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Are Payers Ready, Willing, and Able to Provide Access to New Durable Gene Therapies?

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ABSTRACT

Objective: To explore payer feedback regarding awareness of new gene therapies, sustainability of current financing mechanisms, unique challenges by payer segment, and need and preference for new financial models.

Study Design: Qualitative interview with standardized interview guide.

Methods: Sixty-minute telephone interviews were conducted with financial decision makers from 15 US payers between August and September 2017.

Results: One-third of payers interviewed (n = 5) were newly aware and learning about new gene therapies, 40% (n = 6) described watchful waiting, whereas 26.7% (n = 4) were engaged in active management. New payment models—specifically, performance-based agreements and risk-pooling—were supported by 47% (n = 7) of payers, whereas the current payment model was supported by 53% (n = 8). Major challenges included uncertainty related to utilization, cost, and duration of cure. Payers cited regulation, plan turnover, and ability to track long-term outcomes as barriers to implementation of new models.

Conclusions: Access to new gene therapies may be impacted by payer ability to absorb the cost of coverage. Variation exists in awareness of new gene therapies and level of incorporation of new costs into future plan coverage. The sustainability of current financing mechanisms varies by payer segment, profitability, and size; smaller plans and Medicaid are likely to be impacted first. Government reinsurance, commercial reinsurance, and stop-loss insurance backstop current reimbursement models, dampening the need for urgent action. The tipping point for action may be severe premium inflation in stop loss and reinsurance. Payers are open to innovative financing models that improve financial predictability and reward clinical performance.

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Introduction

After several decades of development, the US Food and Drug Administration (FDA) approved innovative new gene therapies in 2017. Two chimeric antigen receptor (CAR) T-cell therapies, tisagenlecleucel (Kymirah/Novartis) and axicabtagene ciloleucel (Yescarta/Kite Pharma), with listing prices of $475 000 and $373 000, respectively,[1] provide new hope to patients with certain types of leukemia and lymphoma. In late December 2017, voretigene neparvovec-rzyl (Luxturna/Spark Therapeutics) became the first pharmacologic gene therapy approved to treat an inherited retinal disease. Its list price is $425 000 per eye or $850 000 per patient, as the majority of patients will need treatment for both eyes.[2]

The opportunity for durable gene therapy is large as over 10 000 diseases are linked to genetic disorders.[3] There were 925 novel gene therapies targeting 209 indications in the development pipeline as of January 2017.[4] It is estimated that 60 gene therapies will be introduced to the market in the next 5 years.[5] Although extremely high cost, these treatments generally focus on rare and ultra-rare populations. Thus, the payer impact of any individual treatment is likely to be manageable. Payers' ability to absorb the impact of the aggregate cost of multiple gene therapies while delivering affordable access to healthcare is less certain.

The upfront reimbursement of durable therapies creates uncertainty for payers. The benefit of these treatments accrues over a patient's lifetime after a single high-cost administration event. This runs counter to the traditional model where both treatment costs and benefits are spread out over time, a model that fits the yearly assessment of coverage, premiums, and member enrollment. In addition, the uncertainty around durability of clinical outcomes over time compounds the assessment of benefit.[6]

Recognizing the challenges payers face in delivering affordable healthcare coverage while ensuring access to medical innovation

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such as durable gene therapies is critical to the sustainability of research and development of new cures. The Massachusetts Institute of Technology (MIT) Center for Biomedical Innovation (CBI)–New Drug Development Paradigms (NEWDIGS) Initiative launched the Financing and Reimbursement of Cures in the US (FoCUS) project in 2016 to investigate strategies for managing the inherent financial challenges of implementing medical innovations. One focus of this endeavor was to obtain formal feedback from payers regarding their readiness to adopt new gene therapies and the need for and operational feasibility of implementing new financing mechanisms.

Methods

Qualitative interviews using a standard question set were conducted with decision makers from 15 US payers between August and September 2017. Forty individuals from various payer segments, including commercial plans, self-insured employers, Medicare, Medicaid, integrated delivery networks (IDNs) with insurance products, and reinsurers were invited by email to participate. Potential interviewees were identified through their participation in the MIT FoCUS project or by referral from project participants. Two interviews were conducted with multiple stakeholders from that payer, for a total of 21 interviewees from 15 payers. Results were compiled by payer. All participants voluntarily agreed to participate without financial incentive.

Before the discussion, interviewees received a 3-page document, including background and objectives of the interview, summary of 2 case studies (CAR-T cell therapy and hemophilia A), 4 proposed financing and reimbursement mechanisms, and a list of interview questions (see Appendix in Supplemental Materials found at https://doi.org/10.1016/j.jval.2018.12.004). The financing and reimbursement mechanisms were broad and loosely defined to allow for exploration of payers' preferences and concerns. The 4 mechanisms presented for discussion were:

1. Annuity: Individual annuity that converts a one-time upfront high cost to multiperiod payments.
2. Performance-based annuity: An annuity payment that is contingent upon performance (ie, efficacy, durability, safety, etc).
3. Risk-pooling: Pool risks for constant payments at plan or employer level using standard reinsurance or state-level bonding.
4. Current approaches: Continue without any changes to the current payment system.

Two interviewers participated in each of the interviews; the primary and secondary interviewers were consistent throughout. Interviews were taped, and agreement regarding categorization of responses was achieved by consensus of the interviewers.

Results

Sample Participants

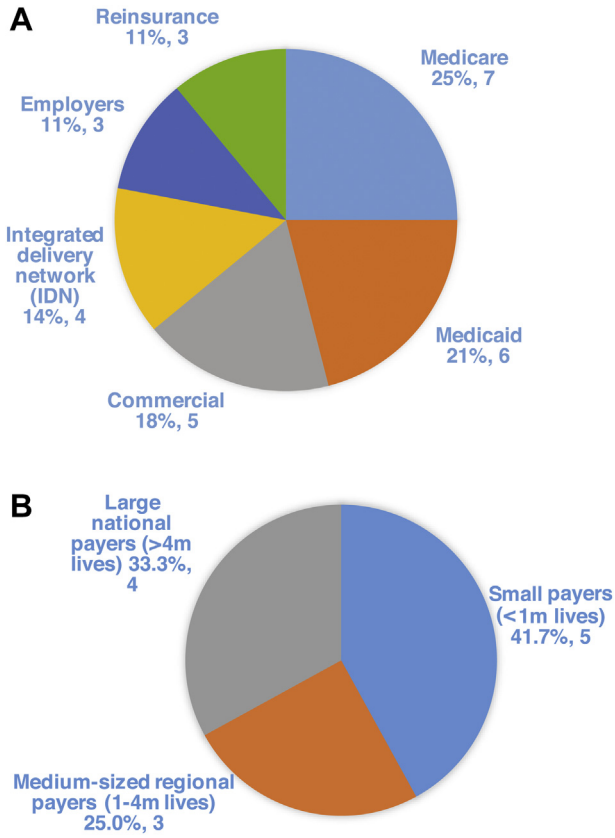
Of the 40 individuals invited to participate, 15 (37.5%) completed interviews. Of the 25 nonparticipants, 14 (56%) did not respond, 8 (32%) referred the request, and 3 (12%) declined to participate.

All major payer segments were represented with a minimum of 3 interviews per segment. Seven payers were engaged in multiple business segments, and 28 payer segments were represented in total: Medicare (n = 7; 30.4%), Medicaid (n = 6; 26.1%) commercial (n = 5; 21.7%), IDN (n = 4; 17.4%), self-insured employers (n = 3, 13.0%), and reinsurance (n = 3, 13.0%) (Figure 1A).

Payer size ranged from 4000 lives to over 4 million lives. Five interviewees (41.7%) represented small payers of less than 1 million lives, 3 (25.0%) represented medium-sized regional payers with 1 to 4 million lives, and 4 (33.3%) represented large national plans with more than 4 million lives (Figure 1B). Two reinsurers and one IDN without an insurance plan were not included in the payer size description.

All 21 interviewees self-identified as financial decision makers. Thirteen (62%) had finance or actuary backgrounds, and 8 (n = 13) had clinical backgrounds.

Figure 1. **(A)** Distribution of interviewees by payer segment (n = 28). **(B)** Distribution of interviews by plan size (n = 12).



*Excludes 2 reinsurers and 1 IDN without an insurance product. IDN indicates integrated delivery networks; m, million.

Payer Awareness and Preparation for Gene Therapies

Payers reported various states of awareness of the gene therapy pipeline and its potential financing challenges. One-third (n = 5) of payers were learning about gene therapies, having recently become aware of the pipeline and potential challenges; 40% (n = 6) were aware of the gene therapy pipeline and watching its progress, and the remaining 26.7% (n = 4) were engaged in active management, anticipating FDA approval and incorporating new gene therapy–projected costs into their 2018 plan premiums (Figure 2).

Many payers interviewed described a process of monitoring the drug pipeline for treatments likely to be approved in the next 12 to 18 months. This process was led by the clinical team with varying participation of the financial and actuarial staff. Increased

Figure 2. Participants' awareness of gene therapy financing challenges (n = 15).

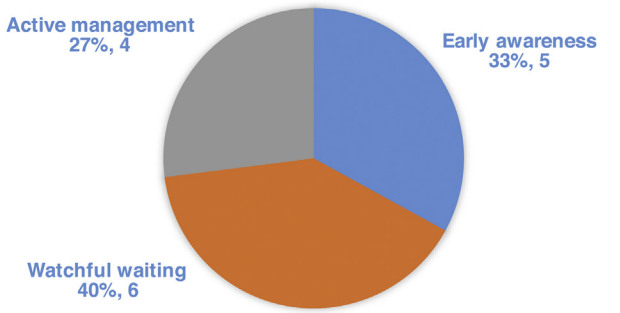
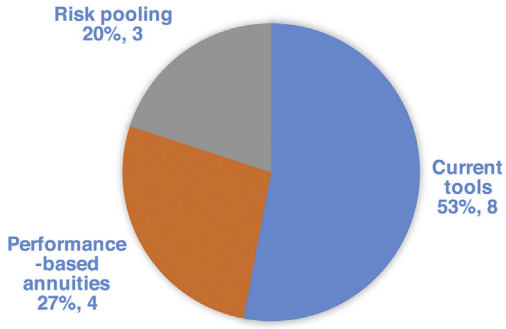


Figure 3. Payers' top tool choice (n = 15).



focus is given to treatments, such as gene therapies, that are expected to be very high cost and likely to replace existing treatments. Prevalence of the target condition, expected cost, effectiveness, and safety of the treatment are all areas of examination that feed into prediction of future year plan costs and premiums. To aid in development of management strategies, the intensity of focus increases as the drug nears approval.

Most self-insured employers reported delegation of pipeline review to their pharmacy benefits manager or medical administrator. Discussions regarding new therapies generally occur closer to drug approval, if at all, and may involve coverage options and utilization management preferences or be for informational purposes only. As a result, the self-insured employers were least likely to be knowledgeable regarding anticipated new gene therapies approvals and their impact.

Decisions around coverage of durable gene therapies are based on medical and pharmacy coverage policies and generally rely on review of clinical, safety, and economic information. Payers described a review process often including external experts to aid in coverage decision making. IDNs also identified reliance on key opinion leaders in their organization to advise on provider uptake and expectations, coverage, and management of specific treatments.

Preference for Financing and Reimbursement Mechanisms

When asked about the need for new financing mechanisms in the near-term, the majority of payers, 53% (n = 8), believed that the current tools were sufficient, 27% (n = 4) identified performance-based annuities as the top choice, and 20% (n = 3) chose risk-pooling. No payers identified simple annuities as a top choice (Figure 3).

In general, payers had concerns about the affordability and sustainability of the current financing and reimbursement system as new high-cost therapies are approved over the next 3 to 5 years. Most reported that the cost burden of current and new term gene therapies is likely to be relatively small for any one plan in the near-term. It is the cumulative effect of multiple gene therapies impacting more and more patients that raised concern for the longer term.

Further, several payers pointed out that the current tools will continue to function as intended. By accounting for the approval of new treatments and plan experience, the new costs could be built into the plan design and premium. This would likely result in premium escalation that ensures the plan financial viability, but could result in access constraints to health insurance coverage for all and, in particular, the new treatment may not be affordable for patients who need them.

A number of payers identified concerns with the cost of treatments to payers under their current provider contracts. Payers cited paying mark-ups to providers from 25% to 6 times the provider's acquisition cost under the current practice where providers purchase the drug and then bill the payer for the drug at a marked-up price plus the cost of administration. Costs tended to be higher for new technologies until they obtain a specific reimbursement code and agreed upon reimbursement rates.

Impact by Payer Segment

Commercial payers

Commercial payers are those that are financially at risk for health insurance policies not offered or provided by the government. Large national payers, in general, and large national commercial payers, in particular, reported satisfaction with current financial and reimbursement tools, having significant cash reserves to cover year-to-year fluctuations in actual costs (Table 1). They have more lives to spread their risk over, reported sophisticated tracking systems, and tended to have a longer-term view of the impact of these therapies compared with other payers. They were engaged in overall affordability and pricing discussions, not limited to just this particular area of cost increase.

Smaller state and regional commercial payers may be compelled to cover cutting-edge innovations to improve the attractiveness of their plan and stay competitive in the markets they serve. They reported having proportionately more lives subject to state coverage requirements that limit their ability to control access and manage utilization. Further, even a relatively small number of unexpected treatments driven by luck or adverse selection could severely affect their cash flow and reserves. Thus, some payers report use of reinsurance to protect against this risk.

All commercial plans reported a focus on ensuring that the new durable gene therapies are used appropriately and in the right patients. To promote improved quality, they report pursuing a center-of-excellence approach to limit access to therapies to certain approved facilities and providers to optimize outcomes. Aligned with this approach is direct contracting with the manufacturer to avoid provider mark-ups and management of performance-based agreements that financially guarantee outcomes.

Self-insured employer

Employers that are financially at risk for their members' healthcare coverage are self-insured employers. Self-insured

Table 1. Considerations for various payer segments

Segment	Top concerns	Current risk mitigation strategies	Specific barriers	Future risk mitigation strategies
Commercial				
Small to medium state and regional	• Ability to remain competitive compared with larger plan offerings • State coverage requirements • Impact of aggregate costs of multiple treatments in the next 5 years	• Cash reserves • Reinsurance	• Cash flow • Patient churn • Adverse selection	• Expanded risk pools • Performance-based agreements • Plan consolidation
Large national	• Accurate plan cost projections • Premium escalation	• Cash reserves	• Drug reimbursement mark-up rates under provider contracts	• Limit use of centers of excellence • Direct manufacturer contracts • Lobby for broader approaches to healthcare affordability and drug pricing management
Self-insured employer	• Predictability of claims experience	• Stop-loss insurance	• Providing access to the few affected while maintaining affordability for all • Reliance on plan administrators for management	• Reduction in other nonmedical employee benefits
Payer associated with IDN	• Ability to remain competitive compared with larger plan offerings • Pressure from providers to cover new innovations early	• Reinsurance if warranted • Leverage provider relationships to control drug selection and mark-up costs	• Adverse selection	• Expanded risk pools • Performance-based agreements
Managed Medicaid	• State government establishment of premium • Lack of clear-cut rules for states that carve out high-cost drugs	• Limit access • State risk-pooling • Education of regulators	• Patient churn in and out of plan based on qualifying criteria • Regulatory constraints	• Expanded risk pools • Carve out gene therapies to singe national risk pool • Plan consolidation
Medicare				
Medicare Advantage	• Accurate cost projections to inform premiums	• Re-insurance if warranted	• Regulatory constraints • Protected classes of drugs	• Expanded risk pools
Medicare PDP	• Accurate bid and premium projections	• Government catastrophic re-insurance	• Regulatory constraints	• Performance-based agreements

IDN indicates integrated delivery networks; PDP, Part D plans.

employers focused on predictability of claims experience. As a result, they rely on stop-loss insurance to protect against the volatility of unexpected high-cost claims and expect to continue with this approach. Employers report that switching stop-loss vendors is fairly easy, contributing to the competitiveness of the industry and the suppression of premium increases.

If faced with dramatic stop-loss premium increases, payers identified several management options. Two examples given were to increase the dollar threshold for stop-loss coverage or to reduce other nonmedical employee benefits to subsidize medical benefits. If additional financial management options are needed, employers favored expanded risk pools for stop-loss and reinsurance vendors to moderate their risk.

Payers associated with IDNs

The IDN payers interviewed were relatively small in size overall, with less than 1 million lives, and offered coverage under multiple lines of business. They, like other payers their size, face the challenge to provide cost-competitive yet innovative plans to remain viable in markets where they compete with the larger payers. In addition, they are pressured by their providers to cover new innovations early and to reduce the burden of management programs. As a result, they are concerned about adverse selection—patients who need gene therapies disproportionally enrolling in their plan because it covers the new therapies whereas other plans do not.

All payers with IDNs were open to new financing mechanisms, favoring expanded risk pools primarily, followed by performance-based annuities.

Managed Medicaid

Managed Medicaid payers face challenges today with escalating drug costs against a regulatory backdrop that constrains their ability to manage effectively. Payers reported that premiums are dictated, not by the plan, but by the state. If the premium does not take into account new treatments likely to be approved during

a plan year, the plan will lose money. In some states, certain drugs, for example, all FDA-approved oncology treatments, must be covered.

Some states carve high-cost drug liability out of the plan, but this is generally handled on a drug-by-drug basis, so there is little certainty regarding the liability of an individual treatment until a formal decision is reached. Other states withhold a portion of the premium dollars to reimburse plans with higher-cost patients.

Managed Medicaid payers reported a very high turnover as patients move on and off the plan over the course of the year based on financial qualification. As such, Medicaid payers are least likely to reap the reward of medical cost offsets resulting from the use of durable therapies because members of the plan are often transient.

Medicare

Like Medicaid, Medicare payers reported requirements to cover certain protected classes of medications, including oncology drugs. Bid submissions for Medicare plans, including formulary, utilization management, premiums, and plan design, have a long lead time. They are generally submitted 7 to 8 months before the start of the plan year. As a result, payers report that the prediction of pipeline approvals and pricing for incorporation of very high-cost treatments into the bid may suffer from accuracy, overestimating and underestimating plans costs and premiums. In the case of overestimation, plans may be overpriced compared with competitors, affecting their ability to attract and retain covered lives. If plans underestimate, the premiums and plan design may not cover costs.

The government provides catastrophic coverage for Medicare Part D plans (PDP). Once members reach their true out-of-pocket (TrOOP) cost threshold, they enter the catastrophic coverage stage of Part D coverage. The 2018 plan year out-of-pocket threshold or maximum true out-of-pocket cost was $5000.00. In the catastrophic coverage stage, the government is responsible for 80% of costs, the plan 15%, and member 5%. Thus the government acts as a reinsurer with a national risk pool for PDPs. As a result, in these interviews, PDPs reported interest in short-term performance-based agreements that limit their liability for less-than-expected performance.

Medicare Advantage (MA) payers are at risk for both medical and pharmacy costs and do not receive catastrophic coverage from the government. These plans are governed by much of the same requirements for bids and coverage as PDPs. These players may obtain reinsurance to cover the uncertainty and risk of unexpected high-cost patients. As a result, Medicare Advantage payers generally favored expanded risk pools to moderate their reinsurance premiums.

Stop loss and reinsurance

Payers reported reliance on stop loss and reinsurance to protect against the volatility of unexpected high-cost claims. Many purchase coverage for high-cost medical claims only; thus, high pharmacy costs could be exposed. Rates are generally based on payer historic experience. As a result, the impact of high-cost gene therapies may take time to manifest in future premiums.

The effect of high-cost durable therapies on reinsurance premiums is unlikely to be sufficient to warrant change in the current model of financing and reimbursement at present. Looking down the road, expanded risk-pooling or a carve-out risk pool for gene therapy may be of interest.

In addition, reinsurers report reliance on a plan's coverage documents to precisely define coverage. Ambiguity regarding definitions of experimental and investigational treatments and coverage for approved therapies could result in conflict.

Barriers

Durability: All payers expressed concern regarding the durability of cures generated by new gene therapies. Most studies leading to approval of these agents were 18 months' duration or less. Thus, long-term real-world outcomes associated with these very high-priced treatments are uncertain. As a result, many payers expressed an interest in performance-based payments with or without an annuity instrument.

In addition, payers stated that as the indications for durable therapy expand to bigger populations or if they deliver less than expected outcomes, there is likely to be more push back on manufactures, pay for performance arrangements, and potentially limitations in access.

Beneficiary turnover: Patient churn in and out of plans is challenging for payers, especially in the context of a single high-cost payment. The payer funding the treatment may not have the opportunity to benefit from medical cost offsets if the patient moves to another plan. Turnover will also complicate, if not prohibit, performance-based payments predicated on the long-term durability of treatment.

Adverse selection: Most payers were concerned that inconsistency in coverage by payers in competing markets could lead to adverse selection for the plans covering durable gene therapies. Those players that cover these treatments may attract members in need of gene therapy to their plan, resulting in higher costs and eventually higher premiums compared with competitors.

Buy and bill: Payers reported that the pervasive reimbursement model for medications covered by the medical benefit is for providers to purchase the medication, charge the plan an agreed-to marked-up payment, and collect the member copayment on administration. Payers reported that this "buy and bill" mark-up could be anywhere from 25% to 200% and in some cases 600% of provider acquisition cost. Payers reported concern over the sustainability of these mark-ups for extremely high-cost treatments.

For payers interested in performance-based agreements that share risk with manufacturers over the real-word outcomes, direct contracting may be necessary. This may disrupt current provider agreements and disrupt provider revenue.

Regulation: Regulations governing coverage and reimbursement were cited as barriers to management of gene therapies and adoption of new financing mechanisms. Medicaid, Medicare, and payers subject to state requirements cite the potential need for regulatory or policy change to facilitate new reimbursement models. Medicaid is most challenged by the need to have all states and the federal government agree on new policies.

Discussion and Conclusions

Payer financial decision makers are concerned about the cost of gene therapies. They vary in their depth of understanding and preparedness to take action. A survey of medical directors conducted in March to June 2017 reported that just over 10% of medical directors had started to consider coverage or operational issues associated with this treatment.[7] In our interviews conducted in August to September 2017, two-thirds of payer financial decision makers reported contemplating or taking action related to gene therapies. There appears to be a fairly rapid progression of

awareness, likely prompted by the approval of the first market entrant in August 2017.

It appears that current approaches to management, leveraging existing financing and reimbursement strategies, will support access to durable gene therapies in the short term. Currently available treatments affect relatively few individuals and the burden for any one payer is small, but payers are open to innovations in financing mechanisms. These will likely evolve over the next 5 years as the aggregate impact of new market entrants and extended indications mounts. The details of how the specific tools would work need to be fleshed out, leaving open the opportunity to pilot options. In addition, the infrastructure to support new financing mechanisms, including resolution of barriers, will need to be defined and implemented.

The current coverage and reimbursement system is focused on a 12-month cycle and is not structured to recognize interventions with value that accrues over years or decades. Further, the sustainability of current financing mechanisms varies by payer segment, profitability, and size. To address these concerns, precision financing tools that target the specific challenges of each payer segment will be needed. These tools will be facilitated by addressing regulatory and operational barriers. Regardless, most payers are interested in performance-based arrangements, with or without a long-term annuity component; therefore, in the short-term, most effort is likely to be focused here.

Payers that currently engage in reinsurance will look for solutions that ensure the sustainability of affordable reinsurance premiums. They are likely to promote financing tools that promote expansion of risk pools to larger populations to spread the risk over more lives. Another consideration would be a carve-out of high-cost treatments to a single national risk pool. The benefit of this approach would be to facilitate access to treatments equally across all payers. Criteria for inclusion and exclusion of treatments would need to be defined.

In summary, payers are early in the process of preparing for a sustainable reimbursement model for durable gene therapies. They are engaged in understanding the complexities, considering options, and laying the groundwork for future transformation. Government reinsurance, commercial reinsurance, and stop-loss insurance backstop current reimbursement models, dampening the need for urgent action. The tipping points for action may be severe premium inflation in stop loss and reinsurance and the total number of patients eligible for approved treatments. Payers are open to innovative financing models that improve financial predictability and reward clinical performance. The most successful strategies will be targeted to meet the specific financing challenges of each payer segment.

Limitations

This qualitative interview study is limited by the small sample size and the broad nature of the survey. As such, results should be considered exploratory in nature. In addition, participants may have had increased awareness of durable gene therapies and the issues surrounding them owing to their participation in or association with the MIT FoCUS project.

The description of various financing tools was intentionally brief to elicit payer reaction and prompt broad feedback. More research is needed to solicit firm reactions to specific financing mechanisms.

Payers with multiple lines of business defaulted to discussion of solutions for their segment with the most covered lives. This affected the ability to report a tool preference by payer segment. Further study of payer segments and preference for specific tools would be helpful.

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Supplemental Materials

Supplementary data associated with this article can be found in the online version at https://doi.org/10.1016/j.jval.2018.12.004.

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