Objectives:
1) Recognize the key criterion physicians must meet to bill Medicare for house calls
2) List barriers to physician house calls
3) Identify elements of home functional assessment
4) Recognize evidence-based outcomes of home care and house calls
5) Name outcomes associated with caregiver burden

Module 1: How to Make A House Call
Jen Hayashi, MD

Question 1
For the last year in your outpatient clinic, you have been seeing Mrs. H, an 84-year-old woman with osteoarthritis of both knees, hypertension, insulin-dependent diabetes, chronic renal insufficiency, coronary artery disease, and congestive heart failure with an ejection fraction (EF) of 35%. She was hospitalized with a CHF exacerbation 3 months ago. During that hospital stay, she became delirious and fell when she got out of bed in the middle of the night to go to the bathroom and tripped over her Foley catheter. Luckily, she did not suffer any serious injury from the fall, but since then she has limited her activity out of fear of falling again. You have seen her twice since she returned home, and had to increase both her diuretic and her antihypertensive medications for increasing edema and blood pressure. Today she arrives almost an hour late for her appointment and her daughter, who usually accompanies her to her medical visits, says that Mrs. H has been "harder and harder to get out of the house—it took us so long today because I had to call my husband home from work to help me get her down the steps and into the car."

Based on the above information, which one of the following is the most appropriate reason for a physician to make a house call to Mrs. H?
   a) Review medication adherence
   b) Evaluate home safety
   c) Improve her access to medical care
   d) Monitor her vital signs including weight for her worsening hypertension and CHF

Question 1: Pop-up answers
   a) Incorrect: Review of medication adherence is easily and effectively accomplished by a nurse without a physician’s direct supervision.
   b) Incorrect: While house call physicians need basic home safety assessment skills to thoroughly evaluate a patient at home, physical therapists are usually better trained and more practiced at this function.
c) Correct! This is the correct answer because it identifies a key reason for physicians to make house
calls that other members of the health care team cannot accomplish individually.

d) Incorrect: Monitoring as described is well within the scope of practice of a home care nurse and
does not require the presence of a physician in the home.

Question 1: Summary answer
The correct answer is C: Improve her access to medical care.

While all of the choices listed are valid reasons to make a house call\(^1\), only (c) is directly related to the
physician’s role in caring for a chronically ill, functionally impaired patient. Reasons other than
transportation barriers for physicians to make house calls include the need to evaluate the home
environment for safety or adherence information, professional satisfaction, improved physician-patient
relationship, and terminal care.\(^2\)\(^4\)

Many medical services are available for patients like Mrs. H, even if their physicians do not make house
calls\(^5\). Medicare pays for skilled services at home if the patient is considered "homebound." According to
the web site of the Center for Medicare and Medicaid Services, the definition of "homebound" is "normally
unable to leave home unassisted". To be homebound means that leaving home takes considerable and
taxing effort. A person may leave home for medical treatment or short, infrequent absences for non-
medical reasons, such as a trip to the barber or to attend religious service. A need for adult day care doesn't
keep you from getting home health care."

<table>
<thead>
<tr>
<th>Reasons Medicare considers a patient “homebound”</th>
<th>Reasons Medicare consider a patient NOT homebound</th>
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<tbody>
<tr>
<td>Leaves home only with the assistance of special equipment or another person</td>
<td>Leaves home frequently for social, recreational, or functional purposes (shopping, banking, etc.)</td>
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<tr>
<td>Leaves home regularly for medical visits, dialysis, or adult day care</td>
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<tr>
<td>Leaves home occasionally for social reasons (religious services, family events, grooming)</td>
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Medicare-certified home health services include nursing to review medication adherence, teach patients and
caregivers about self-management of disease, monitor vital signs in the context of new diagnoses or
exacerbation of chronic illness, and manage pressure and surgical wounds. Other skilled services, such as
home safety evaluations and in-home physical and occupational rehabilitation, can be provided by physical
or occupational therapists. Finally, a medical social worker is available in all Medicare-certified home
health agencies to assist patients and families with identifying and mobilizing community resources.
<table>
<thead>
<tr>
<th>Home health care team member</th>
<th>Role</th>
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<tbody>
<tr>
<td>Nurse</td>
<td>Medication review</td>
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<td></td>
<td>Patient/caregiver education</td>
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<td></td>
<td>Routine monitoring</td>
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<td></td>
<td>Wound management</td>
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<td></td>
<td>Case management</td>
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<td>Physical therapist</td>
<td>Home safety evaluation</td>
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<td></td>
<td>Low-intensity physical rehabilitation</td>
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<td></td>
<td>Home exercise program</td>
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<td></td>
<td>Caregiver training (safe lifting, passive range of motion, etc.)</td>
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<tr>
<td>Occupational therapist</td>
<td>Functional assessment and rehabilitation</td>
</tr>
<tr>
<td></td>
<td>Energy conservation</td>
</tr>
<tr>
<td></td>
<td>Home modification</td>
</tr>
<tr>
<td>Speech/language therapist</td>
<td>Speech/swallowing therapy</td>
</tr>
<tr>
<td>Home health aide</td>
<td>Personal care (bathing, dressing, etc.)</td>
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<tr>
<td></td>
<td>Light housekeeping (changing bed linens, etc.)</td>
</tr>
<tr>
<td>Medical social worker</td>
<td>Identifying community resources</td>
</tr>
<tr>
<td>Physician</td>
<td>Access to medical care</td>
</tr>
<tr>
<td></td>
<td>Medical diagnosis and management</td>
</tr>
<tr>
<td></td>
<td>Care oversight</td>
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</table>

**Question 2**

The clinic visit today with Mrs. H goes smoothly; although her blood pressure is elevated at 164/92, she does not have evidence of any acute illness. You ask Mrs. H and her daughter if they would like you to make a house call sometime in the next few weeks to try to get a better idea of how best to help her with her medical problems. They look at each other dubiously, and say, "We didn’t think doctors made house calls anymore. Are you sure you can do that?"

**What’s the most appropriate answer to this question?**

a) "Well, it’s not as good as the care you can get when you come to the office, since we have all kinds of equipment here that we can’t use in your home, but if you really have a hard time coming in, it’s better than nothing."

b) "House calls were almost extinct a few years ago, but since more older patients are becoming homebound, and medical technology is more portable, it makes sense to see some people in their
homes instead of making them go through what you have to go through to get to the doctor’s office."

c) "I’ll have to charge you an extra fee, because Medicare doesn’t pay as much for a home visit as for an office visit, and my malpractice liability is higher if I see patients anywhere other than my office"

d) "You’re right, because most primary care doctors never learn how to make house calls. In fact, only 10 percent of Medicare patients received a house call in the last year."

Question 2: Pop-up answers

a) Incorrect: Most of the equipment used in a typical primary care geriatrics office practice is readily available in portable form for use on a house call.

b) Correct! This is the correct answer. As the “baby boom” generation ages, more people are living longer with chronic disease and disability, and technological advances in the last few decades have created portable sophisticated medical equipment.

c) Incorrect: Medicare pays slightly more for a home visit than for an office visit of equivalent complexity, and there is no evidence to support the perception that house call doctors have higher malpractice risk.

d) Incorrect: All family physicians make house calls during their training as required by the family medicine Residency Review committee. Despite this potential workforce, a landmark 1997 study showed that less than 1% of Medicare-reimbursed physician visits were to patients in their homes.

Question 2: Summary answer

The correct answer is B: House calls were almost extinct a few years ago, but since more older patients are becoming homebound, and medical technology is getting more portable, it makes sense to see some people in their homes instead of making them go through what you have to go through to get to the doctor’s office.

National surveys reveal that physicians perceive several barriers to making house calls. These barriers fall into four general categories: quality of care, financial constraints, medical liability, and physician competence. The first answer (a) reflects a perception that high-quality medical care depends upon technology that is limited to doctors’ offices or large medical centers. While this perception may have been accurate in the early and mid-20th century, when house calls were largely replaced by office visits because of rapid advances in medical technology, the development of microchips has allowed miniaturization of devices so that an experienced clinician properly equipped on a house call can provide care equivalent to that delivered in an office. Although data are lacking on discrete outcome measurements in homebound patients such as blood pressure control, glycosylated hemoglobin levels, and rates of common screening procedures, the essential skills of history-taking and physical examination are no different in the home than
in the office, and most equipment used in the office is also available in the home.\textsuperscript{1,7} Moreover, given the high burden of illness in the patients who have difficulty getting to a physician’s office, patient goals and preferences often inform the medical decision-making as much as or more than evidence-based guidelines do, resulting in higher quality of life and more control over circumstances surrounding the end of life.\textsuperscript{8}

Perceived financial constraints are reflected in answer (c), which is incorrect in both its assumptions of higher malpractice liability and lower reimbursement. Since 1998, Medicare reimbursement has been higher for a house call than for an office visit of the same level of complexity.\textsuperscript{5} The lower number of patient encounters per unit time spent in house calls compared with office practice can be offset by this higher reimbursement and additional Medicare reimbursement of revenues derived the physician’s active management of the home care plan. Finally, the operating expenses (“overhead”) of house call practices tend to be lower that those of office practices because of the smaller number of ancillary staff.

The misperception of increased malpractice risk related to house calls is common but unfounded. There is no evidence of increased liability in house calls, and a recent LexisNexis legal database review in 2003 showed that there have been only 5 house-call related lawsuits in the last 20 years\textsuperscript{9}. Finally, (d) is incorrect because all family medicine residencies require at least some training in home care, and fewer than 1% of Medicare beneficiaries received physician home visits in 1993 and 2004, as reported in two different studies.\textsuperscript{10,11} Importantly, insufficient preparation for house call medicine during residency is one of the few perceived barriers to house calls that is borne out by reality. A recent analysis of US internal medicine residency programs\textsuperscript{12} showed that fewer than half included even a single lecture on home care in the curriculum, and only 25% have a required home visit experience (which is often not a physician house call, but a home visit with a nurse or therapist).

**Question 3**

Reassured, they agree to a house call. A few weeks later, you prepare a "black bag" of equipment and supplies to take out to her home for your visit.

**Which of the following pieces of medical equipment available in the office is LEAST likely to be taken on a home visit?**

a) Phlebotomy supplies and "sharps" container  
b) Electrocardiograph (EKG machine)  
c) Oto-ophthalmoscope  
d) Portable x-ray
Pop-up answers

a) Incorrect: Venipuncture supplies are a staple of house call medicine for both routine and urgent visits. By definition, primary care house call patients cannot easily travel to an outpatient lab or office to have their blood drawn.

b) Incorrect: EKG machines come in a variety of sizes, some small enough to be carried in a coat pocket.

c) Incorrect: Battery-powered “diagnostic kits” have all of the same uses as the wall-mounted models found in most medical offices.

d) Correct! This is the correct answer because most physician house call practices do not own radiology equipment for logistical reasons (cost, maintenance, regulation).

Summary answer
The correct answer is D: Portable x-ray.

Although portable x-rays are available within 24 hours in many communities, most physicians are unlikely to take this equipment out on a routine home visit because it is bulky, requires specialized maintenance, and has strict safety regulations. The other items listed are all easily available in lightweight and portable devices used in typical house call practices. Common examination done during a home visit includes ascertainment of vital signs and oxygen saturation. Common testing includes bloodwork, urine sample collection, and wound evaluation and treatment. Thus, the following items are found in the typical house call "black bag."

<table>
<thead>
<tr>
<th>The House Call “Black Bag”</th>
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<tbody>
<tr>
<td>Sphygmomanometer with various-size cuffs</td>
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<tr>
<td>Electronic thermometer</td>
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<tr>
<td>Pulse oximeter</td>
</tr>
<tr>
<td>Phlebotomy/IV supplies (needles, syringes, tubing, alcohol swabs, bandages, gauze pads, specimen tubes)</td>
</tr>
<tr>
<td>Basic wound care supplies (rolled gauze, iodine, sutures, suture/staple removal kit, scalpel)</td>
</tr>
<tr>
<td>Surgical lubricant, guaiac cards</td>
</tr>
<tr>
<td>Gloves</td>
</tr>
<tr>
<td>Urinary catheterization supplies (Foley and straight caths, specimen cups)</td>
</tr>
<tr>
<td>Gastrostomy tube</td>
</tr>
<tr>
<td>Optional: glucometer, EKG, handheld Doppler, cooler (summer item for holding specimens),</td>
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</tbody>
</table>

Tests and interventions requiring large or highly specialized medical equipment (e.g., MRI, CT) are still generally limited to offices and medical centers.
Question 4
As you drive up to Mrs. H’s home, you notice that the 8 steps to get up to the front door are crumbling and that the front porch is scattered with piles of debris and trash. Surprised at the disarray because of Mrs. H’s usually impeccable appearance in clinic, you make a mental note to observe the interior of her home closely.

Which one of the following in-home assessments is most likely to provide you with insight into her poorly controlled hypertension?

- a) Check the contents of her refrigerator and freezer
- b) Ask how she does her laundry
- c) Look for throw rugs and electrical cords in the path between her favorite chair and the bathroom
- d) Evaluate her daughter’s level of caregiver burden

Question 4: Pop-up answers

- a) Correct! This is the correct answer because patients may not accurately report eating habits on direct questioning, and dietary modification is a first-line intervention in the management of hypertension.
- b) Incorrect: Doing laundry is an important instrumental activity of daily living, but probably not directly relevant to her hypertension.
- c) Incorrect: These actions are an essential part of a home-based assessment of fall risks. While important to Mrs. H’s overall health, her fall risks are not directly related to her hypertension.
- d) Incorrect: Evaluating caregiver burden is an important part of caring for geriatric patients, but unlikely to help you understand or manage her hypertension.

Question 4: Summary answer
The correct answer is A: Check the contents of her refrigerator and freezer.

Several practical guides to making house calls have been published. One widely cited article provides a mnemonic framework for remembering the essential elements of a home visit: INHOMESSS.

Immobility/impairments: a gait evaluation and observation of how Mrs. H takes care of her own basic needs (answer b) will give you a better understanding of her functional limitations.

Nutrition: a glance into her kitchen (refrigerator, freezer, pantry) may reveal that she has inadequate food supplies or an abundance of convenience foods laden with sodium and fat (answer d).

Home environment: assessment of the home environment may reveal the presence of trip hazards and falls risks (answer c) or the absence of simple assistive devices and home safety modifications. Also, a quick
survey of the neighborhood may provide insight into external barriers to healthy living (absence of public transportation to get to appointments, numerous loiterers that may make the patient feel uncomfortable or unsafe outside or inside her home so she does not get out to exercise or run errands).

Other people: for many homebound elderly patients, informal caregivers are the only connection to the outside world, and these caregivers suffer a significant rate of fatigue and burnout which can in turn affect outcomes such as hospitalization or nursing home placement.¹⁵ There is no standardized objective measurement of caregiver burden, despite the fact that burden is associated with poor caregiver health and an increased risk of elder abuse or neglect.¹⁶,¹⁷ Many different factors influence the sense of burden experienced by any individual caregiver, and what seems burdensome to the physician may not be perceived as such by the caregiver. However, several studies have shown that a high level of social support correlates with a lower level of caregiver burden,¹⁸ and female caregivers are more likely to feel burdened than male caregivers.¹⁹ Importantly, studies of home-based primary care in the Veterans’ Administration²⁰,²¹ as well as descriptions of physician-led house call programs based in teaching programs and private practices⁸,²² have shown that patient and caregiver satisfaction with care and health-related quality of life are increased with physician house calls.

Medications: Expired and duplicate medications are commonly "kept around the house," although they may not be brought in to a clinic visit. A polite but thorough "medicine cabinet biopsy" along with a request to see all of the medications (pills, liquids, and dietary supplements) that the patient has can reveal potential interaction or polypharmacy risks.

Examination: The physical examination is essentially the same as in any setting, with special attention to gait and mobility issues because the patient often has mobility limitation necessitating the home visit. Additional assistance may be required in turning or positioning the patient to perform the exam.

Safety: Interactions or conversations with other household members may highlight risks for elder abuse or neglect. The adult grandson who is unemployed, addicted to alcohol, and lives in the basement may not come to the office with her for a visit or be mentioned by her or other family members, but may be a significant risk.

Spiritual health: Patients who have difficulty leaving their homes often become socially isolated from spiritual or other communities. Many older adults rely heavily on their religious or spiritual backgrounds to deal with illness,²¹ and an understanding of the role of spirituality in a patient’s life can strengthen the patient-physician relationship and provide context for medical decision-making.
Services: The array of community-based services for elderly people can be bewildering and difficult to access, particularly for patients with sensory impairment, cognitive deficits, or limited computer access or skills. A clinician who is aware of available services can help a patient identify and activate appropriate resources to improve overall health and function (e.g., Meals on Wheels, personal care aides, local social work services).

Question 5
When she gives you permission to look in her pantry, refrigerator, and freezer, you learn that Mrs. H has been getting her groceries by a delivery service from a local grocery store. "I don’t like to bother my daughter to go shopping for me. She’s already so busy and has had to do so much more for me since I fell, I don’t want to ask her to do even more." Because she cannot make her own grocery selections, for the last two months she has been eating mostly canned soups and prepackaged frozen dinners, usually whatever is on sale at the store. You also notice that the smoke detector in her kitchen is dangling from the ceiling and is missing its battery.

Which one of the following interventions is most appropriate for you to pursue to improve your care of Mrs. H?

a) Refer her to a Medicare-certified home health agency for a social worker to help her find assistance with meals (e.g., Meals on Wheels, food stamps)
b) Call the local Adult Protective Services (APS) agency for evaluation of unsafe living situation and possible self-neglect
c) Counsel her on the importance of diet in controlling her medical problems and ask if you can discuss it with her daughter on her behalf
d) Request a formal decision-making capacity evaluation from a mental health specialist to determine her ability to live alone

Question 5: Pop-up answers

a) Incorrect: A need for social work is not by itself a sufficient reason to initiate Medicare-certified home health care.
b) Incorrect: Adult Protective Services are inappropriate for this patient with no evidence of psychopathology who has informal caregivers demonstrating their willingness to provide help.
c) Correct! This is the correct answer because it provides a medically reasonable first step and takes Mrs. H’s autonomy and preferences into consideration.
d) Incorrect: There is no evidence in this case to suggest that Mrs. H has impaired decision-making capacity, and the information you have learned on this visit does not suggest that she is unable to safely live alone at this time.
Question 5: Summary answer
The correct answer is C: **Counsel her on the importance of diet in controlling her medical problems and ask if you can discuss it with her daughter on her behalf.**

Many authors have noted the informational value of home visits in caring for medically complex geriatric patients. Dr. Peter Boling, in his book "The Physician’s Role in Home Health Care,"\(^ {13} \) comments specifically on the current standard of care for physicians supervising home care without the benefit of making their own observations on house calls. He asserts "The perspective gained by entering a home cannot be effectively conveyed by verbal or written descriptions. There is also a continuous clinical reasoning process during physician-patient encounters, and integration of observations, pathophysiology, and therapy—concurrent discovery of new problems and the making of additional relevant observations as the session proceeds. Imagine asking physicians in any other context to make serious medical judgments from a distance, without actually seeing the patients." In one study, a home visit by a geriatric nurse specialist resulted in up to 4 new problems and 1-8 new treatment recommendations, with 23% of the new problems having the potential to result in death or significant morbidity. Importantly, at least one problem was found on the home visit that was not recognized at the office visit in 111/154 cases (72%), and there were no factors apparent in the office visit that predicted the risk of problems in the home.\(^ {24} \)

While social workers are skilled at recognizing and mobilizing community agencies and services, Medicare does not pay for social work in the absence of a medical need for home health care. The physician can use the new information gained on this visit to Mrs. H’s home to better understand the barriers to controlling her current medical problems or to develop realistic treatment plans for her in the future. The information should not be misconstrued to mean that she is unable to safely live alone or to make that choice. If she were unsafe or incapacitated and did not have reliable informal caregiver support, then APS or capacity evaluation would be reasonable.
References


18. Lim J, Zebrack B. Caring for family members with chronic physical illness: a critical review of caregiver literature. Health Qual Life Outcomes 2; 50.


The Dementia Care Practice Recommendations are based on the latest evidence in dementia care research and the experience of care experts. Engagement in meaningful activities is one of the critical elements of good dementia care. When nursing homes and assisted living residences are considering changes to care or to the environment of the residence, they should ensure that these changes comply with relevant state and federal regulations.

Good dementia care involves assessment of a resident’s abilities; care planning and provision; strategies for addressing behavioral and communication changes; appropriate staffing patterns; and an assisted living or nursing home environment that fosters community. Housing can expose people to a number of health risks. As discussed in the WHO Housing and health guidelines (HHGL), structurally deficient housing increases the likelihood that people slip or fall, increasing the risk of injury.

The quality of the evidence is rated based on the risk of bias (and other quality features) in the included studies, inconsistency of results, indirectness, imprecision and other factors deemed relevant. Based on the current and projected national prevalence of populations with functional impairments and taking into account trends of ageing, an adequate proportion of the housing stock should be accessible to people with functional impairments. Strong. The evidence base was generated from published studies and practical experiences. The results demonstrate that preventive home visits should be directed to persons 80 years old and older and involve various professional competences. The visits should be personalized, lead to concrete interventions, and be followed up. Results of a pilot study showed that the protocol validly identified health risks among older people with different levels of ADL dependence.

The purpose of preventive home visits is to promote overall health and wellbeing in old age. The aim of this paper was to describe the process of the development of evidence-based preventive home visits, targeting independent community-living older persons.