

SARS-CoV-2 pandemic and the population with dementia. Recommendations under the auspices of the Polish Psychiatric Association

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Summary

SARS-CoV-2 poses a particular risk to the elderly and people with many comorbidities. In the case of people with dementia, the compliance with sanitary recommendations and the necessary physical isolation can have far-reaching negative consequences in terms of limiting the continuation of tailored care, support and treatment. The recommendations related to the SARS-CoV-2 pandemic must take into account not only the medical consequences of lack of access to medical care, but also their long-term effects and the disease progression in accordance with the concept of social health. A plan of action for the psychoeducation of informal carers, adapted to the elderly group (including people with dementia), is also necessary. Prepared under the auspices of the Polish Psychiatric Association, the recommendations for people living alone, with their family and in long-term care facilities are intended to draw attention to key epidemiological issues that can be planned by medical staff within the organization of patient care. However, mental and social needs of patients, whose fulfillment is particularly significant in times of restrictions related to everyday activities, are of equal importance. Further monitoring of the epidemiological situation and scientific reports related to the SARS-CoV-2 pandemic are necessary to verify and update the guidelines.

Key words: SARS-CoV-2, dementia, social health

Introduction

The consequences of the SARS-CoV-2 pandemic for people living with dementia

First global reports reveal that the course of infection associated with a new strain of SARS-CoV-2 coronavirus (Severe Acute Respiratory Syndrome coronavirus 2),

which causes COVID-19 disease (**Coronavirus Disease 2019**), poses a particular risk to the elderly and patients with many comorbidities. American Centers for Disease Control and Prevention (CDC) list the age over 65 years and stay in long-term care facilities as risk factors for the severe course of COVID-19 [1], which is associated with an increase in hospitalization and significantly increased mortality [2, 3]. For this reason, global agencies submit further recommendations, including:

- compliance with sanitary recommendations, e.g., those concerning hand hygiene;
- restriction on leaving the house;
- avoidance of medical facilities and contact with medical personnel;
- use of telephone contact with medical personnel or remote dealing with official matters.

Currently, all social activities are limited by the necessity to maintain social isolation and distance, which aims at reducing the risk of further SARS-CoV-2 transmission. Restrictions taken to cut the transmission chain may increase the severity of anxiety, depression, feeling of loneliness, and perceived insecurity in society (Figure 1) [4]. The elderly and the sick, who are less abled and resourceful, are a particularly vulnerable group. For those living with dementia, the above-mentioned recommendations and the necessary physical isolation can have far-reaching negative consequences in terms of limiting the continuation of tailored care, support and treatment. In many countries, such as Poland, the elderly, as well as people with dementia and their carers, have already been confronted with the limitations of access to health care and social support system. The global spread of SARS-CoV-2 and its disproportionate impact on the elderly can result in further inequalities in access to these services as well as further marginalization of this group, as can be seen in the Italian population [5]. Due to these reasons, the recommendations of the Polish Psychiatric Association were prepared.

In the current conditions, health care provided remotely using telecommunications means is becoming a daily reality. On the other hand, people living with dementia, who have little knowledge and skills in the field of telecommunications and rely primarily on personal support, may feel a deepening feeling of loneliness and a sense of abandonment [6]. In their case, the lack of technical competencies is a real barrier to meeting the necessary needs (especially the access to a doctor, psychologist) and maintaining the previous physical activity level [3, 6, 7]. Previously developed psychosocial interventions were largely based on increasing social participation, implementation of personalized support, improving the quality of life of people living with dementia. Although the control of disease transmission is nowadays of paramount importance, the recommendations related to the SARS-CoV-2 pandemic must take into account not only medical consequences of the lack of access to medical care, but also the negative phenomena that translate into later functioning of the elderly.

A decrease in life activity associated with social isolation of people with dementia may have a real impact on their long-term functioning and the illness progression in accordance with the concept of social health [8–10]. Recent research indicates that

social health is key to understanding the phenomenon of cognitive reserve as a protective factor against the development of deficits in cognitive functioning [11]. This means that maintaining an efficient network of contacts, participation in meetings and group activities can be a source of better cognitive performance in the elderly and an important factor in slowing down the illness progression for people living with dementia. It is also associated with a tendency to intensify the mobilization of this group by organizing interventions and psychosocial programs aimed at reducing phenomena perceived as negative, such as social isolation or stigmatization. This reduces the psychopathological symptoms, which are often an emotional consequence of the activation of maladaptive mechanisms for handling the illness. The solutions introduced in Poland and related to the establishment of the so-called meeting centers for people with dementia and their carers or other places of social mobilization have revealed a number of important benefits for this group of recipients, such as: the improvement of emotional functioning and general well-being of people with dementia, an increase in their self-esteem, sense of belonging, as well as the reduction of neuropsychiatric symptoms and increase in received support [12, 13]. Currently, there are few studies assessing the effects of social isolation resulting from intentional isolation associated with the risk and transmission of SARS-CoV-2 [7]. However, it is important to emphasize that social isolation during a pandemic can have a completely different dimension than social isolation in a reality where contact with another person is possible. It is important to distinguish the concepts of physical distance from social distance. There are many ways to stay in close emotional contact while refraining from physical contact. However, in the group of elderly people, especially those living with dementia, maintaining this closeness without physical contact is a real challenge.

Therefore, it is necessary to plan and implement new methods of care to minimize these negative phenomena in a way not affecting the risk of the viral transmission among this group of patients [7]. Moreover, a plan of action for psychoeducation, tailored to the elderly (including those with dementia), is needed.

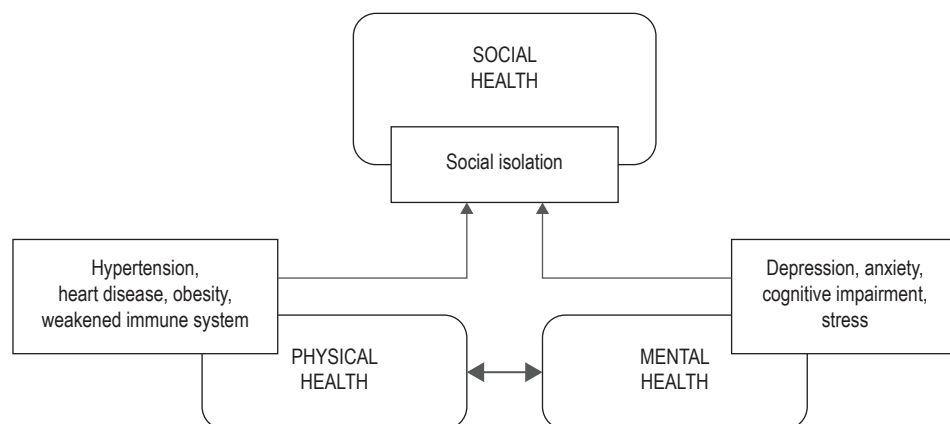


Figure 1. Negative consequences of isolation in social conditions before the pandemic

Due to the diverse life situation and organization of care for people with dementia, recommendations tailored to individual patient groups are necessary. To distinguish people with dementia living at home with their family and those living alone is the basis. In the case of people with dementia living alone, a well-functioning support network (social services, volunteers, neighbors) can protect against rapid deterioration in living conditions, food access and medical care. The third group consists of patients in 24-hour social care centers. In this case, a contact with the medical personnel is maintained; restrictions on contact are applied to family members. The personnel of the 24-hour centers must know and apply all the recommendations of the General Sanitary Inspectorate (GSI).

Recommendations for people providing medical and social care to patients with dementia

The present situation requires solutions designed for the population living with dementia, taking into account both specific problems they experience and their ability to adapt to new conditions. The role of the carer of the person with dementia is increasing.

LEVEL 1. Principles of daily care of a person with dementia, reducing the risk of SARS-CoV-2 transmission:

- The use of reminders for security measures – memory deterioration results in the need for intensive support for the implementation of such recommendations as: the application of disposable masks, not touching or hugging other people, not touching the face, frequent hand washing in the form of reminders from the carer or, for instance, placing information notes in strategic points of the apartment (on the front door, in the bathroom) [14];
- Assistance in dealing with formal matters or meeting medical needs – assistance in obtaining access to a remote pathway in making an appointment by phone or on-line, but also, if possible, planning the treatment and providing prescriptions for a longer period of time, which will allow to limit attending clinics and visits to pharmacies [14];
- Limiting the visits and the number of people taking care of a patient – this limitation particularly applies to all forms of social assistance and its implementation requires the transfer of some responsibilities associated with care (e.g., doing shopping) to the group of people closest to the patient;
- Observation of the patient's condition – apart from the symptoms characteristic of infection, it is necessary to monitor daily functioning. Carers should be advised to seek medical attention if there is a change in patient's behavior, as it may indicate delirium (Appendix A) [14, 15].

LEVEL 2. Modification of forms of medical and social care for a person with dementia

- Communication with a home patient via televisits – teleconsultations significantly reduce the number and frequency of sudden hospital visits or emergen-

cy calls, especially among patients over 65. Videoconsultations (if possible) allow an audiovisual interaction of the patient with the physician, psychologist or occupational therapist, which gives the patient a sense of direct contact despite physical distance. The elderly often prefer telephone contact rather than the use of unknown to them internet communication solutions. The form of remote communication should be adapted to the individual needs and capabilities of the patient;

- Adjustment of drugs and their doses to the patient's current mental state considering possible changes in the prevalence and severity of psychopathological symptoms;
- Providing psychosocial support and information on techniques of coping with stress to both patients with dementia and their carers via the mass media (radio, TV programs or online activities dedicated to the elderly) or helplines organized during the pandemic, related to psychiatric care and psychological support [16];
- Personalized contact – communication with the patient provided with institutionalized care should take place in an atmosphere of mutual respect and should be as engaging as possible;
- Monitoring the consequences of social isolation in terms of emerging behavioral disorders in patients and/or inappropriate behavior of family members (in the case of inpatient care – medical staff members) towards the patient;
- Monitoring negative emotional consequences such as anxiety, sense of abandonment, depression, and behavioral disorders in people with dementia staying in long-term care facilities, where a ban on visits and contact with the family has been introduced;
- Depending on local restrictions, maintaining group activities in small groups if possible (e.g. physical exercises, watching TV, praying) and meal times (eating alternately);
- Monitoring all patients with dementia for symptoms of psychomotor agitation, which may lead to more frequent use of sedatives and antipsychotics.

LEVEL 3. Support for the carer of a person with dementia (proposals for actions that can help in patient care, useful for both professional and family carers):

- The use of mental health clinic staff assistance – psychiatrists, psychologists, social workers or volunteers should provide uninterrupted mental health care by telephone or online;
- Tips for stress reduction, such as relaxation or meditation exercises, can be provided through electronic media or with the use of available and effective tools to reduce tension and improve the emotional functioning of a person with dementia. An example can be the use of exergaming (exercises and games), i.e., the use of virtual reality and console games in the elderly [17];

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- Reduction of exposure to news programs on TV or radio, media reports which intensify the stress and fear, especially those coming from unreliable sources [16].
 - Providing the patients with a set schedule of the day, as under unchanging conditions patients with dementia are less likely to develop anxiety and depression [18];
 - The use of supporting technology in daily activities of people with dementia. The present situation limiting the possibility of physical contact has an impact on faster development and widespread use of new technologies among people with dementia also in Poland. Assistive technology can be defined as “any device or system that enables a person to perform a task which they would not otherwise be able to perform, or increases the ease and safety with which a task can be performed” [19]. This includes a wide range of devices that can be grouped according to their purpose (sensors located in the patient’s ear that monitor the patient’s movements, heart rate, body temperature; electronic wristbands; devices reminiscent of performing basic activities relevant to daily life) [20];
 - Introducing physical activity to a person with dementia at home and joint organization of other non-pharmacological effects (Appendix B);
 - Rehabilitation of cognitive functions using workbooks available online (Appendix C);
 - Using mobile or tablet applications adapted to the needs of people living with dementia (Appendix D);
 - Monitoring the changes regarding the functioning in a given region of the City Social Welfare Centre (Polish: MOPS) and the Regional Centre of Social Policy (Polish: ROPS) adapting their activities to the current situation. These institutions organize psychological or social consultation free of charge via telephone or online. Details are published on an ongoing basis in the news tab on the websites of individual facilities;
 - For patients isolated at home, walking within a radius of approx. 200 meters away from the home can help to prevent behavioral disorders;
 - Obtaining information if the person with dementia and their carer have access to all the medicines they currently need. It is advisable to have reserve supplies of all regularly taken drugs for at least 1 month [21] ;
 - Assistance in updating social contacts so that the patient can obtain help if necessary. Indication where and how to obtain practical help when needed, e.g., how to call a taxi, order food and ask for medical care;
 - Avoiding and minimizing the increasing doses of sedatives. The following activities may be helpful:
 - Sorting out old photographs and objects from the past can help to recover personal memories;

- Collecting items and old newspaper clippings can help a given person to recall the name of items and related facts;
 - Listening to old songs can be useful for awakening emotions and memories;
 - Movement/exercises – a walk around the apartment or house or, if possible, on the terrace. Simple exercises such as getting up and down from a chair or other home exercises are encouraged as well;
 - Various activities – a person with dementia may be involved in such activities as repairing, cleaning, arranging in drawers, manual washing of underwear, folding towels, etc.;
 - Maintaining a regular schedule – routine is crucial for people with dementia;
 - Right lighting depending on the time of day – avoiding shadows or half-shadows which often cause stimulation (a night light is recommended in the bedroom whereas a lighted corner in the living room);
 - Free time and entertainment, for example, cooking together, playing board games or cards;
 - Sundown syndrome – going out in front of the house or block of flats at sunset helps to restore orientation; climbing stairs can be useful for distraction and as exercises (walking on foot is a better solution than taking the lift).
- Hygiene and sanitary rules (washing hands and disinfecting rooms is the basis). It may be necessary to prepare appropriate materials with guidelines concerning hand washing, which will be understandable for patients (e.g., picture instructions or simple messages: “wash your hands frequently with soap and water”, “sneeze or cough in a tissue”, “throw used tissues in the bin”, “do not touch your face”) [22];
- Instructing the carers of absolute necessity to observe possible symptoms of infection when people with dementia are unable to report them (regular measurement of body temperature; carers may ask if the person feels pain or have dyspnoea and indicate the part of the body in question, or if they feel uncomfortable);
- Suggesting that relatives not living with the patient should be able to maintain telephone or video contact (computer, tablet, mobile phone);
- The need to explain the course of the COVID-19 epidemic in a way that takes into account the cognitive impairment of patients. It is important to use expressions that are directly related to the patient (e.g., “I’m wearing a face mask to prevent you from becoming infected”);
- Ensuring the best possible identification of personnel (name tags with big letters or pictures) when using personal protective equipment (face masks, face shields) that may hinder recognition;
- It is worth remembering that persons with dementia may find it difficult to understand the information provided in the media or by carers about their own situation (e.g., they may not understand the regulations regarding e.g., when they can do shopping; they may confuse conditions in other countries with situations in their own country).

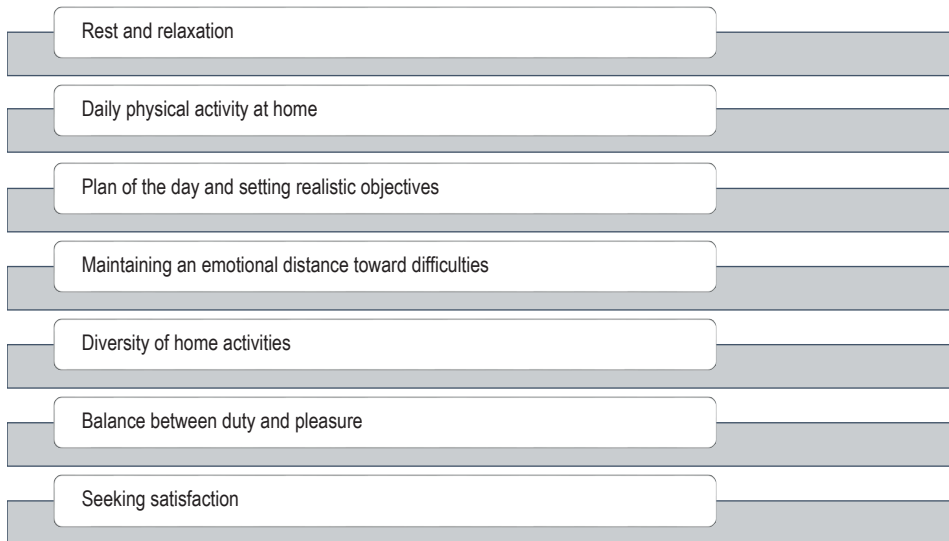


Figure 2. **Tips important for maintaining the emotional balance of the informal carer**

As part of the contact between the clinician and the informal carer, psychoeducation related to improving their emotional functioning is essential [23]. Figure 2 highlights the key areas that should be considered during the conversation. Additionally, Appendix E comprises guidelines relevant to a close relative of a 24-hour nursing home resident.

Conclusions

Notwithstanding the overriding value of the epidemiological recommendations, patients with dementia require specific care that also considers their mental state and the cognitive aspects of social health important for their long-term functioning. The presented recommendations aim to draw attention to the key epidemiological issues that can be planned by medical personnel as part of the organization of patient care. Equally important are the mental and social needs of patients, which are particularly relevant in times of restrictions related to everyday activities. Further monitoring of the epidemiological situation as well as scientific reports related to the COVID-19 epidemic is necessary in order to verify and update the guidelines.

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Appendix A

Recommendations on how to proceed in the event of delirium

In the course of SARS-CoV-2 infection, symptoms of delirium may occur. Especially the emergence of exacerbated motor disorders and excitability will pose an additional challenge in times of epidemics and recommended social isolation. Standard non-pharmacological measures to treat or prevent delirium may not be applicable in isolated environments. At the same time, the environment itself may intensify the symptoms of delirium.

First of all, good general care should be provided and, in particular, prevention, early detection of delirium and, if conditions permit, non-pharmacological measures should be applied.

Secondly, as SARS-CoV-2 is easily transferable, the risk of harming other people may exceed the risk of harming the affected person. This may require prior pharmacological treatment so as to prevent potentially risky behavior. It should be borne in mind that even in complex situations where the patient is delirious in the course of COVID-19, with the additional risk of transfer to other people and possibly limited human resources, the same basic principles of risk assessment and the Mental Health Protection Act are in force.

Suggested recommendations:

1. Implementing delirium screening in risk groups and regular assessment of mental health with the use of a recommended tool (e.g., CAM: http://proicu.pl/images/pdf/CAM-ICU_Training_Manual_Polish_Nov2015.pdf);
2. Reducing the risk of delirium by avoiding or limiting the factors predisposing to it. Taking care of the following:
 - providing information on a regular basis to improve knowledge of the time and place where a patient is;
 - ensuring the right surroundings and environmental support (staying in a calm, bright, quiet room);
 - preventing constipation;
 - early treatment of pain;
 - early diagnosis and treatment of other infections;
 - maintaining sufficient oxygenation and hydration;
 - avoiding urinary retention;
 - regular review of medications;
3. Whenever a behavioral disorder occurs, the immediate causes, including pain, urinary retention, constipation, etc. should be identified and treated. Should these interventions be ineffective or control is needed more quickly, in order to reduce risks to the patient and others, pharmacological treatment may be necessary earlier than normally considered;

4. If patients receive sedative treatment, including benzodiazepines, the side effects – vital parameters, hydration levels and consciousness should be monitored at least every hour until the patient's condition stabilizes;
5. In the case of elderly people, it is necessary to remember about the appropriate dosage of medications:
 - Haloperidol – starting dose of 0.5 mg (preferably orally, fluid or tablet) followed by an increase in the dose every 2–4 h depending on the patient's condition assessment. The average daily dose of 1–4 mg. When administered parenterally, the dose should be reduced by half;
 - Tiapride – starting dose of 25 mg–50 mg, followed by an increase in the dose depending on the patient's condition. Maximum daily dose is 300 mg;
 - Risperidone – starting dose of 0.25 mg–0.5 mg. Increasing the dose depends on the patient's condition. Daily dose is 2 mg.
6. Attention should be paid to warnings about the use of antipsychotics in patients with Parkinson's disease or Lewy-Body dementia;
7. Providing information on delirium is essential using locally available resources such as brochures available on the website (<https://www.bgs.org.uk/resources/coronavirus-managing-delirium-in-confirmed-and-suspected-cases>).

Appendix B

Motor activation of persons with dementia at home or in a 24-hour care center

Currently it is considered that physical activity can significantly inhibit the rate of deterioration of physical and mental fitness. An active lifestyle leads to a reduction in the intensity of changes in organs resulting from the passage of time, such as changes in bone tissue, loss of muscle mass, endurance, coordination of movements, balance or functional ability.

Social isolation related to the SARS-CoV-2 pandemic prevents persons with dementia from engaging in regular physical activity outside (e.g., walking) or activity in organized groups. A decrease in physical activity may have a tangible impact on the deterioration of functioning and progression of the illness. It is essential to stay physically fit at home.

Some examples of exercises for people with mild to moderate dementia to be done at home:

WARM-UP

Before starting the training session, measure your heart rate and start with 3 warm-up exercises:

1. Breathing exercise: lift both arms up in front of the body while inhaling through your nose, lower your arms downward exhaling through your mouth. Repeat 3 times.
2. March on spot: march on spot for 2 minutes while alternating the movements of your upper limbs. Lift your legs so that your hips and knees are bent at an angle of about 90 degrees.
3. Breathing exercise: lift both arms up sideways while inhaling through your nose, lower your arms downward exhaling through your mouth. Repeat 3 times.

MAIN PART

4. Coordination exercise: sit on a chair, then gently grasp your nose with your left hand and your left earlobe with your right hand using your thumb and index finger. Take a break by clapping your hands 5 times. Now change sides. Repeat the exercise 10 times for each side.
5. Drawing triangles in the air: sit on a chair with your hands on your knees. Lift both arms up. Then, using your index fingers, try to plot 3 invisible right-angled triangles in the air. Each triangle requires three movements with both upper limbs in a coordinated manner. Go back to your starting position and rest for 30 seconds. Repeat the exercise 5 times. If you find it too difficult, do it for each upper limb separately.

6. Now do a more difficult exercise by drawing a circle in the air with your right hand and a straight vertical line with your left hand. Do the exercise 5 times and take a 1-minute break. Then repeat them changing sides.
7. Balance exercise on all fours: get down on all fours on a mat or extended towel. Extend your right hand in front of you and your left leg back (up to body height) – hold this position for 2 seconds (do not hold your breath, breathe freely). Take a 5 second break returning to all fours. Breathe slowly. Change sides. Repeat the exercise 10 times for each side, remembering not to hold your breath while doing it.
8. Lifting your hips: lie on your back on a carpet or mat with your feet resting on the ground (knees bent) and your hands extended along your body. If you experience any discomfort in the cervical spine, put a towel or a small pillow under your head. As you exhale, lift your hips. Tighten your buttocks and hold for 3 seconds (do not hold your breath, breathe freely). As you inhale, gently lower them to the ground. The movement of lifting your hips should start by pressing your feet onto the ground. Repeat the exercise 20 times.
9. Rolling the ball: prepare a soft small ball. Sit on a chair opposite the other person (or about 1–2 metres from the wall). Pass the ball to your partner using your feet for about 5 minutes. If you don't have a partner to do the exercises, bounce the ball gently against the wall.
10. Supported squat: stand behind the chair and grab its backrest. Do a half squat (exhale) and slowly return to a standing position (inhale) while holding the backrest of the chair. Take a 5 second break. Repeat the exercise 15 times, rest and again repeat the exercise 15 times.
11. Balance exercise in standing position: stand between two chairs. Bend one leg slightly at the knee, lifting it just above the ground and try to hold the position for 15 seconds. Take a 10 second break and repeat for your other leg (10 times for each side). If you don't feel secure, grab the backrest of the chair with one hand. Rest and do the second series of 10 repetitions of this exercise.

END OF THE TRAINING SESSION:

1. Stretching your calves: sit on a chair, extend one leg so that it rests on the floor. Pull your toes towards yourself until you feel tension in your calf. Hold the position for 10–15 seconds. Relax and repeat for your other lower limb.
2. Front thigh stretches: stand facing the backrest of the chair. Bend your leg at the knee, hold the ankle with your hand and pull your foot to the buttock. The whole body should be aligned. Hold the position for 10–15 seconds and repeat for your other leg.
3. Shoulder stretching: take a standing position. Do 15 shoulder joints rotations backwards and 15 forwards.
4. Breathing exercise: lift both arms up sideways while inhaling through your nose, lower your arms downward exhaling through your mouth. Repeat 3 times.

You should avoid holding your breath while doing exercises (this can increase your blood pressure), exercising with your head down, jumping, jumping off, and exercises that cause pain. During the exercises, the patient's well-being and involvement should be monitored.

Non-pharmacological treatment in the event of anxiety, restlessness in patients with dementia:

1. Breathing exercises – e.g., working to control the rate of breathing or abdominal breathing exercises (e.g., “Sit down comfortably on a chair. Inhale through your nose. Exhale the air through your mouth pronouncing the consonants ssssssss”).
2. Occupational therapy.
3. Relaxation therapy – e.g., muscle relaxation by instructing to relax individual muscle groups (using relaxation techniques available on-line)
4. Music therapy.
5. Kinesitherapy (example exercises described above). The exercises should be done in a quiet setting.

Appendix C

Examples of cognitive exercises available online, free of charge

- <https://www.lundbeck.com/pl/dla-pacjentow-i-rodzin/wiczenia-pamici>
- <https://www.egis.pl/23/dla-pacjenta/11/materialy-edukacyjne/41/jak-zwiekszyc-efektywnosc-terapii>
- http://seniorzybialoleki.org.pl/images/katalogssb/pdf/CWICZENIA_USPRAWNIAJACE_PAMIEC.pdf

Appendix D

Examples of phone or tablet applications adapted to the needs of the elderly

Application name	Intended use
A WalkThrough Dementia	Understanding the perspective of a person with dementia
Iridis	Helps to plan the living space for people with dementia
Peak – Brain Training	Trainings to maintain cognitive functions
Lumosity	Trainings to maintain cognitive functions
Brain Test (logical puzzles)	Trainings to maintain cognitive functions; available in Polish
Easy game (brain training and brain-teasers)	Trainings to maintain cognitive functions; available in Polish
Timeless Care	Facilitating the organization of daily activities and social interaction
Memory Match (memory games)	Simplified memory exercises for persons with more advanced deficits
Dementia Talking Point (Internet forum)	Platform for sharing experiences related to the deterioration of cognitive functions

Appendix E

Guidelines relevant to a close relative of a 24-hour nursing home resident

- Contact a loved one by phone at regular intervals/hours;
- Remember that physical social isolation is difficult for anyone, but can exacerbate the symptoms of dementia. Therefore, try to have regular conversations (these can be short but regular);
- If possible, send photos and use video calls via smartphones. Stay calm and smile during the calls; take your time. A smaller number of calm conversations is more beneficial than frequent short ones;
- Try to explain the reasons why visits stopped suddenly, in order to avoid misunderstandings and calm down the patient with dementia. Be careful not to show your concern;
- It is important to remember that medical personnel can be overburdened. However, do not hesitate to seek medical assistance if necessary.