Can Financial Incentives Effectively Promote Home Dialysis in the United States?

By Eugene Lin

The United States is in year 4 of a policy experiment aimed at determining whether large payment incentives can effectively promote more home dialysis use. The Centers for Medicare & Medicaid Services' (CMS') End-Stage Renal Disease (ESRD) Treatment Choices (ETC) Model randomized 30% of dialysis facilities and nephrologists in the United States to a mandatory payment model that holds care teams financially accountable for enrolling more patients into home dialysis (1). (To a lesser extent, ETC also holds care teams accountable for successfully waitlisting patients for transplant.) The payment incentives are large, ranging from +8% and −10% (−9% for nephrologists) of all Part B dialysis payments. One of ETC's selling points is its randomized nature, which makes it one of the true policy experiments implemented by CMS.

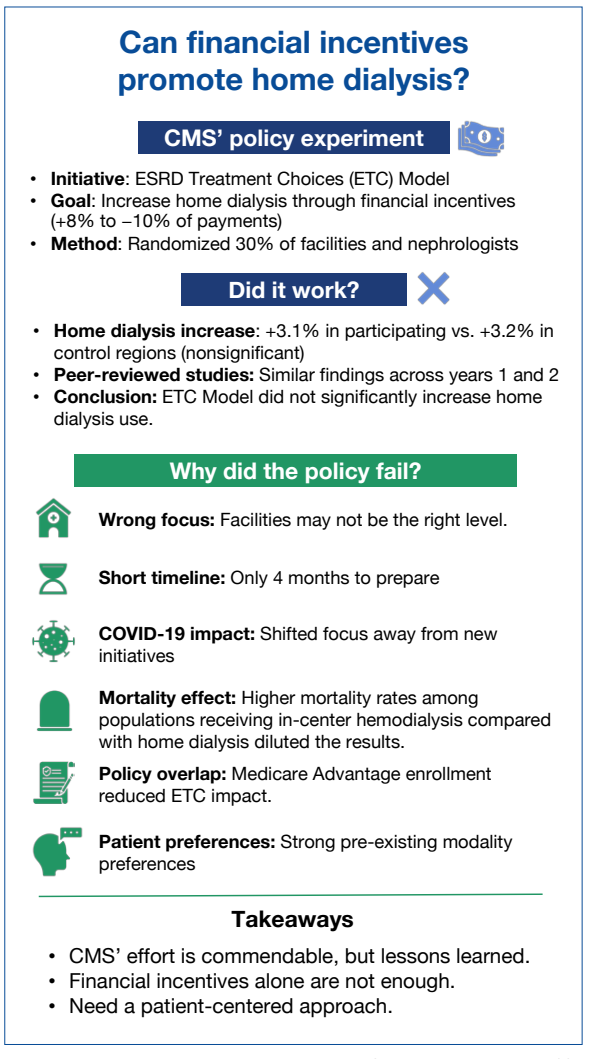
Unfortunately, ETC has been an unequivocal failure. CMS' own evaluation of the first 2 years demonstrated an increase in home dialysis use of 3.1 percentage points in participating regions and 3.2 percentage points in control regions (a nonsignificant difference) (2, 3). Similarly, an early peer-reviewed study showed similar findings in year 1 (4), and in June, Koukounas et al. corroborated these results for years 1 and 2 (5).

Although there are many structural hurdles to home dialysis use (e.g., lack of education and home dialysis infrastructure), policymakers and researchers understandably assumed that financial considerations were important. Indeed, the Government Accountability Office has shown that profit margins are highest for in-center hemodialysis, largely because recruiting patients to already existing in-center shifts allows facilities to inexpensively share fixed costs and labor costs (6). Financial bonuses should have changed relative profit margins in favor of home dialysis, at least for some patients. Additionally, because two dialysis chains own 75% of the market and have facilities in both participating and nonparticipating regions, it would have been straightforward to preferentially focus their attention on participating facilities.

My best guess, ex ante, is that these large payment incentives would have moved the needle at least an iota. So, why did the policy fail? I can think of at least six reasons.

1. Dialysis facilities may not be the right level of intervention. Home dialysis often requires a robust educational effort, often months before initiating dialysis (7). But, ETC also mandated participation by nephrologists, and one would think entrepreneurial nephrologists would have acted accordingly.
2. It can take years to launch a successful home dialysis program, from developing infrastructure to recruiting and training staff. CMS only gave care teams 4 months of notice between the time of randomization and implementation. However, we should have expected movement in the latter years of the model if this were the only explanation.
3. COVID-19 likely derailed any efforts made by facilities to develop home dialysis programs. The pandemic was catastrophic for patients receiving dialysis (8). Understandably, facilities pivoted away from new ventures and toward ensuring the safety of their patients (9).
4. Especially early in the pandemic, we witnessed increased mortality among populations receiving in-center hemodialysis relative to populations undergoing home dialysis (10). A side-effect is that the *number of patients* on home dialysis remained unchanged, but *the proportion* on home dialysis increased. This numerical phenomenon would tend to dilute any observable effect attributable to ETC.
5. CMS unfortunately had a concurrent policy that contaminated ETC. Owing to the 21st Century Cures Act, starting in 2021, patients with ESRD were allowed to newly enroll into Medicare Advantage plans (11). Because ETC only affects traditional Medicare enrollees, increased enrollment into Medicare Advantage rendered ETC's incentives less powerful.
6. Finally, and perhaps my favored explanation, it may be that policymakers cannot simply throw money at this problem. Instead, we need a more patient-centered (and less *impatient*) approach. We have seen historical inklings that we cannot simply coerce patients to pick a preferred modality. In 2003, researchers in the Netherlands attempted to randomize patients to peritoneal dialysis versus hemodialysis (12). Despite recruiting over 773 patients, only 38 agreed to participate. Why did the trial fail? Over 95% of patients already had a strong preference for one modality over the other.

Still, despite the policy's ineffectiveness, I *commend* CMS for its efforts! We need more randomized policy experiments. Too often, policymakers act on naïve assumptions without testing them. It was reasonable to assume that financial considerations were sufficient to move the needle on home dialysis. But now that we know otherwise, we should have some humility in admitting that increasing home dialysis use is difficult. My hope is that CMS (and care teams, academics, and researchers) goes back to the drawing board and designs new policy experiments that may push us to a more patient-centered approach to home dialysis. ■



Visual Graphic by Jia H. Ng, MD, MSCE

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