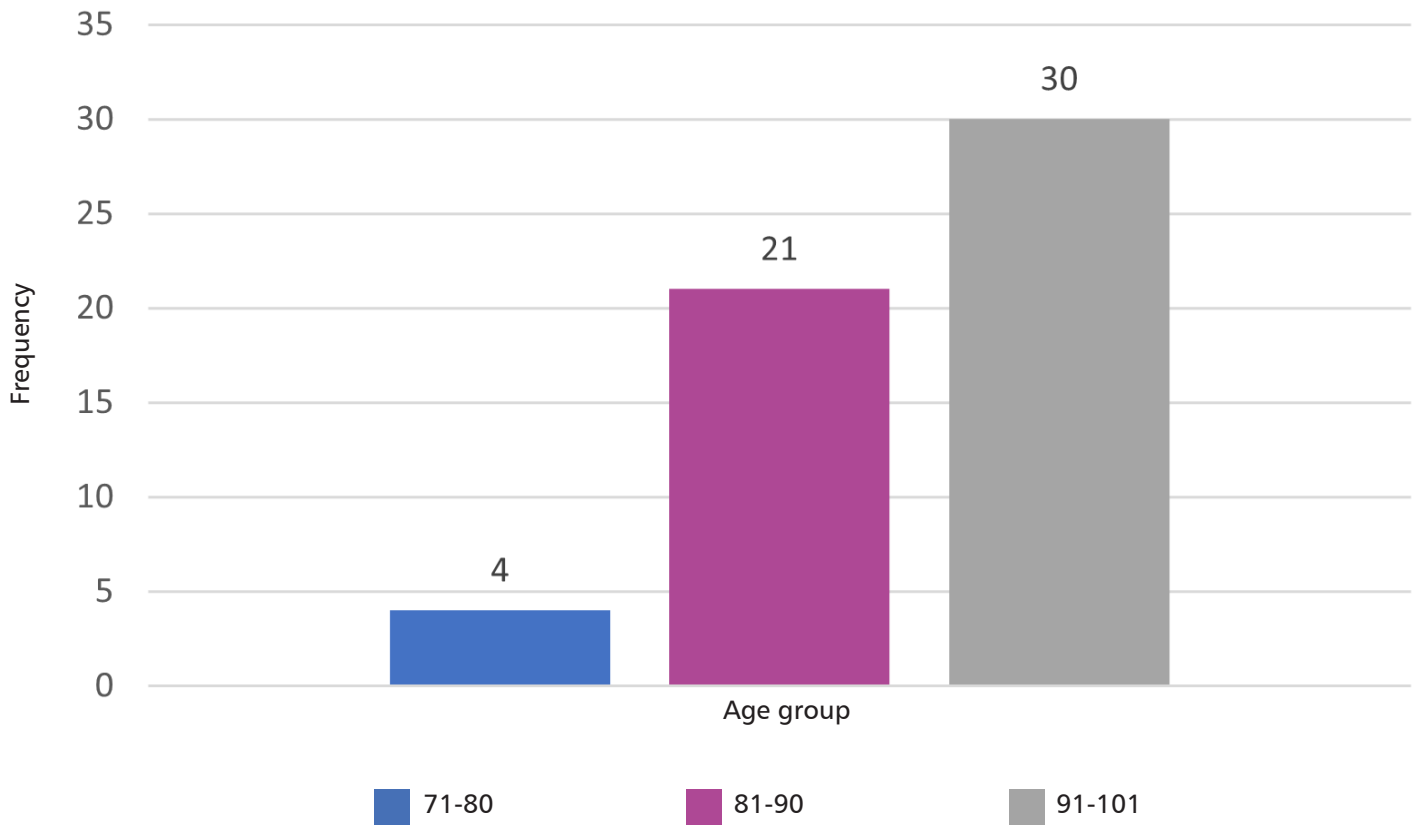
Figure 2. Age distribution of the 111 people living with dementia (2018 & 2019)

Dementia diagnosis

- The majority of people (72) included in the sample (111) had a diagnosis of dementia, with one person not diagnosed but showing dementia symptoms such as memory loss. Figure 3 shows the cumulative total of the sample examined.
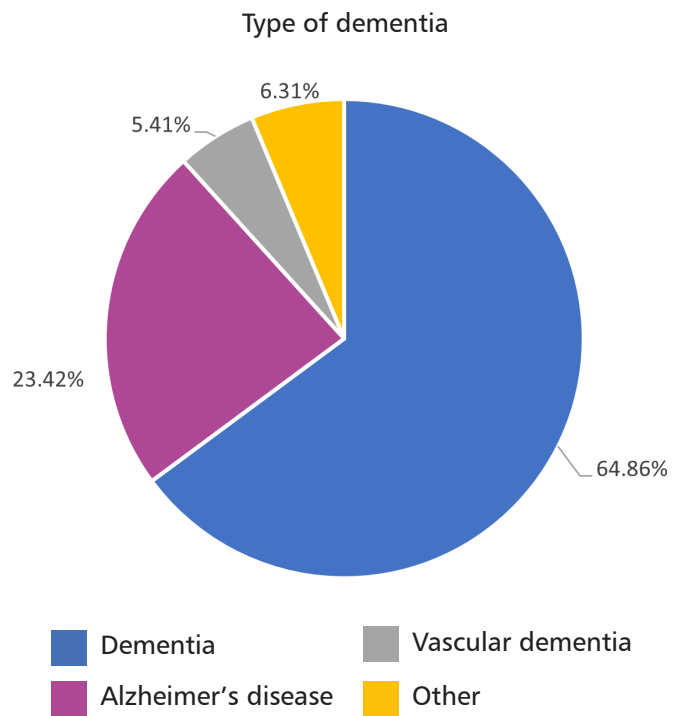
Type of dementia

Figure 3. Dementia diagnoses for 2018 & 2019 cohorts

Living arrangements

- Most people were living in a 'dementia specific residential home'. Smaller numbers were living in their own homes or longer-term care facilities. Figure 4 shows a 12 % increase of people living in dementia specific residential home in 2019 compared to 2018.
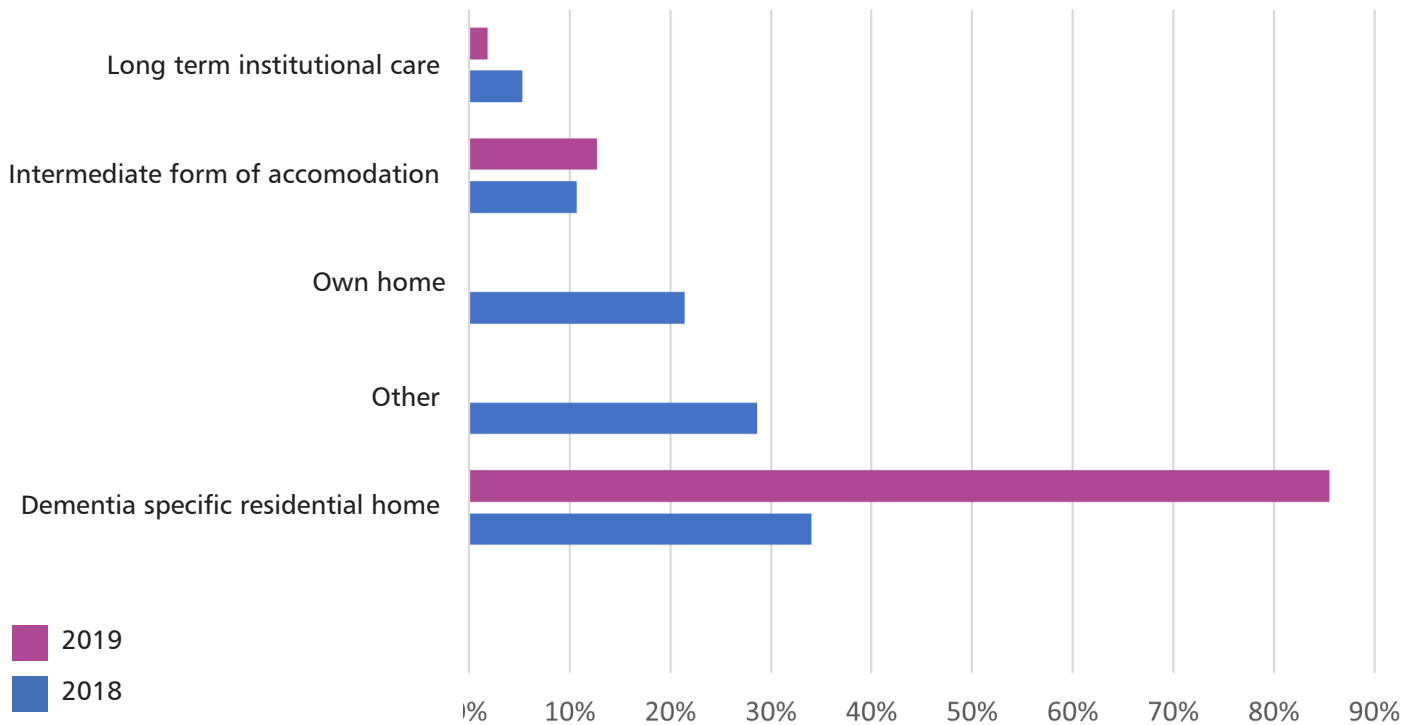

Figure 4. Living arrangements of people living with dementia

Hospital admissions

- Data collected about the sample of people living with dementia presented in this report shows no record of hospital resource utilisation for the 2019 cohort (n= 55).
- Annual records for the 2018 cohort (n=56) indicate 14 people were admitted to hospital with variations in the number of episodes of admission and overnight stays.
- There were a total of 57 night spent in hospital in 2018, with a majority in internal medicine (21). Other nights in hospital wards included surgery (14), neurology (11) and general ward (11).

Health and allied health service utilisation

- ZorgSaam recorded a reduction in the health and allied health service utilisation of approximately 40% among the 2019 cohort compared to the 2018 cohort (Figure 5).
- There was a big shift in types of services used between 2018 and 2019. For example, almost district nurses were need almost 4000 time in 2018, but not at all in 2019. Similarly, Occupational therapists, geriatricians and neurologists were used in 2018, but not in 2019. More physiotherapists and specialist elderly care were used in 2019 compared with a year earlier, suggesting that more residents were able to access services needed.
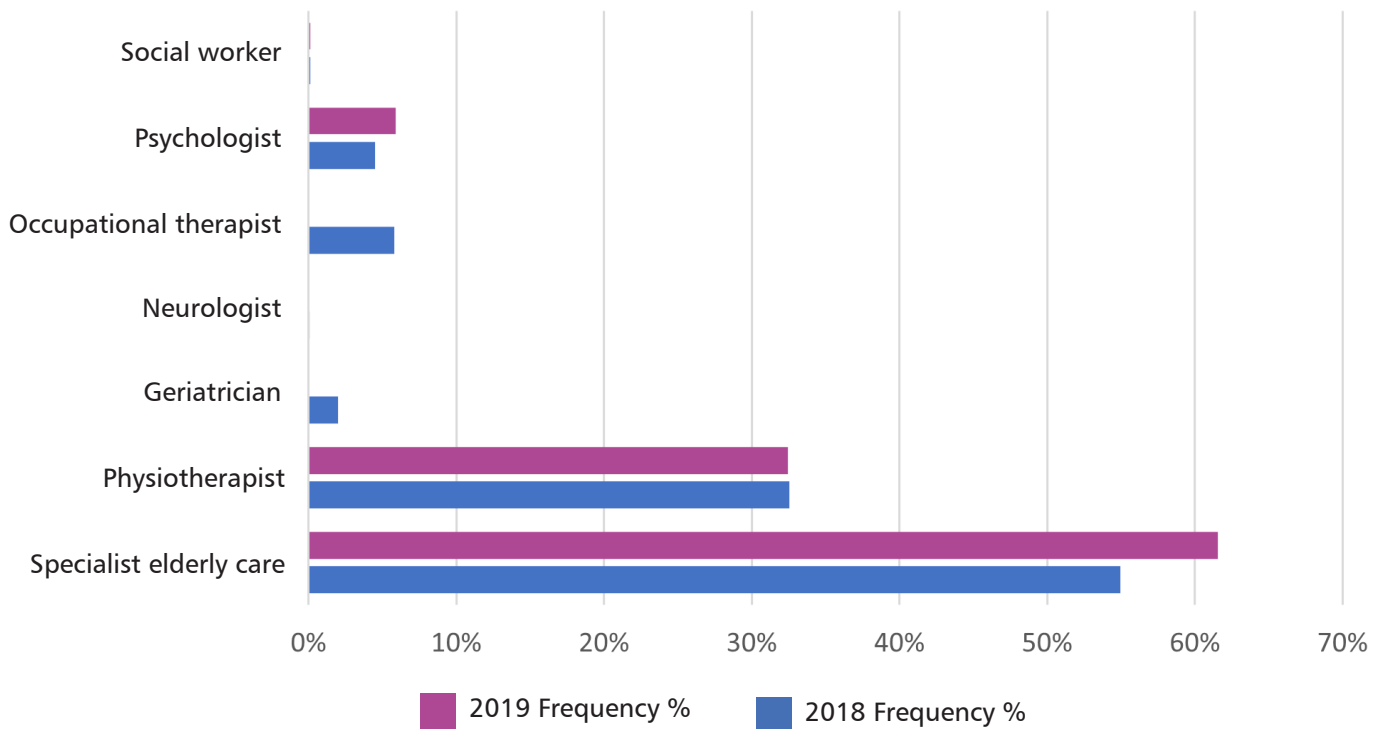
Figure 5. Health and allied health professional resource utilisation

4.5 Client satisfaction with long-term care

- ZorgSaam long-term care clients expressed high satisfaction with the value and quality of service.
- In 2019, 90% of the 29 clients surveyed by the organisation indicated they would recommend ZorgSaam to others, with an average score of 8.4 on a 10-point scale for the value of the service across all care locations.
- The average score for the value of the service improved in 2020 with all 21 clients surveyed agreeing they would recommend ZorgSaam as a long-term care service provider to family and friends.

Client complaints

- The number of complaints registered in 2018 (20) compared to 2019 (21) did not vary significantly.
- Care teams prioritise handling expressions of dissatisfaction with the care immediately before they escalate to formal complaints.
- ZorgSaam attributed the sharp rise in official complaints in 2020 (51) to the COVID-19 frustrations, particularly with restrictions on visiting arrangements.

4.6 Organisational achievements

- ZorgSaam has made strides with the environmental care programme to ascertain residents' comfort and wellbeing.
- ZorgSaam continuously strives for higher standards of health and care and pride lies with mastering the environmental triad underpinning the quality of life of people in long-term care. The triad comprises:
  - o The physical environment concerning the building.
  - o The social environment, emphasising who and how often the resident contacts.
  - o The workplace culture focusing on staff training and motivation.
- The quality of care is perceivably better and greater satisfaction exists among staff, residents and family carers. The public perception of the quality of care in the western part of Zeeuws-Vlaanderen has also been

- boosted.
- ZorgSaam care group Zeeuws-Vlaanderen has experienced steady growth in profits since 2017. A profit of €4.8 million was realised in 2018 compared to €2.3 million obtained in 2017.
- The highest earnings were obtained from home & residential care (€1,641,284) and hospital care (€1,454,934).
- ZorgSaam attributes the growth in profit to cost control measures and the rise in the number of clients resulting from the acquisition of Warmande, despite the 1.6% increase in staff costs.

4.7 Challenges in long-term care
- The organisational division for home and residential care for older adults has developed over the years despite struggles that may impede the quality and safety of care.
- In addition to ongoing workforce concerns, ZorgSaam is working around:
  - o The necessity to abandon the medical model and focus on the needs of the residents and their living pleasure. Getting everyone onboard with putting the wellbeing of the resident first is a challenge not only for the family's expectations around care but also for care staff and treatment service providers.
  - o ZorgSaam plans to transform the twelve long-term care locations in the next two decades. The aspiration is to have multiple rooms with different activities such as a television room, dining room, a library room and a music room for people living with dementia. The organisation deems clustering people living with dementia in groups of eight as better for staff costs, but not a perfect environment with one living room.

4.8 Looking to the future
- The use of healthcare technology to support the staff in their work and home care automation for maintaining clients' independence, will play a major role in the future. ZorgSaam contends that the future must be more flexible with possibilities.
- The ongoing long-term care housing plan at ZorgSaam began in 2018 to embrace the idea of care in the community (extramural care).
- The purpose is to enable people living with dementia to have more freedom to move around safely and independently.
- The vision is to expand the concept of homely residential care facilities so that the environment ceases to feel like one is walking through the grounds of a nursing home.
- ZorgSaam is currently working with professionals to translate the vision into actual buildings incorporating technology to ascertain the independence and safety of people living with dementia. ZorgSaam hopes to experiment tactfully with deploying social care staff (to guide clients) alongside care assistants to enhance the autonomy of people living with dementia.

4.9 Implications for long-term residential dementia care practice
- ZorgSaam is yet to demonstrate systematically the benefits of focusing on the care environment.
- ZorgSaam implemented a range of programmes in 2019 to enhance the safety and quality of long-term residential care. Healthcare resource utilisation among the 2019 cohort of people living with dementia studied in this report declined dramatically.
- Evidence from primary and secondary sources identify that the sustainability of the ZorgSaam model of integrated dementia care is derived from the funding mechanism of a universal dementia care package.
- Minimal utilisation of healthcare resources in the majority of residents offsets the costs associated with higher care needs in only a minority of people living with dementia.

5.Conclusions

Shortages in staff numbers and the required mix of skills are ongoing challenges for ZorgSaam within which the organisation has embraced the use of technology solutions to implement and monitor improvements in home and residential care long-term. The retrospective analysis of the ZorgSaam model of long-term home and residential care identified that the standard of integrated dementia care is not static. Future proofing the safety and quality of dementia care necessitates a multidimensional approach to continuous service improvement programmes and timely responses to funding mechanisms and the changing care needs.

6. References

Kontos, P., Miller, K. L., Colobong, R., Palma Lazgare, L. I., Binns, M., Low, L. F., ... & Naglie, G. (2016). Elder clowning in long-term dementia care: Results of a pilot study. Journal of the American Geriatrics Society, 64(2), 347-353.

Wyche, S., Sengers, P., & Grinter, R. E. (2006, September). Historical analysis: Using the past to design the future. In International Conference on Ubiquitous Computing (pp. 35-51). Springer, Berlin, Heidelberg.

7. Appendices

Appendix 1: Secondary sources of data

- Transcripts for two in-depth interviews with long term care cluster managers 2021
- Home and residential long term care employee survey 2021
- Organisational structure 2021
- Quality in long term care report 2020
- Care & Coercion Act 2020
- Environmental care report 2020
- ZorgSaam model of care ppt steering group meeting 2019
- Residential care policy document 2019
- Person centred practice index for staff report 2019
- Quality in long term care report 2019
- Environmental care plan 2019
- Quality plan for long term care 2019
- Healthcare utilisation records for people living with dementia 2019
- Healthcare utilisation records for people living with dementia 2018
- ZorgSaam Care Group Zeeuws-Vlaanderen annual report 2019
- ZorgSaam Care Group Zeeuws-Vlaanderen annual report 2018
- Quality in long term care report 2018
- ZorgSaam and Emmaus site visit report 2017

Appendix 2: Methods for undertaking the retrospective analysis

The assumptions underpinning the retrospective analysis were: i) Structures within the organisation influence care delivery processes and ii) the sequence of events impacts on outcomes. Interviews with key informants aimed to establish core components for sustainable and good quality dementia care, drivers for changes in models of service delivery and mutual influences of the CASCADE project.

HZ University of Applied Sciences conducted and transcribed the key informant interviews in Dutch. CCCU translated the transcripts using the forward-backward method with the help of three platforms including Microsoft word, google translate and DeepL. Emphases from the two interview transcripts informed the domains examined in the documentation selected for analysis. Both primary and secondary sources of data were subsequently interrogated for:

- Changes in modes of delivering care and reasons for implementing change
- Financing and organisation of care
- Quality and safety of care
- Workforce recruitment, planning and job satisfaction
- Key strategies for providing sustainable care
- Challenges and future aspirations

Information addressing the above points was extracted from the documents examined (Appendix 1) and arranged to construct coherent narratives explaining events and their contexts.

Resource Utilization in Dementia (RUD) scale

The original excel files were transported into SPSS version 27 for analysis and the Dutch free-text data were translated into English using Google Translate. The resource utilisation in dementia scale was modified to collect retrospective data about services used annually instead of monthly. Questions removed for example included, 'number of nights the person with dementia spent in temporary accommodation' and 'changes in accommodation for more than 24 hours in the last 30 days'. These were deemed unsuitable for the retrospective analysis approach for evaluating the ZorgSaam model of home and residential long-term care. The data collected using the Resource Utilisation in Dementia (RUD) scale are usually either nominal (e.g., in the last 30 days, how many times was the person admitted to hospital for more than 24 hours?) or ordinal (e.g., who does the person live with?). Some free-text questions (e.g., reasons for hospital visits) were added and were included in the analysis. Data corresponding to the question: 'person lives with', had been collected with a yes/no response, as opposed to who the person lives with (e.g., alone; spouse; child; etc.). Therefore, this was removed from the data analysis as meaningful analysis was not possible