HOME-BASED PRIMARY CARE

It's Time to Think Beyond the Clinic Walls

By **THOMAS CORNWELL, MD**

"Home-based primary care can significantly reduce medical emergencies, fragmented care, missed appointments and poor control of chronic conditions."

– THOMAS CORNWELL, MD, SENIOR MEDICAL DIRECTOR
VILLAGE MEDICAL AT HOME

Four reasons home-based primary care is opening doors and opportunities for patients and providers today

Primary care is being rapidly redefined today right before our eyes. As healthcare evolves, patient needs expand and providers must look for new and better ways to achieve a patient-centered model of practice. Providing the best in healthcare to patients who are aging, homebound or facing multiple complex conditions has often required "out of the box" thinking. Now, it involves thinking "outside of the clinic walls" to extend the continuum of primary care beyond the office and offer flexible new solutions like telehealth and at-home care.

Of course, the concept of the physician "house call" is nothing new. Physicians with their iconic black bags delivered medical care in the home for more than two centuries in this country. Even as recently as the 1930s, at least 40% of health care was still provided at home before technological medical resources drew patients to the physician's office.

Some consider house calls simply a memory from the past, but today's home-based primary care represents a powerful healthcare opportunity for the future, provided by physicians, nurse practitioners and physician assistants.

WHY IT'S TIME TO OPEN THE DOOR TO CONTEMPORARY HOME-BASED PRIMARY CARE

1.

Today's patient population needs home-based care more than ever before. The number of patients facing multiple chronic conditions continues to grow, particularly as a significant percentage of the population ages. According to the CDC, six out of every 10 Americans live with at least one chronic condition,[1] while 40% have two or more chronic diseases and 12% have five or more chronic conditions.[2] Others are homebound or lack the mobility for frequent office visits because of health conditions. Others still have be-

come more hesitant about the risk of exposure to other illnesses they may encounter in the office waiting room.

According to the U.S. Census Bureau, the number of homebound or home-limited people 65 years or older will more than *double* from 2010 to 2050, and the population of those 85 years or older will *quadruple* from 2000 to 2050. Statistics have shown that the population older than 80 years of age has the most disabilities and need for assistance with daily living.

Home-based primary care (HBPC) typically provides care to the most medically complex patients within the health care system. Individuals who need HBPC often have issues that limit their continuous follow-up care. They face a cycle of poor health management that can quickly become expensive and exhaustive for the patients and caregivers as well as financially taxing for the country's healthcare system. However, only 15% of the nation's three million home-limited patients currently receive HBPC.[3]

Home-based primary care is designed to increase access and improve quality of life for homebound patients and their caregivers. In addition, the provider can help improve end-of-life care and decrease healthcare costs by allowing patients to remain at home and avoid unnecessary stays in hospitals or nursing homes.

Currently, in today's fragmented healthcare system, 5% of the country's sickest patients use 50% of healthcare dollars.[4] This is because the system is not set up to care for the sickest patients who are often homebound. Home-based primary care (HBPC) brings quality primary care to the most complex, costly patients in society. Bringing the care model to the patient not only makes sense, but it also improves care and lowers costs.

2.

Mobile medical technology is available to support today's home-based care. HBPC is not only high-touch, but it has also become high-tech with significant advancements in mobile diagnostic and therapeutic technology.

The iconic black bag has been replaced with the latest in portable advancements. Electronic medical records allow in-home providers access to patient charts from virtually anywhere. Lab tests can be completed within the home in minutes. Blood can be drawn and spun in a centrifuge plugged into a vehicle's auxiliary power outlet (or cigarette lighter port). Affordable portable x-rays and ultrasound equipment make diagnostics convenient to use in the home, often with same-day results.

In addition, today's smartphones can function as an ultrasound console or as an electrocardiogram, delivering rhythm strips in seconds. Numerous mobile apps are also available for vision testing, medical reference and drug databases. Today's smartphone can even transmit paperwork with remote scanning and printing. Most mobile providers can actually conduct more tests in the home than many primary care practices can complete in their offices!

Beyond diagnostic resources, therapeutic technology, such as home dialysis and smart pumps for IVs and antibiotics, are available in the home. In other words, the technology that directed patients to the office decades ago is now enabling care to return to the home.

3.

Promising transitions within today's healthcare payment structure now support home-based primary care as part of the healthcare continuum. As more payment models transition from a fee-for-service to value-based payments, HBPC has become a more viable option. Examples of these new payment models include Primary Care First, the Seriously Ill Population Option and Direct Contracting. The Direct Contracting model also includes a High-Needs Population option that is ideal for HBPC programs.

Previously, HBPC has been slow to scale because of the predominant fee-for-service payment system that rewards volume over value. Within the fee-for-service system, an office-based provider can often see double the number of patients daily compared to an HBPC provider. However, home-based services are increasing with the growing prevalence of value-based payments and the well-documented results from this high-touch op-

Home-based primary care is designed to increase access and improve quality of life for homebound patients and their caregivers.

In addition, the provider can help improve end-of-life care and decrease healthcare costs by allowing patients to remain at home and avoid unnecessary stays in hospitals or nursing homes.

tion of care. The resultant high quality and cost savings is rewarded by value-based payments, including assuming full risk.

Although value-based payment systems are better structured to support HBPC and will ultimately be the economic engine to scale home-based care programs, even fee-for-service payments have improved to support house calls. Medicare has added several fee-for-service payments, including advance care planning, chronic care management, transitional care management, remote patient monitoring and INR management. In addition to increased payments, HBPC can also significantly reduce expenses for the provider, such as minimizing the expense of medical office space and furnishing exam and waiting rooms.

As further confirmation of the trend toward HBPC, one simply needs to look at the recent surge of venture capital investments in home-based care, including Cityblock, Clover, Devoted, Heal, Landmark, VillageMD, WellBe Senior Health and others.

"Providing the best in healthcare to patients who are aging, homebound or facing multiple complex conditions has often required "out of the box" thinking. Now, it involves thinking "outside of the clinic walls" to extend the continuum of primary care beyond the office and offer flexible new solutions like telehealth and at-home care."

4.

The results speak for themselves in quality of life, convenience and cost savings. In addition to enhancing the quality of care for patients and supporting caregivers, HBPC can significantly reduce medical emergencies, fragmented care, missed appointments and poor control of chronic conditions. These are factors that most frequently lead to emergency department visits, readmissions, hospitalizations or the need to move to nursing homes.

For home-limited patients, HBPC provides improved quality of life and comfort. For clinicians, it provides a rewarding care experience. For family caregivers, it offers support and peace of mind. For the patient and family, it brings an empowering choice in care options.

QUALITY OF CARE. QUALITY OF LIFE.

Examples of the life-changing power of home-based primary care abound:

Type 1 diabetes had taken a toll on Amanda,* who at the age of 35 was on home-dialysis, had four stents in her coronary arteries and was blind in her right eye from diabetic retinopathy. A former national U.S. karate champion and medalist in the Pan-Am games, she now could not manage stairs because of severe chronic pain and weakness. Her pain and multiple medical problems landed her in the hospital ten times in the spring of 2017, where she spent more than one-third of her days. HBPC entered her life in June of 2017, and there were many fewer hospitalizations the remainder of the year. In 2018, she did not spend a single day in the hospital and her improved health gained her acceptance on a renal transplant list. In the fall of 2018, she was able to leave her home and participate in a fall festival, where she sent the picture seen here. She captioned the photo with a message that echoes the sentiment of so many HBPC patients, "Thank you for giving me my life back."

In 2019, Amanda was hospitalized again, but this time not for horrible pain but, in-

stead, for a kidney and pancreas transplant. She is no longer diabetic or on dialysis.

VALUE AND SAVINGS

While quality of life and care is clear from case examples, the statistics demonstrate the value and savings inherent in HBPC. Nothing else has shown more cost savings than providing house calls for the sickest of the sick to keep them out of nursing homes and hospitals.

Village Medical at Home Houston six-months post-engagement along with case controls:

- Hospital admissions down 52%
- Costs down 18%
- A1C testing up 21%
- A1C control up 18%
- Improved diagnostic coding: Average Risk Adjustment Factor score 0.74 = 34%

The Independence at Home Medicare demonstration provides further support. With only 15 HBPC practices and 10,000 Medicare beneficiaries per year, it demonstrated a savings of $100 million in the first five years.[5] Similar savings were demonstrated by the Veteran Administrations Home-Based Primary Care program, including an 89% reduction in nursing home use.[6]

EXCELLENCE IN END-OF-LIFE CARE

Home-based primary care also delivers quality palliative and end-of-life care:

In another example, 82-year-old Gertrude* had been hospitalized 13 times in 11 months with subsequent rehabilitation due to congestive heart failure (CHF) and symptoms related to chronic obstructive pulmonary disease (COPD). Her 84-year-old husband and daughter served as her primary caregivers. Working with HBPC led to discontinuing multiple medications that resolved dizziness Gertrude had experienced for years. The goals of care were discussed, and the patient's wishes included avoiding hospitalization. Gertrude's quality of life dramatically improved, which was also a joy and relief for the husband and daughter. When Gertrude started to decline, she requested hospice and passed away comfortably at home eight months after the start of HBPC.

The statistics support home-based end-of-life care. The facts show that end-of-life medical care is expensive in this country. Approximately 25% of health care costs are spent on care in the last year of life, most of this is driven by hospitalizations.[7] Today, 70% of patients express a desire to die at home,[8] but only 31% do – the majority spending their last hours uncomfortably in institutional settings such as hospitals.[9]

Northwestern Central DuPage Hospital's HBPC program, HomeCare Physicians' (HCP) end-of-life care outcomes – much like the earlier patient experience with Gertrude – are much different. Like most HBPC programs that target high-risk populations, HCP has an annual 20-25% mortality rate. During the past six years, over 1,200 patients died. The average length of care with HCP was 2.1 years, and the median length of stay was 1.3 years, so most patients worked with HBPC care during their entire last year of life, which is often the costliest year. With HCP, goals of care conversations start at the very first encounter, to understand what matters most to patients. These discussions, coupled with patient and family education and preparedness, lead to significant better end of life care outcomes, as demonstrated by the statistics:

- 76% dying at home, compared to 31% nationally
- 76% on hospice, compared to 50% nationally

**Personal details have been altered slightly to protect patient identity.*

- 35% hospitalized in the last 90 days of life compared to 65% nationally[10]
- 5% in the ICU in the last 30 days of life, compared to 29% nationally
- Average hospice length of stay 104 days, compared to 71 nationally
- Median hospice length of stay 28 days, compared to 24 days nationally
- 38% of hospice patients dying in the first two weeks, compared to over 50% nationally.

Hospice's ability to impact patients is reduced when working with a patient for less than two weeks. By giving patients more time on hospice, HBPC increases patient comfort and family support during this difficult time.

Convenience and confidence for patient and caregiver. Home-based primary care also helps alleviate stress and other challenges for everyone involved in a patient's care. A visit to a physician's office can be a taxing effort on the elderly or those with chronic disease, and often requires the loved one or caregiver to dedicate an entire day to the visit. By contrast, the loved one who wishes to be present for a primary care visit at home often only needs an hour off work. The support and education provided by home-based care also gives a reassuring confidence to the caregiver.

Most importantly, home-based primary care empowers the patient. Patients receive education about their care options and medications with full information about risk and benefits for each choice. Patients are equipped to become advocates for their own health, which can lead to a more fulfilling life.

Home-based primary care: the time is now. Ultimately, HBPC moves the care model to the patient, which is rewarding for the provider and offers higher quality care for the patient. The "house call" or home-based primary care is certainly not a model past its prime. In fact, it is only now beginning to make its impact on helping to transition healthcare to a patient-centric model. HBPC today is poised to make a difference in the quality, cost, and delivery of healthcare for patients, caregivers and healthcare providers.

REFERENCES

1. "Supporting Older Patients with Chronic Conditions." *NIH: National Institute on Aging.*
https://www.nia.nih.gov/health/supporting-older-patients-chronic-conditions. (Accessed August 2020).

2. Buttorff, Christine, Teague Ruder and Melissa Bauman. *Multiple Chronic Conditions in the United States.* 2017 Rand Corporation.
https://www.rand.org/ content/dam/rand/pubs/tools/TL200/TL221/RAND_TL221.pdf

3. Ornstein, K., Leff, B., Covinsky, K., Ritchie, C., Federman, A., Roberts, L., Kelley, A., Sui, A., Szanton, S. (2015). "Epidemiology of the Homebound Population in the United States." *JAMA Intern. Med.* doi:10.1001/jamainternmed.2015.1849. (Accessed August 2020).

4. Mitchell, Emily M. "Statistical Brief #521: Concentration of Health Expenditures and Selected Characteristics of High Spenders, U.S. Civilian Noninstitutionalized Population." 2016. Feb. 2019. *AQHR.*
https://meps.ahrq.gov/data_files/publications/st521/stat521.shtml. (Accessed August 2020).

5. "Independence at Home Demonstration." *CMS.gov.*
https://innovation.cms.gov/innovation-models/independence-at-home. (Accessed August 2020).

6. Edes, T., Kinosian, B., Vukovic, N., Nichols, L., Becker, M., & Hossain, M. "Better Access, Quality, and Cost for Clinically Complex Veterans with Home-Based Primary Care." *Journal of the American Geriatrics Society,* October 2014; 62(10): 1954-1964. doi: 10.1111/jgs.13030.

7. Riley, Gerald F. and James D. Lubitz. *"Long-Term Trends in Medicare Payments in the Last Year of Life."* Health Services Research. April 2010. (Accessed August 2020).

8. "Changes in the Place of Death in the United States." T*he New England Journal of Medicine.* 2019; 381:2369-2370 DOI: 10.1056/NEJMc1911892. https://www.nejm.org/doi/full/10.1056/NEJMc1911892 (Accessed August 2020).

9. Cross, Sarah H. and Haider J. Warraich. "What people want at the end of life." *Kaiser Family Foundation/The Economist;* April 27, 2017, https://www.economist.com/graphic-detail/2017/04/27/what-people-want-at-the-end-of-life. (Accessed August 2020).

10. Teno, Joan M. and Pedro Gozalo, Amal N. Trivedi. "Site of Death, Place of Care, and Health Care Transitions Among US Medicare Beneficiaries, J 2000-2015." *JAMA* 2018 (Accessed August 2020).