

Nursing recommendations for facing dissemination of COVID-19 in Brazilian Nursing Homes

Recomendações para o enfrentamento da disseminação da COVID-19 em Instituições de Longa Permanência para Idosos
Recomendaciones para abordar la propagación de COVID-19 en Hogares para Ancianos

Rosimere Ferreira Santana^I

ORCID: 0000-0002-4593-3715

Marcos Barragan da Silva^{II}

ORCID: 0000-0002-6476-9746

Daniela Aparecida da Silva Rebouças Marcos^{III}

ORCID: 0000-0002-6508-8352

Cristiane dos Santos Rosa^{IV}

ORCID: 0000-0002-6001-7053

Willi Wetzel Junior^V

ORCID: 0000-0002-6193-4064

Romulo Delvalle^{VI}

ORCID: 0000-0002-8782-6184

^I Universidade Federal Fluminense. Rio de Janeiro, Rio de Janeiro, Brazil.

^{II} Residencial Geriátrico Vida. Porto Alegre, Rio Grande do Sul, Brazil.

^{III} Residencial Israelita Albert Einstein. São Paulo, São Paulo, Brazil.

^{IV} Espaço Vianney Instituição de Longa Permanência de Idosos. Niterói, Rio de Janeiro, Brazil.

^V Quinta Urbana Instituição de Longa Permanência de Idosos. Pelotas, Rio Grande do Sul, Brazil.

^{VI} Ministério Público do Estado do Rio de Janeiro. Rio de Janeiro, Rio de Janeiro, Brazil.

How to cite this article:

Santana RF, Silva MB, Marcos DASR, Rosa CS, Wetzel Jr W, Delvalle R. Nursing recommendations for facing dissemination of COVID-19 in Brazilian Nursing Homes. Rev Bras Enferm. 2020;73(Suppl 2):e20200260. doi: <http://dx.doi.org/10.1590/0034-7167-2020-0260>

Corresponding author:

Rosimere Ferreira Santana
E-mail: rfsantana@id.uff.br



EDITOR IN CHIEF: Dulce Barbosa
ASSOCIATE EDITOR: Andrea Bernardes

Submission: 04-12-2020 Approval: 06-26-2020

ABSTRACT

Objective: to develop a protocol of recommendations for facing dissemination of COVID-19 in Brazilian Nursing Homes. **Method:** a study of experts' recommendations using a structured form applied through the Delphi Technique, obtaining 100% agreement among professionals after four rounds of analysis. The population comprised six nurses members of the Scientific Department of Gerontological Nursing of the Brazilian Association of Nursing (Associação Brasileira de Enfermagem) **Results:** the protocol was structured in a nucleus of nursing interventions to face the spread of COVID-19 in Nursing Homes, consisting of 8 actions. **Final considerations:** the protocol can help nurse managers to organize assistance to face the pandemic, which can be adaptable to each reality, making training nurses and health teams easier.

Descriptors: Nursing Care; Homes for the Aged; Geriatric Nursing; COVID-19; Coronavirus.

RESUMO

Objetivo: elaborar um protocolo de recomendações para o enfrentamento da disseminação da COVID-19 em Instituições de Longa Permanência para Idosos. **Método:** estudo de recomendações de especialistas utilizando-se um formulário estruturado aplicado por meio da Técnica Delphi, obtendo-se 100% de concordância entre os profissionais após quatro rodadas de análise. A população foi constituída por seis enfermeiros membros do Departamento Científico de Enfermagem Gerontológica da Associação Brasileira de Enfermagem. **Resultados:** o protocolo foi estruturado em um núcleo de intervenções de enfermagem para o enfrentamento da disseminação da COVID-19 em Instituições de Longa Permanência para Idosos, consistindo em 8 ações. **Considerações finais:** o protocolo poderá auxiliar os enfermeiros gestores a organizar a assistência para enfrentar a pandemia, que pode ser adaptável a cada realidade, facilitando o treinamento das equipes de enfermagem e saúde. **Descritores:** Cuidados de Enfermagem; Instituição de Longa Permanência para Idosos; Enfermagem Geriátrica; COVID-19; Coronavirus.

RESUMEN

Objetivo: desarrollar un protocolo de recomendaciones para abordar la propagación de COVID-19 en hogares para ancianos. **Método:** estudio de recomendaciones de expertos utilizando una forma estructurada aplicada utilizando la técnica Delphi, obteniendo un 100% de acuerdo entre profesionales después de cuatro rondas de análisis. La población estaba compuesta por seis enfermeras que son miembros del departamento científico de enfermería gerontológica de la Asociación Brasileña de Enfermería (Associação Brasileira de Enfermagem). **Resultados:** el protocolo se estructuró en un núcleo de intervenciones de enfermería para enfrentar la difusión de COVID-19 en Hogares para Ancianos y consta de 8 acciones. **Consideraciones finales:** el protocolo puede ayudar a los gerentes de enfermería a organizar la asistencia para enfrentar la pandemia, que puede adaptarse a cada realidad, facilitando la capacitación de los equipos de enfermería y salud.

Descriptorios: Atención de Enfermería; Hogares para Ancianos; Enfermería Geriátrica; COVID-19; Coronavirus.

INTRODUCTION

China reported, at the end of 2019, the first cases of pneumonia of unknown causes, whose patients initially have high fever, dry cough, and dyspnea⁽¹⁾. Later, in analyzes of bronchoalveolar lavage, whole genome sequencing, RT-PCR and cultural examinations in hospitalized patients in Wuhan, China, pointed to the new Coronavirus (2019-nCoV)⁽²⁾.

Right on the initial route of the epidemic, the World Health Organization (WHO) declared, on January 30, 2020, that the outbreak of by COVID-19 was a Public Health Emergency of International Concern. On March 11, 2020, COVID-19 was characterized as a pandemic, and thousands of COVID-19 cases and deaths were recorded worldwide, mostly affecting elderly individuals⁽³⁾.

The elderly population and pre-existing health conditions (such as hypertension, heart disease, lung disease, cancer, or diabetes) were considered to be the most likely to develop the severe form of COVID-19, resulting in higher mortality rates⁽³⁻⁴⁾. Thus, there is an urgent concern with the Nursing Homes (NHs) as a scenario of extreme vulnerability to outbreaks of respiratory diseases, including influenza and other diseases⁽⁵⁾. Therefore, public policies that promote measures to protect the health of institutionalized elderly in the midst of a pandemic become necessary. This population is mostly fragile and dependent, caused by chronic diseases and greater cognitive impairments, favoring worse results of this infection⁽⁴⁾.

Concerned with the increasing number of elderly people infected by COVID-19, the Brazilian National Health Regulatory Agency (*Agência Nacional de Vigilância Sanitária*, abbreviated ANVISA) launched the TECHNICAL NOTE GVIMS/GGTES/ANVISA 05/2020 *Orientações para a Prevenção e o Controle de Infecções pelo novo coronavírus (SARS-CoV-2)* (freely translated as Guidelines to Prevent and Control Infections with the new coronavirus (SARS-CoV-2)) in NHs, whose objective was to address minimum guidelines for NHs regarding prevention and control measures that should be adopted during assistance to residents, especially with regard to suspected cases or with a confirmed diagnosis of COVID-19⁽⁶⁾.

Inserted in care management in NHs, nurses take the front line to the pandemic and need to have priority in the discussion and consolidation of infection prevention and control strategies, and, above all, to have access to Personal Protective Equipment (PPE). To that end, strategic planning is necessary, including the review of financial, material and human resources, which support care actions to prevent COVID-19 infection and support interventions in geriatric and gerontological aspects.

From this perspective, the Scientific Department of Gerontological Nursing (*Departamento Científico de Enfermagem Gerontológica*, abbreviated DCEG) of the Brazilian Association of Nursing (*Associação Brasileira de Enfermagem*, abbreviated ABEn) prepared an information document for nursing teams at NHs to face dissemination of COVID-19. Such document contained guiding interventions to care for institutionalized elderly, since, in many cases, elderly individuals and health professionals at NHs are at risk of transmitting COVID-19⁽⁷⁾. Such documents strengthen the field of geriatrics and gerontology to play a critical role in managing this global crisis, as they focus on critical aspects of this pandemic for health professionals working at NHs⁽⁴⁾.

It is known that the current situation has changed the daily lives of NHs and that this has impacted workers and elderly individuals. In this context, this study is based on contributions according to the current evidence, the most consistent possible for NHs to strengthen themselves to face the COVID-19 pandemic. This study contributes to the dissemination of infection prevention and control strategies, demonstrating nursing as the protagonist of care in NHs.

OBJECTIVE

To develop a protocol of recommendations for facing dissemination of COVID-19 in NHs.

METHODS

Ethical aspects

This study did not use an Informed Consent Form, since it was not a research carried out with human beings, but a study of experts' recommendations for joint construction of a protocol for NHs.

Study design, place, and period

This is a study of experts' recommendations, linked to DCEG, carried out in March 2020, online. DCEG, in the structure of ABEn and in some of its Sections, is a milestone for the political and scientific organization of nursing professionals who seek to qualify towards autonomous and competent care aimed at elderly individuals and their families. At the same time, it is an important step in the field representativeness for debate on training policy in nursing and public policies for elderly individuals.

Population and sample

Six nurses with clinical experience in geriatrics and gerontology were part of the study, as well as participants in a research group, with publication of articles in the field. Professionals with knowledge about the COVID-19 pandemic, with professional experience of at least two years as an NH manager, and who participate in all stages of the study were included.

Their characteristics were:

- Four females and two males;
- With age ranging between 33 and 57 years old;
- Education level: one (1) has post-doctorate in nursing; one (1) has a PhD in nursing; two (2) have masters' degree in nursing; and two (2) specialize in gerontology;
- Practice field: four (4) NH managers; three (3) from private institutions; one (1) from a philanthropic institution; one (1) professor at a federal public university; and one (1) expert technician from the Specialized Technical Support Group (*Grupo de Apoio Técnico Especializado*, abbreviated GATE) of the State Prosecutor's Office, in charge to inspect elderly care units.
- Place: São Paulo (SP), Porto Alegre (RS), Pelotas (RS), and Rio de Janeiro (RJ);
- Experience in the elderly field: all with more than 10 years of experience in gerontology; more than four (4) years in

NH management; with specialization in management and or title of expert in gerontology; elderly health associates;

- All are active in their ABEn DCEG states.
- The group selected a set of interventions to address the spread of COVID-19 for NHs, based on the best evidence from clinical practice and available literature. Exclusion criteria were not foreseen.

Study protocol

The guiding question to build the protocol was: *what nursing interventions/actions are being implemented in NHs to face dissemination of COVID-19?* The number of responses to this question was not determined. An email was sent to the first four experts, individually. Subsequently, the answers were summarized in a single Word file and were analyzed through two rounds according to the Delphi Technique⁽⁸⁾. This technique makes it possible to obtain group agreement on a particular phenomenon. In the first round, contact with experts was initially made by e-mail, sharing the Word file with strategies developed in each unit. Subsequently, in a second round, the main information was summarized and shared via messages by WhatsApp[®], providing a common interface among researchers. Divergent aspects were resolved during brainstorming to define the categorization of the main interventions/actions. After four rounds, it was reached 100% agreement.

Organization and analysis of data

For data organization, content normalization was performed, which deals with spelling corrections, verification of synonyms, adequacy of verb tenses, uniformity of gender (female, male), number (singular, plural) and exclusion of pseudo-terminological expressions. The main selected actions were grouped into intervention centers, which support strategic decision-making to implement the protocol of recommendations for coping with dissemination of COVID-19 in NHs.

RESULTS

The protocol was structured in a group of nursing interventions to face dissemination of COVID-19 in NHs and consists of the following actions: Care management; Educational interventions; Periodic assessment/monitoring of all residents; Prevention and control to prevent the virus to spread; Cleaning and disinfection of surfaces, utensils, and products used by residents; Residents with suspected or diagnosed with COVID-19; Waste treatment; Occupational health and safety; Communication with the family (Chart 1). Eighty-three activities belonging to the interventions were also selected after reaching a consensus.

Chart 1 - Nucleus of nursing interventions to face dissemination of COVID-19 in Nursing Homes

Action	Description
Educational interventions ⁽⁴⁻¹⁰⁾	It includes educational interventions with a focus on the knowledge of professionals working at NHs.
Care management ^(4,11)	It includes nursing interventions/actions that operationalize the work process.

Action	Description
Periodic assessment/monitoring of all residents ⁽⁴⁻¹⁰⁾	Includes clinical nursing assessment activities.
Prevention and control to prevent the virus to spread ⁽⁴⁻¹⁰⁾	Implementation of prevention and control measures for COVID-19 infection, including hand hygiene.
Cleaning and disinfection of surfaces, utensils, and products used by residents ⁽⁴⁻¹⁰⁾	Avoid the virus to spread, through standardized hygiene.
Residents with suspected or diagnosed with COVID-19 ⁽⁴⁻¹⁰⁾	It includes prevention and treatment care for residents with suspected or diagnosed with COVID-19.
Waste treatment ⁽¹²⁾	Organizes the waste from care performed to residents with suspected or diagnosed with COVID-19.
Occupational health and safety ^(6,13)	Purpose to provide safe care and reduce stress for workers.
Communication with the family ⁽¹⁴⁻¹⁵⁾	It includes strategies that facilitate communication between elderly individuals and their families during the period of restricted visits.

Service management

- Redesigning care routines, distributing activities throughout the working day so that there is no crowding between elderly individuals and employees;
- Decreasing time in common areas (TV rooms; cafeteria; games rooms);
- Suspending visits indefinitely, encouraging family members to stay at home;
- Restricting group activities;
- Restricting leaving NHs, whether on tour or outside attendance;
- Restricting visits of professionals who provide periodic and voluntary services such as hairdressers, podiatrists, religious groups, etc. If strictly necessary, NHs should make sure that none of these people show symptoms of respiratory infection, even before these people come into contact with elderly individuals;
- Maintaining the local contingency plan described for the team to guide actions in positive cases or in worsening clinical condition, describing the flow for referral in the event of hospital transfer or death;
- Organizing service flows, including the need to call emergency mobile services;
- Establishing a Rapid Response Team to support and guide the NHs on-call team about the need for guidance and emergency care;
- In institutions that have morgue, following the recommendations for protecting the body, as well as using PPE during post-mortem care;
- Performing terminal cleaning in dormitory and morgue after removal of the body;
- In institutions that do not have a morgue, reinforcing the need for professionals to be dressed, and, after removing the people that died, perform terminal cleaning procedure;
- Mapping the PPE available at the institution to provide resources⁽¹¹⁾;

- Increasing the management of professional scales throughout the pandemic period, avoiding unscheduled employee absences;
- Guiding employees to assist who have difficulty applying preventive measures;
- Describing institutional rules and routines in an exclusive protocol to prevent and treat COVID-19 in NHs, making it available in an easily accessible place for the team.

Educational interventions

- Guiding individual/private caregivers about precautionary measures regarding COVID-19;
- Implementing training among assistance, administrative, hospitality, cleaning, and logistics staff on the measures to be implemented in correct placement and removal of PPE, when indicated;
- Using digital platforms as an educational tool on the disease, epidemiology, forms of contagion, prevention, and treatment;
- Introducing measures to encourage employees about actions that favor resumption of awareness and level of attention in stressful moments and emotional support.

Periodic assessment/monitoring of all residents

- Monitoring residents daily for fever, respiratory symptoms and other signs and symptoms of COVID-19, measuring body temperature twice a day and recording the information in the patients' records;
- Assessing those who had contact with confirmed cases over 14 days;
- Assessing residents' respiratory infection signs/symptoms upon admission or return to the institution and implementing appropriate infection prevention practices for residents who arrive symptomatic. They should be quarantined (14 days) in a separate room, when possible, or spaced 1 meter from another bed, and with an exclusive bathroom keeping doors and windows open and implementing a hygiene routine, with sodium hypochlorite solution. Professionals must implement standardized care with suspected and/or confirmed cases during the quarantine period;
- Sharing with the attending physician the need to collect tissue culture for examination of reverse transcription polymerase chain reaction (RT-PCR), currently the gold standard for COVID-19, when appropriate.

Prevention and control to prevent the virus to spread

- Establishing an entrance route for the institution's employee so that they only have contact with elderly individuals after having bathed, wearing an exclusive NH uniform, including footwear, absence of wristwatches, rings, among other ornaments;
- Keeping hair tied and nails trimmed;
- Paying attention to correct hand hygiene and use of proper clothing;

- Avoiding handling cellphones;
- Avoiding shaking hands, kissing, or hugging;
- Monitoring and reinforcing the cleanliness of environments, including terminal cleaning in rooms, when indicated;
- Placing identifiers affixed to the bedroom door describing precautions and necessary PPE for use in case of a suspected or confirmed case;
- Maintaining natural ventilation in environments and encourage a reduction in using air conditioning;
- Dispensers with 70% alcohol solution should be available at the NH entrance, in circulation areas, bedrooms, and bathrooms;
- Paying attention to all recommendations provided for in Regulatory Standard 32 (NR 32) for safety and health at work in health services;
- Offering and monitoring surgical mask use by employees while performing direct care;
- Using respiratory protection masks N95 and/or PFF2 in individuals suspicious or contaminated with COVID-19, when in procedures of risk of contamination by aerosols and/or fogging, keeping doors closed and windows open during the procedure to avoid spreading in the environment greater circulation;
- At the bedroom door, a trash bin must be placed to discard PPE before leaving the room and after hand hygiene;
- Reviewing the employee cafeteria flow, making, if possible, shifts to meal times in order to avoid crowding;
- Performing hygiene of packages and packaging before handing over to elderly individuals;
- If possible, using disposable utensils for suspected and positive cases. Intensifying tray disinfection before leaving the room;
- Reinforcing hand hygiene before and immediately after any handling with elderly individuals;
- When hands are visibly soiled, cleaning with water and anti-septic soap; if hands are visibly clean, hand hygiene can be performed with alcohol-based products (70% alcohol gel);
- Guiding and encouraging residents to perform hand hygiene with water and 70% liquid soap or gel alcohol frequently and make them available in different places of the institution, including before meals;
- Guiding cough etiquette and respiratory hygiene;
- If coughing or sneezing, nose and mouth must be covered with elbow, or tissue. Using disposable tissue for nasal hygiene (discard immediately after use and perform hand hygiene);
- Attaching posters with instructions on hand hygiene, respiratory hygiene and cough etiquette in accesses and strategic places;
- Keeping vaccination up to date, reinforcing the connection with the nearest Basic Health Unit, including employees.
- Storing N95 and/or PFF2 masks in a plastic bag with 2 holes on the side and in a suitable place;
- Establishing flow in the employees' cafeteria and space for rest and comfort, in order to avoid agglomerations;
- Disinfecting the box where I prepare and store the medications once a shift;

- Reducing the time of residents in common areas to avoid crowds, ensuring a minimum distance of 1 meter;
- Promoting measures of social distance in the institution;
- Making sure that professionals and caregivers working at NHs have an updated vaccination schedule.

Cleaning and disinfecting surfaces, utensils and products used by residents

- If residents have respiratory symptoms, suspicion or confirmation of infection by COVID-19, disinfection of all areas of NHs must be performed, (disinfection can be done with chlorine-based products such as sodium hypochlorite, 70% liquid alcohol or other disinfectant standardized by the service, regulated by ANVISA).
- Cleaning and disinfecting the most touched surfaces (e.g., door handles, telephones, tables, light switches, handrails and support bars, etc.) and bedroom, with a minimum of 1 shift recommended;
- Cleaning and disinfecting equipment (stethoscopes, sphygmomanometers, thermometers, stretchers, crates, etc.), health products and utensils (e.g., trays, plates, glasses, cutlery, etc.) that have been used by residents with symptoms breathing with suspicion or confirmation of COVID-19;
- The institution must remain ventilated, and the air conditioning with clean filters must be turned on in case of extreme need;
- Seats must keep a distance of 1 meter;
- Elderly people with symptoms of respiratory infection should wear surgical masks, whenever they are outside their rooms, at different times than other elderly people, when possible;
- Elderly individuals, before leaving the room, should perform hand hygiene with water and soap and/or alcohol gel; after that, the environment must be cleaned and disinfected;
- Professionals should use the following PPE when cleaning environments: cap, safety glasses or face shield, surgical mask (common), apron, long-sleeve rubber gloves and waterproof boots.

Residents with suspected or diagnosed with COVID-19

- Isolating suspicious or those diagnosed with COVID-19 in private rooms with bathrooms or with a distance of at least one meter between beds;
- Appointing exclusive employees to care for isolated individuals;
- Avoiding transferring individuals who are clinically stable;
- Notifying all suspected cases of COVID-19 with the health surveillance of the municipality and carry out monitoring through telemedicine center;
- Optimizing the processing of clothes, put used ones in an identified plastic bag and wash separately;
- Adopting standard precautions for droplets and contact in care for all suspected or diagnosed residents of COVID-19. In this case, all professionals/caregivers must wear safety glasses or face shield, surgical mask, surgical cap, waterproof

apron, non-sterile procedure gloves and closed shoes with foot protectors;

- Paying attention to comorbidities that contraindicate patient isolation in a room without continuous monitoring by the nursing staff (decompensated chronic heart diseases, decompensated chronic respiratory diseases, decompensated chronic kidney diseases, immunosuppressants, patients with chromosomal diseases with states of immunological fragility).

Waste treatment

- Residues arising from care of suspected or confirmed residents of COVID-19 in NHs must be classified in category A1 - Biohazardous residues, highly infectious, including: containers and materials resulting from the health care process, containing blood or body fluids in free form (cotton, gauze, compresses with organic matter, diapers, probes, among others). The needles and the syringe-needle used to apply vaccines, when not disconnected, must comply with the rules for sharp management.
- In the case of NHs with treatment carried out outside the unit, these residues must be packed in red bags and remain stored in a waste shelter;
- Garbage containers must be placed in a closed place, exclusively for temporary storage, rigid, resistant to rupture and leakage, with a lid provided with closure and identification control;
- Location must be sufficient to store the waste for up to three days, without stacking the containers above 1.20 m;
- The floor, walls, door, and ceiling must be made of smooth, waterproof, washable, and white material. The door must bear the infecting substance symbol. The waste shelter must be sanitized after external collection or/and whenever accidental spillage occurs.

Occupational health and safety

- Ensuring PPE for staff and residents;
- Mapping the suspected and identified cases of COVID-19, immediately dismissing employees with respiratory symptoms or fever for at least 14 days;
- Assessing the signs of Burnout Syndrome of the team working in the pandemic, implementing strategies for professional decompression to reduce the risks for the residents' safety, providing a channel for emotional support and clarification of doubts about the disease;
- Pregnant women, elderly, and immunosuppressed individuals, if possible, should be directed to administrative and/or support and support services;
- Ensuring the filling and signature of PPE sheets after delivery to employees;

Communication with the family

- Establishing/updating file or folder with telephone/email contacts of family members and/or guardians;

- Informing family members about all approaches to prevent COVID-19;
- Using digital applications with good connectivity for contact between them and family members (with or without cognitive ability), implementing specific times for virtual visits. It is recommended to wrap tablets or smartphones, keeping in plastic bags or film and performing disinfection after use;
- Establishing schedules for contact with family members within the nursing routine;
- Providing family members with newsletters about the general health status of residents via telephone or internet.

Body care in case of death

- Preparing and hasty handling of bodies of patients with COVID-19 must be avoided, maintaining the ethics and professionalism required for that moment⁽⁴⁾;
- During body care, only the strictly necessary professionals must be present in the room;
- Professionals must wear a cap, safety glasses and face shield, surgical mask (use N95, PFF2, or equivalent), apron or cloak (use a cloak or impervious apron if there is a risk of contact with volumes of fluids or body secretions), pair of gloves (use nitrile gloves for handling throughout the procedure) and waterproof boots.
- Hand hygiene before and after interaction with the body and the environment;
- Discarding sharps residues immediately in rigid containers, puncture and leak proof and with the infectious waste symbol;
- Blocking natural body orifices (oral, nasal, rectal) to prevent extravasation of body fluids;
- Movement and handling of the body must be as little as possible;
- Packing the body in a waterproof, leak-proof and sealed bag;
- Whenever possible, body packaging should follow three layers:
 - 1st: wrapping the body with sheets;
 - 2nd: putting the body in a waterproof bag (this should prevent body fluids from leaking);
 - 3rd: putting the body in a second (external) bag and disinfect with 70% alcohol, 0.5% to 1% chlorinated solution, or another sanitizing agent regulated by ANVISA compatible with the material.
- Putting a tag with body identification and identified if suspected or case of COVID-19;
- Discarding the gloves used in an appropriate place;
- Disinfecting the outer surface of the bag (using 70% liquid alcohol, chlorinated solution [0.5% to 1%], or another sanitizing sanitizer regulated by ANVISA, taking care not to use contaminated gloves to perform this procedure);
- Identifying the bag with the body, including information regarding biological risk in the context of COVID-19: biological agent class 3 risk.

All clothing used should be placed in a bag, sealed and identified, to be discarded. The material order must start as soon as the body is sealed and/or removed^(5,6). Personal belongings, such as jewelry and family souvenirs, must be decontaminated before

handing over to the family. Occupation of the room or the environment can only be done after finishing cleaning of objects, furniture, and physical structure.

DISCUSSION

This is the first study that organizes the main nursing recommendations for facing dissemination of COVID-19 in NHs. In Brazil, there is an urgent need to develop protocols to help manage the spread of COVID-19. This protocol is essential for updating in the area and to reduce the different variables of care in NH environments⁽¹⁶⁾.

Currently, there is a dynamism of information about the proposed therapy for suspected or confirmed patients of COVID-19, and this ends up requiring adequate and permanent preparation of these professionals working at NHs. Moreover, absence of vaccine or drug treatment against 2019-nCoV reinforces, among the general population, the adoption of prevention measures against infection recommended by WHO such as hand hygiene, avoiding closed environments and contact with people from of the region where the outbreak began⁽¹⁷⁻²²⁾.

Nurses are responsible for care management actions that include organizing the employees' input flow; measuring their temperature and the presence of flu-like symptoms; changing clothes and/or bathing. They create measures of organization of the environment, with distance from the seats, armchairs, beds, cafeteria, guaranteeing a minimum distance of 1 meter. Posters directed to elderly individuals reminding about the virus can contribute to those who have complaints or cognitive symptoms, for the team to alert/communicate repeatedly about the importance of hand hygiene and the need to provide hand washing places and dispensers of gel alcohol in the institution. Nurses need to manage their group of employees, dispense with a risk group, predict the rate of absenteeism and safety at work, to avoid overload and discontinuity in the team^(18,21-25).

Moreover, nurses will have important educational actions, such as training the team for correct use of PPE, especially in the correct sequence of attire and lack of attire, being daily actions. It is recommended, every day, a professional of the team to carry out training in rounds; thus, when having the responsibility to carry out the technique to the group, the team is assimilated and co-responsible. Another educational and managerial measure would be to assign a member of the professional team to carry out supervision for safe adoption of PPE per working day; therefore, nurse managers' role in the teaching and correct use of PPE is decentralized and the task of safety and protection of NHs professionals and seniors is shared with the group^(17,22).

To effectively implement the measures, NHs must have a clear understanding of the current situation of the pandemic and its role in caring for elderly individuals. All valid information must be shared through different educational modalities: meeting in focused groups, signage, web conferencing and, if available, Telehealth. Administrators should also be prepared to address absenteeism and recommend that employees remain at home if they have symptoms compatible with COVID-19. Assessing nursing personnel sizing, in this time of crisis, increases the technical safety index and can be a strategy to cover the shortage of employees in nursing scales⁽⁴⁾.

Nurses working at NHs generally know well the basic clinical condition of their patients, as they have been living with them for a long period. In one of the first published studies on the clinical profile of patients with COVID-19, with 138 patients from Wuhan, China, fever was present in 99% of the sample, followed by fatigue (70%), cough (59%), anorexia (40%), myalgia (35%), and dyspnea (31%)⁽²⁾. However, frail elderly people may be afebrile and have no cough, chest pain or sputum⁽⁹⁾. Furthermore, those with major cognitive impairment (Alzheimer's/parkinsonian syndromes), a history of stroke, or other health problems can mask the clinical manifestations of COVID-19. Therefore, any significant change in clinical status from baseline, which has no immediate explanation, may be caused by infection or sepsis, and should be assessed for COVID-19 infection during the current pandemic⁽²⁾. In this regard, monitoring vital signs and clinical status must be improved during the period of COVID-19.

It is known that the spreading mechanism of Coronavirus is droplet transmission. Coughing or sneezing produces droplet nuclei that travel through the air. Similar to the influenza virus, COVID-19 can remain on the skin and inanimate objects for several hours, and on some surfaces, for several days⁽²⁾. That is why it is recommended to use tissues, cutlery, dishes that can be disposed of in infectious waste. Diapers with feces, together with all types of secretion residues, are treated as suspicions of contamination both to employees who deal with the final destination of the waste as a risk of contamination of the environment and must be classified in category A1 - Highly infectious biohazardous waste, disposed of in milky white bags with an infectious indication^(6-9,12). For healthcare professionals, safety glasses or face shield, surgical mask/N95, waterproof apron, procedure glove and hand washing should be used to provide assistance to suspected or confirmed cases of COVID-19 infection⁽⁸⁾. Therefore, it is important building professional safety protocols.

Likewise, care with the preparation of the body in case of death in NHs should proceed with using standard precautions, in particular hand hygiene and impervious clothing. It is known from studies that proved the permanence of COVID-19 virus in fluids even after death; therefore, WHO and the Ministry of Health recommend funerals restricted to family members and without access to the body^(6,26). Care must still be taken when communicating with family members, residents and the professional team. A death in an NH tends to change the care routine; therefore, reestablishing communication and encouraging feelings must be guaranteed even during the COVID-19 pandemic.

Concerning communication with the family, this includes strategies that facilitate communication between the elderly person and family members during the restricted visit period. Visiting restrictions can be one of the most aggressive interventions that should be implemented. This certainly reduces the circulation of people, but it must be implemented in a personalized way. Allowing elderly people to contact their families through other modalities, such as telephone contact or virtual visits via devices connected to the internet, can be a clinically useful tool⁽¹²⁾. Not only that, discussing with patient, family, or guardian about advance will guidelines, as appropriate, and documenting these decisions in the chart are humanized strategies⁽¹³⁾. Hospitalizations in Intensive Care Units may be limited and potentially unavailable to those at the end of life⁽⁴⁾.

Moreover, depending on the patients' clinical condition and decisions made, there is no need to take them to the hospital. Suspected or confirmed cases should be immediately isolated in a private or rooming-in as long as it meets the criteria for prevention, and infection control practices are established, with a private bathroom, if possible, as this prevents emergencies from becoming overcrowded⁽⁹⁾.

Elderly individuals, when returning from hospitalization for external assistance, must present a discharge note proving the negative test for COVID-19, a procedure that must also be adopted in cases of new admissions. In addition to the hospital discharge note, to reduce the chances of contamination within the institution, it is also recommended that, when admitted/readmitted, they should be placed in a 14-day quarantine to monitor the presence of new signs and symptoms⁽¹⁴⁾. It should be noted that the situation provided for above may change, since NHs may be called upon to care for patients with a positive test for COVID-19, provided that they are able to do this⁽⁴⁾.

Therefore, prevention and control measures to prevent the virus to spread cause prophylactic care to be taken to slow the rapid spread. NH workers can be infected and be the source of contagion, presenting mild or nonexistent symptoms. Continuous use of surgical masks during the main nursing care is necessary. But for this to happen, there must be a guarantee of PPE, even in times of scarcity. All professionals must be instructed on the clinical manifestations of COVID-19 infection. They must, daily before entering NHs, measure their temperature, bathe and change clothes before and after work. Maintaining occupational health and safety helps to avoid stress. Furthermore, as the outbreak brings fear and anxiety to the team, emotional support can be a strategy to care for workers⁽⁴⁻¹¹⁾.

Study limitations

The topics related to drug treatment protocols or care flow-chart were not addressed. Consequently, these variables can be studied in a specific protocol based on new scientific evidence.

Contributions to nursing, health, and public policies

These recommendations provide subsidies for improving quality of care, favoring the development of guidelines that control risks and process failures in the face of the announced pandemic. This supports changes in care processes and favors improvements to workplace, as well as increasing the performance of employees to protect themselves, elderly individuals, and their families.

FINAL CONSIDERATIONS

The protocol built could help nurses who manage NHs to organize assistance to face dissemination of COVID-19 to mitigate resources and reduce the risk of mortality due to the social and physical vulnerability of institutionalized elderly. To that end, it is recommended an Action Plan focusing on: Care management; Educational interventions; Periodic assessment/monitoring of all residents; Prevention and control to prevent the virus to spread; Cleaning and disinfection of surfaces, utensils, and products

used by residents; Residents with suspected or diagnosed with COVID-19; Waste treatment; Occupational health and safety; Communication with the family; Care with body preparation. This protocol can be adaptable to each reality, should make training nurses and health teams easier and take into account the emerging measures to be adopted in NHs.

ACKNOWLEDGMENTS

This article is an enlarged excerpt from the DCEG announcement, which is an open letter to the scientific community on care of NHs to face dissemination of COVID-19: http://www.abennacional.org.br/.../DCEG-ABEn_Informe_COVID-19...

REFERENCES

1. Zhu N, Zhang D, Wang W, Xingwang Li, Yang B, Song J, et al. A novel Coronavirus from patients with pneumonia in China, 2019. *N Engl J Med.* 2020;382(8):727–33. doi: 10.1056/NEJMoa2001017
2. Huang C, Wang Y, Li X, Ren L, Zhao J, Hu Y, et al. Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. [published correction appears in *Lancet.* 2020 Jan 30;]. *Lancet.* 2020;395(10223):497–506. doi:10.1016/S0140-6736(20)30183-5
3. Organização Pan-Americana de Saúde (OPAS). Folha informativa – COVID-19 (doença causada pelo novo coronavírus) [Internet]. Brasília: 2020[cited 2020 Mar 03]. Available from: https://www.paho.org/bra/index.php?option=com_content&view=article&id=6101:covid19&Itemid=875.
4. D'Adamo H, Yoshikawa T, Ouslander JG. Coronavirus Disease 2019 in Geriatrics and Long-term Care: The ABCDs of COVID-19. *J Am Geriatr Soc.* 2020 68:912-7. doi:10.1111/jgs.16445
5. Hand J, Rose EB, Salinas A. Severe Respiratory Illness Outbreak Associated with Human Coronavirus NL63 in a Long-Term Care Facility. *Emerg Infect Dis.* 2018;24(10):1964–66. doi: 10.3201/eid2410.180862
6. Ministério da Saúde (BR). Agência Nacional de Vigilância Sanitária Nota Técnica GVIMS/GGTES/ANVISA N 05/2020. Orientações para a prevenção e o controle de infecções pelo Novo Coronavírus em Instituições de Longa Permanência para Idosos (ILPI) [Internet]. Brasília (DF): Ministério da Saúde; 2020[cited 2020 Mar 03]. Available from: <https://www20.anvisa.gov.br/segurancadopaciente/index.php/alertas/item/nota-tecnica-n-05-2020-gvims-ggtes-anvisa-orientacoes-para-a-prevencao-e-o-controle-de-infecoes-pelo-novo-coronavirus-sars-cov-2-ilpi>
7. Associação Brasileira De Enfermagem (ABEn NACIONAL). Departamento Científico de Enfermagem Gerontológica. Comunicação aos trabalhadores de enfermagem das instituições de longa permanência de idosos (ILPI) para o enfrentamento da disseminação da COVID-19[Internet]. 2020[cited 2020 Mar 03]. Available from: http://www.abennacional.org.br/site/wp-content/uploads/2020/03/DCEG-ABEn_Informe_COVID-19-ILPI.pdf
8. Revorêdo, LS. O uso da técnica Delphi em saúde: uma revisão integrativa de estudos brasileiros. *Arq Ciên Saúde.* 2015;22(2):16-21. doi: 10.17696/2318-3691.22.2.2015.136
9. Belasco AGS, Fonseca CD. Coronavírus 2020. *Rev Bras Enferm.* 2020;73(2):e2020n2. doi: 10.1590/0034-7167-2020730201
10. Malone ML, Hogan TM, Perry A, et al. COVID-19 in Older Adults: Key Points for Emergency Department Providers. *J Geri Emerg Med* [Internet]. 2020[cited 2020 Mar 03];1(4):1-11. Available from: <https://gedcollaborative.com/article/covid-19-in-older-adults-key-points-for-emergency-department-providers/>
11. Center Disease Control and Prevention (CDC). Planilha para calcular a quantidade de Equipamento de Proteção Individual necessária na instituição [Internet]. 2020[cited 2020 Mar 03]. Available from: <https://www.cdc.gov/coronavirus/2019-ncov/hcp/ppe-strategy/burn-calculator.html>
12. Ministério da Saúde (BR). Agência Nacional de Vigilância Sanitária. Resolução RDC/Anvisa nº 222/2018. Regulamenta as Boas Práticas de Gerenciamento dos Resíduos de Serviços de Saúde e dá outras providências [Internet]. 2018[cited 2020 Mar 03]. Available from: http://portal.anvisa.gov.br/documents/10181/3427425/RDC_222_2018_.pdf/c5d3081d-b331-4626-8448-c9aa426ec410
13. Livornese K, Vedder J. The Emotional Well-Being of Nurses and Nurse Leaders in Crisis. *Nurs Adm Q.* 2017;41(2):144–150. doi:10.1097/NAQ.0000000000000221
14. McKnight's Long-Term Care News - Usa Communicating with patients and families during COVID-19: Five messages to consider[Internet]. Northbrook; 2020[cited 2020 Mar 03]. Available from: <https://www.mcknights.com/marketplace/communicating-with-patients-and-families-during-covid-19-five-messages-to-consider/>
15. Dadalto L, Tupinambás U, Greco DB. Diretivas antecipadas de vontade: um modelo brasileiro. *Rev Bioét* [Internet]. 2013[cited 2020 Mar 03];21(3):463-76 <http://www.scielo.br/pdf/bioet/v21n3/a11v21n3.pdf>
16. Li R, Pei S, Chen B. Substantial undocumented infection facilitates the rapid dissemination of novel coronavirus (SARS-CoV2) [published online ahead of print, 2020 Mar 16]. *Science.* 2020. doi: 10.1126/science.abb3221
17. Ministério da Saúde (BR). Secretaria de Atenção Primária à Saúde (SAPS). Procedimento Operacional Padronizado: Equipamento de proteção individual e segurança no trabalho para profissionais de saúde da APS no atendimento às pessoas com suspeita ou infecção pelo novo Coronavírus (COVID-19). [Internet]. 2020[cited 2020 Mar 03]. Available from: <https://www.unasus.gov.br/especial/covid19/pdf/67>
18. Ministério da Saúde (BR). Diretrizes para diagnóstico e tratamento da COVID-19[Internet]. 2020[cited 2020 Mar 03]. Available from: <https://portalquivos.saude.gov.br/images/pdf/2020/Abril/07/ddt-covid-19.pdf>
19. Sociedade Brasileira de Geriatria e Gerontologia – SBBG. Posicionamento sobre COVID-19. Sociedade Brasileira de Geriatria e Gerontologia – SBBG [Internet]. 2020[cited 2020 Mar 03]. Available from: <https://sbbg.org.br/posicionamento-sobre-covid-19-sociedade-brasileira-de-geriatria-e-gerontologiasbpg-atualizacao-15-03-2020>

20. McMichael TM, Currie DW, Clark S, Pogosjans S, Kay M, Schwartz NG, et al. Epidemiology of Covid-19 in a Long-Term Care Facility in King County, Washington. *N Engl J Med*. 2020;382:2005-2011. doi:10.1056/NEJMoa2005412
 21. Agência Nacional de Vigilância Sanitária (ANVISA). Nota técnica nº 04/2020 GVIMS/GGTES. Apresenta orientações para serviços de saúde: medidas de prevenção e controle que devem ser adotadas durante a assistência aos casos suspeitos ou confirmados de infecção pelo novo Coronavírus (COVID-19)[Internet]. 2020[cited 2020 Mar 03]. Available from: <https://www20.anvisa.gov.br/segurancadopaciente/index.php/alertas/item/notatecnica-n-04-2020-gvims-ggtes-anvisa-atualizada>
 22. Organização Panamericana de Saúde (OPAS). Prevenção e controle de infecção durante os cuidados de saúde quando houver suspeita de infecção pelo novo Coronavírus (nCoV). Diretrizes provisórias 25 de janeiro 2020[Internet]. 2020[cited 2020 Mar 03]. Available from: https://www.paho.org/bra/index.php?option=com_docman&view=document&layout=default&alias=1918-prevencao-e-controle-de-infeccao-durante-os-cuidados-de-saude-quando-houver-suspeita-de-infeccao-pelo-novo-coronavirus-ncov&category_slug=pasta-temporaria-periodo-de-transicao-no-iris-ate-22-2&Itemid=965
 23. Ministério da Saúde (BR). Secretaria de Atenção Primária à Saúde. Plano Nacional de Contingência para o Cuidado às Pessoas idosas Institucionalizadas em Situação de Extrema Vulnerabilidade Social. 27/04/2020[Internet]. 2020[cited 2020 Mar 03]. Available from: http://189.28.128.100/dab/docs/portaldab/documentos/nota_plano_nacional_contingencia_cuidado_pessoas_idosas_v1.pdf
 24. Ministério da Saúde (BR). Secretaria de Atenção Primária à Saúde. Nota Técnica no 8/2020-COSAPI/CGCIVI/DAPES/SAPS/MS. Prevenção e controle de infecções pelo novo Coronavírus (SARS-CoV-2) a serem tratados nas Instituições de Longa Permanência para Idosos (ILPI)[Internet]. 2020[cited 2020 Mar 03]. Available from: <http://189.28.128.100/dab/docs/portaldab/documentos/notatecnica82020COSAPICGVIDAPESSAPMS02abr2020COVID-19.pdf>
 25. Ministério da Saúde (BR). Secretaria de Atenção Primária à Saúde. Nota Técnica no 9/2020-COSAPI/CGCIVI/DAPES/SAPS/MS. Isolamento para Idosos Institucionalizados: orientações de higiene e cuidados[Internet]. 2020[cited 2020 Mar 03]. Available from: http://189.28.128.100/dab/docs/portaldab/documentos/NT_N_9_2020_COSAPI_CGCIVI_DAPES_SAPS_MS.pdf
 26. Ministério da Saúde (BR). Secretaria de Vigilância em Saúde. Manejo de corpos no contexto do novo coronavírus COVID-19[Internet]. 2020[cited 2020 Mar 03]. Available from: <https://www.saude.gov.br/images/pdf/2020/marco/25/manejo-corpos-coronavirus-versao1-25mar20-rev5.pdf>
-