Assessing extreme elderly homebound patients with severe loss of autonomy

Proposal for a practice-based periodic health examination form

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In 2015 I started my practice as a family physician and I chose home care as my mandatory governmental priority activity once weekly. For 4 consecutive years, I was the only physician paid by public Medicare to do home visits in the area of LaSalle, a region of the greater Montreal Island in Quebec. In order to prioritize the most vulnerable patients, I put in place very strict criteria to cover the area that spanned 16 km^2 with more than 76 000 people, 19% of whom were elderly.[1] In little time, I filled my home-care practice with patients living with severe loss of autonomy, both physically and cognitively, bed-bound, restricted to transport by ambulance, and often of extreme age (≥85 years) with restricted life expectancy. The median age of my pooled patient population was 90 years old, with 3 patients older than 100. I progressively realized that I lacked a time-efficient and comprehensive structure to document my assessments of these extreme elderly patients.

Over the years, I developed a periodic health examination (PHE) form adapted to my extreme elderly homebound patients with severe loss of autonomy. I was very touched by a statement Dr Sawchuk made in the February 2019 issue of *Canadian Family Physician* that these "homebound patients do not advocate for themselves very loudly and can be invisible if we are not looking,"[2] and I was inspired to share this PHE form as a practical tool for new-in-practice family physicians wanting to integrate home care into their practice. Currently available PHE forms are adapted for the frail elderly in long-term care facilities,[3] but do not take into consideration the complexity of the environment of the home-care patient, the lack of access to investigations beyond blood tests, the pillar role of family members and caretakers, the lack of regular nursing supervision, and the patient's extreme lack of mobility and restricted life expectancy. The PHE form that I am proposing (**Figure 1**), also available at **CFPlus**,* takes into consideration the environment of the home-care patient and the factors that modulate quality of care in the patient's home.

Elements of the PHE form

Social context. The PHE form begins with a narrative description of the patient's caretaking structure. Information in this section describes the specific roles of various family members and caretakers regarding basic and instrumental activities of daily living. Descriptions of community and health-related services that are already in place are also included here in order to quickly present the biopsychosocial circumstances of the patient's daily routine. It is helpful to record dates regarding the patient's loss of autonomy so that rapidity of decline is documented; having these dates recorded is also useful when filling out forms for disability and tax credit benefits. The emergency contact person is also identified in this section, which might be the mandatary in case of inaptitude, but it can also be somebody else who is in closer physical proximity to the patient (eg, neighbour).

Mental status and level of care. The next section includes findings following the assessment of the patient's mental status and judgment. It is of utmost importance to communicate directly with the patient when possible, especially when physical loss of autonomy prevails over cognitive decline. With the help of a social worker when necessary, legal structures regarding inaptitude are clarified—for example, identification of a substitute decision maker for medical care, a private or public protective supervision measure, and advanced directives. Tools that can facilitate communication (eg, portable voice amplifier) are highly useful in the setting of a hearing deficiency and should be medical equipment that is as standard as a stethoscope for home-care visits.

Mobility aids and environment safety. The most important element of home care is understanding the patient's environment. As part of the physical examination and after having assessed the patient's mental status, I suggest walking around and observing the patient's home environment and documenting home adaptations that might be required for mobility and transfers. Particular attention needs to be paid to hazards such as the following: hoarding objects that can clutter a home and increase risk of falls for both the patient and the caretakers; and inappropriate ventilation or uninsulated windows and doors that can expose the patient to harsh weather temperatures. When caring for extreme elders with severe loss of autonomy at home, we must keep in mind that their spouses, children, and siblings are often elderly as well and might also be living with partial loss

*The **proposed periodic examination form for extreme elderly homebound patients** is available at **www.cfp.ca**. Go to the full text of the article online and click on the **CFPlus** tab.

Figure 1. Periodic health examination form for extreme elderly homebound patients with severe loss of autonomy*

1. SOCIAL CONTEXT	
Description of family members and caretakers	
Community and health-related services	
Emergency contact	
2. MENTAL STATUS AND LEVEL OF CARE	
Cognition, judgment, and aptitude	
Mood alterations	
Advanced directives	
3. MOBILITY AIDS AND ENVIRONMENT SAFETY	**4. PAIN CONTROL**
Home adaptations	Pain complaint or pain behaviour
	Analgesics or OTC products
Fall history	**5. SLEEP**
	Sleep schedule
Hazards and hoarding; ventilation or temperature control	Alertness fluctuation
	Daytime stimulation and sun exposure
6. NUTRITION AND ELIMINATION HABITS	**7. SKIN CARE AND INTEGUMENT**
Meal consistency and diversity	Hygiene
Teeth and oral health	Wound assessment
Hydration	
Constipation	Skin conditions (eczema, tinea, neoplasm) and nails
8. CHRONIC ILLNESSES AND RECURRENT INFECTIONS	**9. POLYPHARMACY**
List of active issues	Pill dispenser verification
Targeted history and physical examination findings	Reassessment of drug indications or dosage
Laboratory values	Interactions
10. RED FLAGS	OTC drugs and natural products
Caretaker exhaustion	
Abuse or neglect	**11. PREVENTIVE HEALTH**
	Immunization (pneumonia, influenza, zoster, tetanus and diphtheria)
Financial distress	
12. OTHER COMMENTS	

OTC—over the counter.
*This form is available at **www.cfp.ca**. Go to the full text of the article online and click on the **CFPlus** tab.

of autonomy, so it is necessary to ensure these patients can access help and social resources if needed.

Pain control. Almost 4 out of 10 adults older than age 65 are estimated to be living with chronic pain, and patients older than 85 years of age are at higher risk.[4] Assessing pain in homebound patients with severe loss of autonomy can be particularly challenging, and it is important to be sensitive to these patients' pain behaviour patterns, such as facial grimaces, reduced mobility, withdrawal reflexes, weight loss, decreased appetite, altered sleep, and increased confusion. Poorly controlled pain not only affects the patient but can also affect relationships and quality of life of caretakers.[5]

Sleep. Sleep disturbance can also be a considerable source of distress in homebound patients. Counseling is often necessary to help the family understand that the patient's overall levels of alertness, well-being, and comfort are more clinically meaningful than a rigid sleep routine with a specific minimal number of hours of sleep. Diphenhydramine is among the most commonly used over-the-counter (OTC) medications[6]; therefore, it is essential to explore the patient's use of nonprescribed drugs and determine whether they are relevant, if they should be replaced with a specific medication addressing the sleep issue, or whether to optimize nonpharmacologic strategies, such as daytime light exposure and stimulation. Modifications to bed and furniture placement might be required to improve wake-sleep cycles in these patients.

Nutrition and elimination habits. A detailed assessment of nutritional requirements can be made by a dietitian. However, I recommend examining the patient's oral health for signs of periodontal disease, edentulism, and dry mouth, which are highly prevalent.[7] These conditions might require rapid dietary modifications, assessment by a dentist at home, hydration encouragement, and reevaluation of medication side effects, especially for medications with anticholinergic properties.

Skin care and integument. The physical examination of extreme elders with severe loss of autonomy and who are homebound must include examination of skin and integument at every visit. Even if a disease-specific guideline approach is not recommended in this patient population, the skin is the organ that will most commonly be affected by a disorder (prevalence of more than 80% in elderly patients).[8] Examination should specifically include screening for signs of neglected hygiene or abuse, tinea, eczema, signs of complications of frequent skin conditions, such as cellulitis and onychomycosis, as well as wounds at pressure areas. Patients' use of positioning aids, as well as their mobilization routines, should also be assessed. Finally, it is justified to arrange transfer outside the home to obtain specialist consultation for life-threatening conditions (eg, melanoma, squamous cell carcinoma), especially if biopsy and curative excision can easily be offered within 1 visit. Care must always be taken to respect the patient's decision in case of inaptitude.

Chronic illnesses and recurrent infections. In this section, list the patient's chronic illnesses that are being managed. Also, record history and physical examination findings, as well as laboratory values.

Polypharmacy. Reviewing the patient's pill dispenser is another component of the home-care assessment that is in contrast to patients living in long-term care facilities. In my experience, reviewing the pill dispenser helps reveal numerous problems, such as a spouse's confusion about medication administration, especially in settings where both the patient and the spouse have considerable polypharmacy; medication formulations being inappropriately modified or crushed to facilitate administration; dispenser organization being poorly adapted to the patient or caretaker's routine, with sleeping habits frequently disturbed; and nonadherence to medications because patients cannot physically or cognitively comply with the mode of administration (eg, chronic obstructive pulmonary disease dry powder inhaler devices that require manual dexterity and forced inspiration through a small mouthpiece). Review of the patient's pill dispenser also allows verification of potential medication interactions and other indications; it is an opportunity to ensure that medications are prescribed safely in this fragile patient population (**Table 1**).[9,10]

Moreover, review of the patient's pill dispenser should be followed by explicit interrogation regarding the use of OTC medications, as well as vitamins and supplements, given the potential for harm to the patient and medication interaction. It is estimated that at least one-third of elderly patients who are admitted to a hospital use OTC medications.[11]

Red flags. The PHE form includes a section to document red flags or factors to be monitored closely because of risk of patient harm. These factors might involve abuse; however, in my experience, abuse has usually been secondary to caretaker exhaustion or financial distress, which might lead to patient neglect of hygiene and nutritional needs.

Preventive health. Finally, immunization should be reviewed during the home-care visit with recommendations specific to the patient's risk factors. Typically, in this patient population, the *Canadian Immunization Guide*[12] recommends the following: inactivated pneumococcal polysaccharide vaccine with a booster after 5 years in the presence of risk factors for invasive pneumococcal disease; yearly trivalent inactivated influenza vaccine; and non-live recombinant herpes zoster vaccine.

Table 1. Actions to consider when reviewing the medications of extreme elderly patients

ACTIONS	AGENTS
Initiate or maintain these agents	• ASA for secondary prevention only • Bisphosphonates in case of elevated FRAX or CAROC scores
Modify these agents	• Oral hypoglycemic agents in presence of asymptomatic hyperglycemia < 14 mmol/L and tolerating HbA_{1c} level of ≤ 8.5% • Antihypertensive agents if BP level is < 150/90 mm Hg in the presence of risk factors such as kidney injury, electrolyte imbalance, falls, and orthostatic hypotension
Suspend these agents	• Long-term PPI use without clear indication • Statins both for primary and secondary prevention

ASA—acetylsalicylic acid, BP—blood pressure, CAROC—Canadian Association of Radiologists and Osteoporosis Canada, FRAX—Fracture Risk Assessment Tool of the World Health Organization, HbA_{1c}—hemoglobin A_{1c}, PPI—proton pump inhibitor.
Data from Ricard and Nabid,[9] and the Diabetes Canada Clinical Practice Guidelines Expert Committee.[10]

Conclusion

Home-care practice should be a vital part of family medicine in a society that values universality of health care. When resources are limited, strict criteria are required to be put into place in order to select the most vulnerable homebound patients and, in my practice, these patients were extreme elders with severe loss of autonomy. Conventional disease-specific guidelines and screening interventions were not appropriate in these patients with limited life expectancy. Time is an asset in offering the best possible care to these patients, and a well-structured PHE form that is adapted to the reality of this patient population can facilitate clinical practice and documentation. A comprehensive PHE form should prompt a physician to not miss important elements of the evaluation and can certainly be completed over several visits.

The PHE form that I am sharing represents important elements in my practice in the assessment of extreme elderly patients with severe loss of autonomy who are both homebound and bed-bound. The form takes into consideration the patient's home environment and other factors that might affect the patient's quality of care, which are different than those of a hospital or a long-term care facility. Integrating this form in the provision of home-care family medicine for my vulnerable homebound patient population has contributed to making my practice more efficient and gratifying.

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Competing interests
None declared

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