HHS Public Access

Author manuscript

*Am J Kidney Dis*. Author manuscript; available in PMC 2020 December 24.

Published in final edited form as:

*Am J Kidney Dis*. 2019 August ; 74(2): 248–255. doi:10.1053/j.ajkd.2019.01.027.

# Paying for Frequent Dialysis

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## Abstract

In late 2017, the seven regional contractors responsible for paying dialysis claims in Medicare proposed new payment rules that would restrict payment for hemodialysis treatments in excess of three weekly to exceptional, acute care circumstances. Frequent hemodialysis is performed more frequently than the traditional thrice-weekly pattern, and many stakeholders—patients, providers, dialysis machine manufacturers, and others—have expressed concern that these payment rules will inhibit the growth of this treatment modality's use among U.S. dialysis patients. In this perspective, we explain the role of these contractors in the context of Medicare's in-center hemodialysis-centric dialysis payment system, and we assess how well this system accommodates the higher treatment frequencies of both peritoneal dialysis and frequent hemodialysis. Then, given the available evidence concerning the relative effectiveness of these modalities versus thrice-weekly in-center hemodialysis and trends in their use, we discuss options for modifying Medicare's payment system to support frequent dialysis.

### Keywords

hemodialysis (HD); home dialysis; dialysis modality selection; reimbursement rates; Medicare; end-stage renal disease (ESRD); home hemodialysis (HHD); Medicare; United States; policy; cost of care; payment models; Medicare Administrative Contractors (MAC)

## Introduction

In late 2017, the seven administrative contractors Medicare currently uses to administer Parts A and B benefits and pay these claims proposed new payment policies concerning hemodialysis treatments for patients with end-stage renal disease (ESRD).[1] These contractors represent all geographical jurisdictions in the U.S. and 100% of dialysis patients nationally. Their proposals, which were similar to one another, set out to clarify under what conditions they would pay for "extra" hemodialysis treatments—that is, treatments beyond three weekly. Specifically, they would pay for such treatments only under exceptional

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circumstances when an "*acute event*" precipitated a "*temporary condition*" that would necessitate them.

Since Medicare is the largest payer for dialysis services in the U.S., these proposed rules—called local coverage determinations (LCDs)—have made waves. Patient advocates, nephrologist groups, ESRD Networks, dialysis machine manufacturers, and others decried the proposals as unduly restrictive on frequent hemodialysis, and particularly home hemodialysis (HHD). They argued that since HHD patients routinely receive such "extra" treatments, the payment contractors' determination not to pay for such treatments will limit patients' access to home dialysis services.

This argument, and the reasoning behind the proposed LCDs, have not been critically examined in the broader context of Medicare and its evolving Prospective Payment System (PPS) for dialysis treatments. We aim to fill this gap by (i) describing how the principal dialysis modality alternatives are reimbursed under Medicare's payment system, (ii) highlighting the role that Medicare Administrative Contractors play in influencing payment (or non-payment) for hemodialysis treatments, (iii) assessing the existing evidence that compares the effectiveness of the most commonly used modalities of dialysis and trends in their use, and (iv) laying out options for modifying Medicare's payment system with this evidence base.

## Medicare Administrative Contractors and Local Coverage Determinations in Dialysis

In Box 1, we describe the structures and incentives of the system of Medicare Administrative Contractors (MACs) that Medicare uses to pay claims and to make determinations about whether billed services are medically necessary. This includes the decisions about when to issue LCDs, which can standardize and clarify the MAC's policy concerning when a given service will be deemed medically necessary.

Before the seven MACs released their proposed LCDs concerning frequent hemodialysis, this therapy had been an illustrative example of critically different patterns of ad hoc coverage determinations between MACs. In previous work,[2] we found substantial, persistent variation across MACs in the number of paid-for HHD treatments per patient-month after controlling for differences in patient risk. During 2009–2012, on average the "most generous" MAC paid for approximately 6.1 more treatments per patient-month than the "least generous" MAC. For comparison, the corresponding range in paid-for in-center HD treatments was 0.8 treatments per patient-month. We observed moderately strong correlation in paid-for HHD treatment levels within MACs throughout our study period, indicating that this variation persisted into the era of the expanded PPS post-2011. In addition, we found no evidence that these average differences in discretionary payments for HHD treatments across MACs were associated with local dialysis providers' decisions about whether to operate a HHD program. This was somewhat surprising, given that hemodialysis equipment suppliers (e.g., NxStage) have been aware of this variation for several years,[3] and large dialysis organizations submitting claims to different MACs in different geographic regions are likely to have observed it as well.

Still, since MACs compete for contracts significantly by demonstrating their ability to limit payments for services potentially not covered under Medicare guidelines, we predicted that the MACs would "reconsider their interpretations of medical justification in this context and institute new standards more often restricting payment for HHD services."[2] This is precisely the action that seven MACs took by proposing related LCDs last year.

We also predicted that such policies, if enacted, could potentially reduce variation across MACs and thereby constrain innovation in dialysis treatment. Critics of the LCDs have asserted that these potential outcomes are likely and concerning, though little evidence has been offered to support these claims. Notably, the variation we observed in paid HHD treatments per patient-month was much larger than we expect could reasonably be attributed to differences in clinician-level decisions and judgment—there are likely other, broader forces at work. Moreover, other recent payment policy changes in Medicare, as we describe below, have favored HHD and peritoneal dialysis over in-center hemodialysis. In this context, the LCDs do appear to conflict with these established incentives, alternately favoring and disfavoring HHD.

Whatever one's take on the new LCDs, it remains clear that the MACs are stiffening Medicare's coverage rules and responding to the incentives established by Medicare's contracting system. With these dynamics in mind, in the following sections we consider whether and how the Medicare PPS could be changed to better accommodate hemodialysis therapy with an elevated prescribed treatment frequency, as with HHD.

## Prospective Payment for In-center Hemodialysis and Peritoneal Dialysis

The PPS has always been formulated based on average provider costs for the average dialysis patient. That is, the full PPS rate in any given year is computed based on average treatment costs as observed across the universe of Medicare dialysis patients in earlier years, and, incorporating limited adjustment for patient-specific clinical factors, providers are paid this rate, for their patients' care most of the time. Thrice weekly in-center hemodialysis is the dominant kidney replacement therapy modality in the U.S. About 87% of prevalent patients undergoing dialysis are treated using this modality.[4] Peritoneal dialysis (PD) and HHD, the principal dialysis modality alternatives, are used by 10.0% and 1.8% of prevalent dialysis patients, respectively.[4]

Given the high upfront costs of setting up a traditional dialysis center, such as installing water treatment systems and acquiring machines, dialysis providers have a strong imperative to continue using their existing hemodialysis facilities. Moreover, in-center hemodialysis may be preferable for many patients, particularly those without strong home and community supports or without the inclination to self-care.[5] Thus in-center hemodialysis is likely to remain the dominant modality in the U.S. for the foreseeable future.

In-center hemodialysis's leading presence in dialysis care is also codified in Medicare's PPS. Under the PPS, Medicare pays dialysis facilities a set fee for each hemodialysis treatment—up to three per week—with the fee meant to compensate the facility for the dialysis service itself, a measure of the operating costs associated with maintaining an

outpatient dialysis facility (collectively “Composite Rate” services), and, since 2011, routinely administered injectable medications and prescriptions for certain oral medications if equivalent to covered injectable drugs (collectively “Previously Separately Billable Items”). Dialysis treatments above this thrice-weekly pattern are covered only when justified on the basis of medical necessity.[6] It is estimated that between 0.5% and 1.0% of in-center hemodialysis patients currently undergo more than three treatments per week.[7]

PD, including continuous ambulatory PD and continuous cycling PD, is administered daily for an extended period or semi-continuously. Because the seven or more “treatments” administered weekly for PD patients are not well aligned with the PPS’s thrice-weekly assumption, an exception was made to account for PD’s greater treatment frequency and avoid overpaying for PD on a per-treatment basis while retaining the PPS’s basic framework. A conversion factor was established, with each day’s PD treatment reimbursed at 3/7 the level of a traditional hemodialysis service. Therefore, payments for PD services are effectively the per-day payment equivalent to thrice-weekly hemodialysis payments.

Implicit in this notion of “HD-equivalent PD sessions” is the belief that seven days of PD treatment and thrice-weekly in-center hemodialysis treatments yield roughly equivalent therapeutic benefits for comparable service costs. Studies comparing these modalities’ clinical effects directly have relied on observational data due to the difficulties and expense of administering randomized controlled trials, introducing significant concerns about bias due to selection effects and confounding by indication. The evidence is equivocal. Many studies show that PD patients have better survival, lower hospitalization rates, and better quality of life versus in-center hemodialysis patients,[8–18] suggesting PD may be relatively more reflective of many ESRD patients’ treatment preferences. Yet there is also considerable evidence that PD patients’ clinical outcomes are, at best, no better than those of in-center hemodialysis patients.[19–28] In particular, recent studies taking greater measures to account for selection effects have generally found little difference between in-center hemodialysis and PD patient outcomes.[24,26–28] Studies comparing the costs of these modalities consistently show PD’s are lower than in-center hemodialysis’s (e.g., less intensive provider involvement), after initial training costs.[29–32] However, absent more conclusive trial data and observational studies accounting for psychosocial and other potentially important non-clinical differences between in-center hemodialysis and PD patients, it may be best said, as Bernard Jaar recently wrote, that “It’s a tie,”[33] consistent with Medicare’s implicit assumption.

Given the myriad factors that entrench in-center hemodialysis as the predominant dialysis modality in the U.S., the steady growth of PD in the first several years of the PPS suggested that the PPS offered adequate payment for PD. In 2011, following the expansion of the PPS to include multiple previously separately billable items, the relative incentive for providers to use PD and other home modalities increased, as the added services are used less per treatment by PD patients versus in-center hemodialysis patients.[34,35] Also, as of January 2017, Medicare increased payments for new home dialysis patients’ training treatments by 16.1%.[36] Thus, we expect PD use will continue to rise under the current PPS.

## Prospective Payment for Frequent Hemodialysis

Frequent hemodialysis, either in-center or at home, is typically administered for a shorter duration five or six times weekly.[37] Like PD, frequent hemodialysis is also not well aligned with the in-center hemodialysis-oriented thrice-weekly assumption embedded in the PPS. However, unlike for PD, no exception has been made in the PPS to account for frequent hemodialysis' greater treatment frequency, and there is no "HD-equivalent HHD sessions" conversion factor. CMS did propose such an amendment to the PPS in its June 2016 Proposed Rule, but it was not subsequently implemented in part because of public comments and concerns.

Absent such a conversion factor, Medicare's PPS implicitly assumes that outcomes are similar for patients receiving three weekly hemodialysis treatments either in-center or at home, and additional treatments may only be required for a select few patients. Advocates for frequent hemodialysis reject this assumption and make the intuitive argument that the modality should yield meaningful benefits because it more closely mimics the continuous filtration performed by well-functioning kidneys. Moreover, several studies have found improved survival, overall physical health, and cardiovascular health indicators associated with frequent hemodialysis (versus traditional thrice-weekly treatments), though such patients may experience more frequent access-related interventions and hospitalization for infections.[38–44] There is also evidence of improved quality of life on HHD.[44–49]

Despite these findings and the associated clinical intuition, the scientific evidence remains far from definitive. Hakim and Saha expressed significant concerns about selection bias, endogeneity (parallel impacts of treatment duration and ultrafiltration rates, differences in unmeasured morbidity between patients receiving frequent hemodialysis and patients receiving thrice weekly hemodialysis), small samples, and attrition with these largely retrospective studies, also noting weaker findings among prospective studies.[50] The HHD equipment manufacturer NxStage also participated in multiple related studies as a funder and data provider,[31,41–43] introducing potential conflicts of interest. The few studies comparing the costs of HHD administered 5–7 times weekly versus thrice weekly in-center hemodialysis suggest that HHD has higher up-front equipment and training costs than thrice weekly in-center hemodialysis for established dialysis clinics. However, after these costs are cleared, incremental costs per treatment are materially lower for HHD than for thrice weekly hemodialysis. Thus, for patients who stay on HHD long enough (depending on the up-front equipment costs), HHD becomes cost-saving over time versus thrice weekly in-center hemodialysis. This evidence also suggests that in-center frequent hemodialysis is not cost-effective relative to frequent HHD or thrice weekly in-center hemodialysis.[31,51–53]

Current trends in frequent hemodialysis use do not offer strong evidence regarding the adequacy of payment for the modality. Growth in HHD use has been slow, with HHD remaining a distant third to in-center HD and PD,[4] and the share of in-center hemodialysis patients who undergo frequent treatments appears to be flat.[7] The payment system's incentives for providing frequent hemodialysis are clear: the expanded PPS and increased payment for home dialysis training treatments have increased revenue-to-cost ratios, and providers' expected margins increase with each additional HHD treatment provided and

reimbursed beyond three per week.[34,36,52,54,55] It may be that the non-financial barriers to more widespread use of frequent hemodialysis (e.g., patient reluctance to dialyze more frequently, limited provider education regarding the modality, patient and provider preconceptions that HHD is difficult to administer)[44] or high up-front costs (i.e., price of equipment) to home dialysis providers mitigate providers' responses to these established incentives.

## Evidence-based Payment Policy Options for Frequent Hemodialysis

For a given dialysis modality alternative to in-center hemodialysis, which is the basis for Medicare's PPS, any evidence-based modification to the PPS should account for two principal factors: whether patient outcomes at the population level, broadly defined, are better or worse and whether the modality is more or less costly to provide versus conventional thrice-weekly in-center hemodialysis. If in-center hemodialysis and the alternative offer comparable patient benefit, Medicare payments should be based on the costs of the less expensive modality when administered by an efficient provider (plus a margin sufficient to keep the efficient provider in business). It would only be justified for Medicare to pay providers more for the alternative if it offers improved clinical outcomes or better reflects patients' preferences and values as reflected in quality-of-life outcomes or self-reported satisfaction.

Notably, since PPS payments are based on average treatment costs across the universe of Medicare dialysis patients, it behooves Medicare to specify whether it believes total payment should be the same (cost-neutral) or different overall when the average patient receives frequent hemodialysis versus thrice weekly in-center hemodialysis. As discussed above, MACs' contractual incentives cannot sustain making semi-regular exceptions to this determination, as they have done historically.

Unfortunately, our current review of the literature suggests the evidence on frequent hemodialysis patient outcomes does not offer definitive guidance on this question. We interpret the existing evidence to suggest either that there may be moderate benefits to more frequent hemodialysis for many patients, or that there is no clear benefit, versus thrice-weekly in-center hemodialysis. The evidence on relative costs—based in part on inferences driven by broad trends in HHD use—is similarly mixed. Nevertheless, Medicare's per-treatment fee schedule under the PPS is developed based on the average treatment frequency (i.e., about three weekly) and average provider costs per treatment. Additionally, while these costs include formerly composite rate services and separately billable services, it is notable that the costs of the separately billable services do not rise proportionally to composite rate service costs with the fourth, fifth, or sixth hemodialysis treatment provided weekly. Consequently, absent clear evidence that most patients benefit from undergoing frequent hemodialysis versus thrice-weekly HD, we conclude that a policy of paying the full PPS price for these treatments beyond the third weekly likely represents an overpayment by Medicare on average.*

*Importantly, for patients with select, uncommon clinical conditions (e.g., primary hyperoxaluria), daily, intensive dialysis may be required. In these cases, frequent hemodialysis clearly provides clinical benefits over conventional treatment. The assumptions underlying the PPS are not well-aligned with such treatment requirements; indeed, the PPS may not pay providers appropriately for

Given our conclusion, the pre-LCD Medicare PPS appears unacceptable relative to two potential alternative payment models featuring PPS modifications for frequent hemodialysis patients. These alternatives—one a cost-neutral option with two variants and the second a cost-additive option—are summarized in Table 1. The cost-neutral option is the basis of the MACs' recent proposed LCDs, which would not pay for hemodialysis treatments beyond thrice weekly under most circumstances, thereby potentially discouraging providers from prescribing more frequent dialysis out of concerns they will not receive payment for the additional treatments. To harmonize this policy across MACs, Medicare could elevate these LCDs to a national coverage determination and commit to periodically re-reviewing the evidence and reconsidering when it may be appropriate to pay for additional treatments. In the meantime, this option effectively states that there is no benefit of more frequent hemodialysis treatments versus three weekly in-center hemodialysis treatments for most patients and applies this standard consistently.

A variant of this option would revive Medicare's proposal to implement a conversion factor for frequent hemodialysis sessions akin to what exists for PD. Payment for each day's hemodialysis treatment would be rescaled, relative to payments for thrice-weekly in-center hemodialysis treatments, based on the prescribed number of sessions. (Providers would be required to submit to CMS their prescribed treatment frequency for each patient when submitting claims for their treatment, so that CMS could pay accordingly.) Assuming parity in outcomes with thrice weekly in-center hemodialysis regardless of treatment frequency, the conversion factors could be set to parity in total payment with thrice weekly in-center hemodialysis: at 3/4, 3/5, or 1/2 with prescriptions for four, five, or six hemodialysis treatments per week, respectively. These conversion factors could also be modified based on Medicare's perceptions of the relative effectiveness of more frequent hemodialysis (e.g., multiply all factors by 110% if assuming frequent hemodialysis is 10% more effective than thrice weekly hemodialysis on average), though such assumptions would not be cost-neutral.

This variant implicitly acknowledges the multiple factors nephrologists consider when selecting the number of treatments per week to prescribe, including equipment in use, small solute clearance goals, fluid management goals, and patient response to fluid removal during dialysis. Taking these factors into consideration, additional weekly treatments may be necessary for the patient's benefit when undergoing frequent hemodialysis to be comparable versus when undergoing thrice-weekly in-center hemodialysis treatment. The advantage of this variant is that it encourages providers to follow-through and provide the fourth, fifth, and sixth treatments weekly as prescribed by paying for them, albeit at a fraction of the per-session cost associated with thrice weekly treatments and could allow an 'effectiveness multiplier' as discussed above, while the first variant pays dialysis providers nothing for these treatments. The disadvantage is that the total weekly payments to the provider are unchanged versus what is paid for three weekly sessions; thus providers may be discouraged from prescribing additional weekly treatments in the first place.

either course of treatment. We believe these few clinical conditions should be identified and carved out as exceptions from the PPS, and our comments in this section are not meant to reflect such clinical contexts.

If Medicare decides that frequent hemodialysis offers a moderate benefit relative to conventional in-center hemodialysis—or if a more consistent pattern of evidence favoring frequent hemodialysis emerges—Medicare could select a second option, establishing a separate, frequent hemodialysis-centered PPS analogue. This system would have three components. Two of these are weekly fees for regular expenses incurred regardless of dialysis schedule: for equipment and for injectable drugs (or oral equivalents)—with fees set slightly below the prevailing weekly amounts paid today (e.g., for equipment rentals or corresponding loan or lease payments), thereby maintaining providers' incentive to negotiate these fees downward. The third component is a per-treatment payment set at dialysis facilities' average marginal costs (e.g., the cost of dialysate and other recurring non-machine rental expenses). Under this system, weekly payments would be less than what would be paid under the full PPS for extra hemodialysis treatments but sufficient to give clinicians the autonomy to provide patients the care they think would most benefit their patients. While this proposal is not cost-neutral, we believe it may be more consistent with the dual goal of increasing use of frequent hemodialysis while avoiding making (unjustified) full PPS payments for the fourth, fifth, or sixth treatments weekly.

A key consideration under each of these proposals is that payment levels could be set conditional on providers' current treatment costs, but these costs may evolve over time in ways that can be affected by the payment system's incentives. Large dialysis organizations and dialysis equipment manufacturers both retain substantial market power. In this context, Medicare must take care to set payment levels so as not to entrench today's treatment costs by fixing payment levels to them—providers' and manufacturers' incentives to innovate would be reduced in this case. Conversely, Medicare can encourage innovations leading to reduced program costs by periodically rebasing its payments to reflect contemporary provider costs and reward providers who continually improve their operating efficiency. A rebasing policy along these lines may risk underpaying providers if too great a capacity for improving efficiency is assumed or, vice versa, may risk overpaying providers if too little efficiency improvement is envisioned. Still, we contend that Medicare should seek to motivate providers to improve the efficiency of their care delivery, and rebasing can be an effective tool for doing so.

In addition, it is important that CMS further its efforts to include the perspectives of PD and HHD patients alongside in-center hemodialysis patients' in the CAHPS survey,[56] which, as of 2018, CMS uses within the pay-for-performance structures of the ESRD Quality Incentive Program (QIP).[57] Increasing emphasis on patient experience scores for all dialysis populations through the ESRD QIP—implemented in concert with any of our above proposals—would improve the effectiveness of the PPS in incentivizing dialysis care that reflects patient values and preferences in dialysis treatment choice and frequency.[58]

## Conclusion

The seven nearly identical LCDs proposed by MACs last year to avoid paying for hemodialysis treatments beyond three weekly have raised concerns about the adequacy of the Medicare PPS's model of paying for frequent hemodialysis in-center and at home. We have proposed potential modifications to the PPS informed by the evidence on the relative

benefits, costs, and use trends for frequent hemodialysis versus thrice-weekly in-center hemodialysis. By our read of this evidence, any of the proposed modifications could be justified. Despite uncertainty in identifying the optimal payment model, we are reassured by our previous finding that there was no significant association between the local MAC's propensity to pay for additional HHD treatments beyond three weekly and providers' willingness to operate a HHD program.[2] Frequent hemodialysis use among U.S. patients with ESRD may continue to grow, however slowly, absent more substantial changes in payment policy.

## Acknowledgments

Support: The authors report receiving no monetary or nonmonetary support for the preparation of this article.

Financial Disclosure: Dr. Wilk has effort support from CMS under a sub-contract with OPUS Health Insights and from an administrative supplement to SAMHSA award 6H79SM081774-01M001. Drs. Hirth and Messana have effort support under CMS contracts 75FCMC18D0041 (Order # 75FCMC18F0001) and HHSM-500-2016-00085C, and a sub-contract with The Lewin Group. Dr. Hirth has additional effort support under NIH awards R01DK097165-01-A1, HHSN2762014 00001C and R01-ES028694-01 and State of Michigan contract MA20190108-00-E20192406-00. Dr. Messana has additional effort support under a contract with Arbor Research Collaborative for Health. These contracts and awards did not provide support for the development of this manuscript.

Disclaimer: The opinions expressed in this work are solely those of the authors and are not intended to represent the opinions of CMS, OPUS Health Insights, SAMHSA, The Lewin Group, NIH, the State of Michigan, or Arbor Research in any way.

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**Box 1.**

### Medicare Administrative Contractors and Local Coverage Determinations

There are seven regional MACs responsible for paying Parts A and B claims providers submit to Medicare. The MACs independently determine whether billed services are covered under Medicare and are medically necessary, conditional on any national coverage decisions or other constraints imposed by federal payment policy.[59]

Medicare representatives, providers, and the medical device community have often argued that this regionalized MAC system offers greater flexibility and responsiveness to local innovations in medical care than a single, national reimbursement system would.[60,61] The MAC system also has the potential to constrain Medicare spending. In particular, Medicare can choose to award MAC contracts to organizations with a demonstrated willingness to be more aggressive in denying claims for services they deem inappropriate or fraudulent.[59,62]

Another key feature—or bug, depending on one's perspective—of the MAC system is that it allows for Medicare coverage rules to vary regionally through two different mechanisms. First, MACs typically adjudicate the claims they receive on an ad hoc basis; this is the case with most dialysis services claims. Only occasionally do MACs have meaningful discretion, yet when they do, providers may find some inconsistency in whether the medical justification they provide with their submitted claims is deemed sufficient to disburse payment. (This has been a contentious and important issue in the case of frequent hemodialysis.[3]) Second, MACs may issue local coverage determinations (LCDs) to codify and clarify their local claims payment guidelines for future determinations.[62,63] LCDs can be helpful for providers to see what will and will not be reimbursable under Medicare, and they may also be helpful for increasing the consistency of these determinations within a MAC.[64] It is not clear how often LCDs vary meaningfully across MACs. However, studies have highlighted several services that are covered under some MACs' LCDs but not others, including whole body bone and/or joint imaging, audiology testing, diagnostic pap smears, bilateral deep brain stimulation,[59] and certain hospice services.[65] Notably, CMS may also issue national coverage determinations (NCDs) that would supersede any related LCDs and harmonize Medicare coverage rules across MACs.

Critics of this system assert that LCDs stifle innovation in care delivery practices, usurp clinicians' clinical decision-making authority, put Medicare's finger on the scales in favor of some treatment types over others, and undermine Medicare's "proactively agnostic" stance about when different treatments alternatives are medically justified.[66] They also commonly argue that the processes by which LCDs are issued are not transparent, and it is unclear what evidence was used in determining when a service should be considered medically justified.

A mixture of these criticisms materialized in proposed legislation (HR 3635, 2017–18 Congress), which would require that MACs be more transparent about the evidence they have considered when proposing a new LCD. This bill would effectively transfer some of the burden of medical justification for recommended treatments from clinicians to MACs.

In particular, MACs would be constrained in their ability to restrict payment for treatments for which the evidence is mixed or underdeveloped (e.g., frequent hemodialysis). Given the incentives MACs face to constrain such services' use,[59,62] if this bill becomes law MACs could respond by proposing and issuing fewer LCDs, resorting to the more traditional model of ad hoc claims adjudication and/or effectively implementing LCDs without calling them LCDs. The unintended consequence would be that the MACs' adjudication processes become less transparent, not more. Notably, the bill's provisions are prospective: the recently proposed LCDs concerning frequent hemodialysis would not be subject to these rules.

**Table 1.**

Comparing Alternative Payment Policy Options for Frequent Hemodialysis

| Payment Policy Option | Costneutral? | Fees / Arrangements Prior to Treatment | Weekly Payments | | Payment Modifier |
|---|---|---|---|---|---|
| | | | Treatments 1–3 | Treatments 4–7 | |
| Option 1a: LCDs as Proposed | Yes | n/a | Standard PPS payment per treatment | No payment except under exceptional circumstances * | Each of the 3 policy options should be supplemented with an enhanced ESRD QIP, including patient satisfaction measures captured for all patients (incl. frequent hemodialysis patients at home), not just in-center hemodialysis patients |
| Option 1b: Conversion Factor | Yes | Nephrologist reports prescribed number of weekly treatments | PPS payment per treatment x [3 / (# prescribed treatments)] | PPS payment per treatment x [3 / (# prescribed treatments)] | |
| Option 2: Separate PPS for Frequent Hemodialysis | No | Weekly fees for equipment (rental, loan, or lease) and injectable drugs ** | Per-treatment fee set at average marginal costs (e.g., dialysate + other recurring expenses) | Per-treatment fee set at average marginal costs (e.g., dialysate + other recurring expenses) | |

Notes:

* necessitated when an acute event precipitated a temporary condition

** or oral equivalents; LCDs = Local Coverage Determinations, PPS = Prospective Payment System, ESRD QIP = Medicare End Stage Renal Disease Quality Incentive Program.