

Executive summary

Telemedicine improves quality, lowers costs, and expands access to care. It is difficult, however, to incentivize nursing homes to invest in telemedicine because the savings from it go towards Medicare and not the nursing homes; additionally, some nursing homes have an incentive to keep hospitalizations high in order to receive higher reimbursements. Option 1 proposes that Special Needs Plans pay for telemedicine services for dual-eligible services. Option 2 proposes that Medicare eliminate geography-based reimbursement for telemedicine. Option 3 proposes that Medicare establish a pay-for-performance scheme. The recommendation is to follow both Options 1 and 2.

Background & Problem

The Affordable Care Act (ACA) has expanded health care access to seven million Americans. This expansion adds pressure on a system already overwhelmed by an increasing number of people with chronic illnesses, an increasingly aging population, and a scarcity of primary care physicians and nurses.ⁱ The Centers for Medicare and Medicaid Services (CMS) projects that by 2022, health care costs will constitute 20 percent of total GDP.ⁱⁱ A possible solution to this problem of spiraling costs, recommended by the Institute of Medicine, is increasing the use of telemedicine in healthcare delivery.ⁱⁱⁱ

Telemedicine is the “use of technologies to remotely diagnose, monitor, and treat patients.”^{iv} These services, which are delivered via networked programs, point-to-point connections, monitoring center links, and internet-based patient websites, include primary care

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and specialist consultations and referrals, as well as the remote monitoring of patients.^v

Telemedicine increases the efficiency of health care by facilitating the “sharing of data and tasks among teams [and] allow[ing] team members to practice at their highest levels of skill and training.”^{vi} Because telemedicine improves quality, lowers costs, expands access to care, and increases patient satisfaction, its use has significantly grown over the past four decades. For example, when Partners HealthCare in Massachusetts introduced in-home monitoring of patients with congestive heart failure, hospital readmissions decreased by 44 percent compared with patients not monitored with telemedicine services, saving over \$10 million over six years.^{vii} In another example, nursing homes that introduced telemedicine into their after-hours care witnessed a 9.7 percent decline in hospitalization rates, in contrast to the 5.3 percent decline in facilities that did not introduce telemedicine.^{viii} For nursing homes that were “more engaged” with telemedicine, hospitalization rates decreased by an even larger 11.5 percent. As a result of this decrease in hospitalization rates, Medicare saved approximately \$120,000 per year per nursing home.^{ix}

With such savings, one would expect that nursing homes would be eager to invest in telemedicine. It is important to note, however, that these savings are incurred by Medicare and not the nursing homes themselves. Indeed, while nursing homes are the ones investing in telemedicine, they are not the ones enjoying the financial benefits. The problem lies in the disparity of service and payment between settings: because Medicaid and Medicare have conflicting incentives in reimbursing long-term care, some nursing homes have financial disincentives to invest in telemedicine. For example, because Medicare’s benefit for skilled nursing home facilities is higher than Medicaid’s benefit, nursing homes have a disincentive to prevent hospitalizations for long-stay Medicaid patients.^x On the other hand, other nursing

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homes that primarily care for short-stay Medicare patients have an incentive to invest in telemedicine in order to keep hospitalizations low.

Recent policy changes have attempted to increase the coordination of payment between Medicare and Medicaid. The ACA encourages the creation of Accountable Care Organizations (ACOs), which hold providers and medical facilities accountable for providing the highest quality of care and keeping costs low. Because the fate of ACOs depends on their hospitalization rates, they may be more inclined to invest in telemedicine. However, because this model is still relatively new, it has not become widespread yet. This memo presents three recommendations for policy change that can create incentives for nursing home facilities to lower hospitalization rates by investing in telemedicine.

Evidence

I conducted searches on PubMed using the following keywords: “telemedicine,” “telehealth,” “Medicare,” “nursing homes,” “incentives.” I also heavily relied on research done by D.C. Grabowski and the American Telemedicine Association website.

Option 1: Have SNPs Pay for Telemedicine Services in Dual-Eligible Facilities

Medicare Special Needs Plans (SNPs) were established in 2003 as a managed care option for specific individuals, including those who are eligible for both Medicare and Medicaid. Because SNPs assume the entire financial burden for covering these dual-eligible patients, they have an incentive to keep hospitalizations costs low; one way they can do this is by investing in telemedicine and improving the quality of care delivered. This option involves following Massachusetts’ example and having SNPs reimburse nursing homes for their telemedicine

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services. This option makes common sense by assuming that nursing homes are not investing in telemedicine services because they do not want to pay for something that will not financially benefit them per se (since the savings from telemedicine services go towards Medicare, and not the nursing homes themselves).^{xi} The advantage of this option is that it is cost-effective and is thus technically feasible to implement. The average annual cost of telemedicine services in a nursing home is \$30,000, while the annual savings resulting from a reduction in hospitalizations would be \$151,000—a net savings of about \$120,000 per year per nursing home for Medicare.^{xii} Indeed, the biggest advantage of this option is that it is self-financing: Medicare would not need to increase taxes or premiums in order to fund the telemedicine services because the costs would be offset by the savings. Because this model worked in Massachusetts, it should translate relatively fluidly to other states in terms of feasibility of implementation.

However, because this option focuses on SNPs, it only addresses the reimbursement of services in facilities where most patients are dual-eligible, and not those facilities. Another disadvantage of this option is that while it removes the *disincentives* from not investing in telemedicine, it does not actually address creating *incentives* for investing in telemedicine. With this option, while nursing homes are no longer fully responsible for paying for telemedicine services, they still do not receive any financial benefits for reducing hospitalizations. Therefore, while there is no disincentive preventing them from investing in telemedicine, there is no incentive for it either. Thus, this attempt to coordinate payment and service across settings by creating SNPs in which the plans carry the entire financial burden for dual-eligible patients does not solve the problem of how to incentivize nursing homes to perform well.

Option 2: Eliminate Medicare's geography-based reimbursement model

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Currently, Medicare's reimbursement model^{xiii} for telemedicine is geography-based: it reimburses for telemedicine services only if the health care facility is located in a rural area (a Health Professional Shortage Area, or HPSA) or is outside of a major metropolitan center (a Metropolitan Statistical Area, or MSA).^{xiv} In contrast, Medicaid has more comprehensive reimbursement for telemedicine services in 43 states.^{xv} For example, in Louisiana, all health plans are required to reimburse telemedicine services "at no less than 75% of the reasonable and customary amount of payment, benefit, or reimbursement which that licensed physician receives for an intermediate office visit."^{xvi} Therefore, the second option involves Medicare expanding its scope of reimbursement of telemedicine services beyond only HPSA and non-MSA areas. As a result, those nursing homes that serve Medicare patients outside of HPSA and non-MSA areas will become eligible for reimbursement for telemedicine. The advantage of this option is similar to that in option 1 in terms of it being cost-effective—if more nursing homes are eligible for telemedicine reimbursement, then hopefully more will invest in telemedicine, thereby lowering hospitalization rates and decreasing Medicare costs.

The disadvantages of this option are the same as in Option 1: this option only addresses reimbursement for telemedicine services in facilities with mostly Medicare patients, but not those facilities with primarily dual-eligible individuals. Like with Option 1, this option removes the *disincentive* preventing nursing homes from investing in telemedicine, but does not actually create a strong *incentive* for them to invest.

Option 3: Encourage Medicare to establish pay-for-performance schemes

As mentioned earlier, part of the problem behind the mediocrity of hospitalization rates in nursing homes lies in the reimbursement system. Instead of rewarding quality, the current fee-

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for-service reimbursement system rewards quantity of care provided. Establishing a pay-for-performance system can nudge nursing homes into investing in telemedicine because it would accomplish what the first two options failed to do: provide financial incentives to provide higher quality care.^{xvii}

Michael Sparer, Chair of the Health Policy and Management Department at Columbia University's Mailman School of Public Health, describes two different pay-for-performance models. The first model involves ranking nursing homes based their performance on certain indicators (e.g., hospitalization rates). The top 10% performers will receive a 2% bonus, the 11-20% performers will receive a 1% bonus, while the bottom 10-20% will receive a 1% penalty, and the bottom 10% will receive a 2% penalty. An advantage of this model is that it is revenue-neutral, since Medicare would simply redistribute funds from the poor performers to the high performers. A disadvantage of this model is that it may lead to a vicious cycle in which high-performing nursing homes improve (as a result of the financial infusion) and mediocre nursing homes perform worse and worse (as a result of the loss of funds from the penalty).

The second model involves a benchmark system instead of a ranking system. Medicare would set a benchmark for performance on certain indicators, and nursing homes that perform above the benchmark would receive a financial reward, while those that perform below the benchmark would not be penalized. While this model incentivizes better performance, it does not disincentivize underperformance, thereby addressing the potential vicious cycle of negative performance that the first model neglects. However, this is not revenue-neutral, meaning that Medicare will somehow have to come up with the financial rewards, which may not be technically feasible or politically attractive.

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Both pay-for-performance models are based on the premise that setting financial incentives can encourage nursing homes to decrease hospitalization rates by investing in telemedicine services. However, a large disadvantage of the pay-for-performance model is that because the idea of it is so new, there is no concrete empirical evidence that it works.^{xviii} Indeed, Medicare may be reluctant to change its entire reimbursement scheme to a model only based on assumptions and behavioral economics theory.

Recommendation: Option 1 and Option 2

The largest obstacle to nursing homes currently not investing in telemedicine services is that nursing homes have to use their own funds to pay for telemedicine services. If Medicare can remove this hurdle by stepping in and paying for the telemedicine services, then nursing homes will be less reluctant to start using these services. The recommendation is to follow both options 1 and 2, because essentially, both attempt to solve the problem similarly: they transfer the responsibility of paying for telemedicine services from nursing homes to Medicare/SNPs. Both options are relatively feasible to implement, and are cost-effective. By contrast, option 3 is a more innovative approach that is not yet backed by concrete empirical evidence and is also potentially politically unattractive.

The next step is for Medicare to amend code Q3014, which is the procedural code by which facilities can bill Medicare for telemedicine services, to include facilities in MSA and non-HPSA areas.^{xix} Medicare should also implement the Massachusetts model of telemedicine reimbursement in facilities that primarily serve dual-eligible patients enrolled in SNPs. Both of these actions require policy reform of Medicare. Finally, in order to increase engagement with telemedicine, it is advisable that leaders in nursing homes take the initiative in “encouraging

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buy-in” among staff members, administrators, and physicians so that telemedicine becomes more appealing.^{xx} Initiatives include conducting seminars and workshops on telemedicine and holding training sessions so that providers can become more comfortable with using telemedicine.

ⁱ Kvedar, J. (2014). Connected Health: A Review Of Technologies And Strategies To Improve Patient Care With Telemedicine And Telehealth. *Health Affairs*, 33, no. 2, 194.

ⁱⁱ Kvedar, 2014, 194.

ⁱⁱⁱ McLean, T., & Richards, E. (2006). Teleradiology: A Case Study Of The Economic And Legal Considerations In International Trade In Telemedicine. *Health Affairs*, 25, no. 5, 1379.

^{iv} Kvedar, 2014, 194.

^v American Telemedicine Association. (2012). *What is Telemedicine?* Retrieved from <http://www.americantelemed.org/about-telemedicine/what-is-telemedicine#.U118tfldWSo>.

^{vi} Kvedar, 2014, 195.

^{vii} Kvedar, 2014, 195.

^{viii} Grabowski, D. & O’Malley, A. (2014). Use Of Telemedicine Can Reduce Hospitalizations Of Nursing Home Residents And Generate Savings For Medicare. *Health Affairs*, 33, no. 2, 247.

^{ix} Grabowski & O’Malley, 2014, 247.

^x Grabowski, D. (2007). Medicare and Medicaid: Conflicting Incentives for Long-Term Care. *The Milbank Quarterly*, 85, no. 4.

^{xi} Grabowski & O’Malley, 2014, 249.

^{xii} Grabowski & O’Malley, 2014, 249.

^{xiii} Option 2 focuses on the larger Medicare, and not SNPs specifically.

^{xiv} Cahaba Government Benefit Administrators, LLC. (2013). Telehealth Services. Retrieved from <https://www.cahabagba.com/part-b/claims-2/telehealth-services-medicare-reimbursement>.

^{xv} National Conference of State Legislatures. (2014). State Coverage for Telehealth Services. Retrieved from <http://www.ncsl.org/research/health/state-coverage-for-telehealth-services.aspx>.

^{xvi} Louisiana Insurance Code. R§ 22:1821 (2011).

^{xvii} Sparer, M. (2013, October). Improving Health Care Delivery and Quality. *U.S. Public Health System*. Lecture conducted from Columbia University, New York, NY.

^{xviii} Sparer, 2013.

^{xix} American Telemedicine Association (2012). Telemedicine and Telehealth Services. Retrieved from <http://www.americantelemed.org/docs/default-source/policy/medicare-payment-of-telemedicine-and-telehealth-services.pdf?sfvrsn=14>.

^{xx} Grabowski & O’Malley, 2014, 248.