

UC Berkeley

UC Berkeley Previously Published Works

Title

Value-based payment for oncology services in the United States and France

Permalink

<https://escholarship.org/uc/item/1zj2r1xb>

Journal

Journal of Cancer Policy, 11

ISSN

2213-5383

Authors

Robinson, James C

Megerlin, Francis

Publication Date

2017-03-01

DOI

10.1016/j.jcpo.2016.09.001

Copyright Information

This work is made available under the terms of a Creative Commons Attribution License, available at <https://creativecommons.org/licenses/by/4.0/>

Peer reviewed



Original Research

Value-based payment for oncology services in the United States and France



James C. Robinson (Leonard D. Schaeffer Professor of Health Economics)^{a,*},
Francis Megerlin (Professor of Law and Health Policy)^b

^a University of California, Berkeley School of Public Health, 247 University Hall, Berkeley, CA 94720-7360, USA

^b University of Strasbourg-EUCOR, Strasbourg, France

ARTICLE INFO

Article history:

Received 29 March 2016

Accepted 5 September 2016

Available online 9 September 2016

Keywords:

Cancer

Oncology

Value

Payment reform

Medical home

ABSTRACT

The pursuit of economic and clinical value in oncology goes “beyond the pill” to encompass improvements in the process of caring for patients suffering from cancer. The concept of value-based payment thus extends beyond the amounts reimbursed for drugs themselves to encompass the methods of payment used for the physicians and facilities where those drugs are prescribed and delivered. Oncology payment mechanisms vary widely across nations depending on the structure of their health care systems, but the challenges of appropriate drug selection and patient engagement are common to all. This paper describes contemporary efforts to create stronger payment incentives for appropriate drug selection, administration, monitoring, and management in the United States and France.

© 2016 Elsevier Ltd. All rights reserved.

1. Introduction

The value of an oncology drug derives not merely from its molecular structure, but also from the manner in which it is used. High-value medical oncology requires that chemotherapies and biologics be administered to the right patient, at the right time, in the right dose, and in combination with the right supportive medications [1]. Pharmaceutical regimes should be coordinated with radiation, surgery, and other therapeutic options; the patient should be monitored for beneficial and adverse impacts; and treatment should be periodically reviewed to reduce toxicity and use of emergency hospital services. The patient should be encouraged to share in decision making concerning aspects of care that involve tradeoffs between longevity, quality of life, and other outcomes. For patients with metastatic disease, active chemotherapy should be terminated when it no longer offers meaningful benefits, and the patient should be transferred to conservative end-of-life care. Drug performance needs to be documented using evidence from real-world settings in addition to controlled clinical trials. High-value medical oncology goes far “beyond the pill.”

Public discussions of value in oncology often focus on the price and efficacy of newly launched molecules, raising difficult ques-

tions of how much society should financially reward past research as an incentive for future research. Innovation in the manner in which drugs are used is of equal importance to innovation in identifying cellular targets, mechanisms of action, and modes of administration. Rather than being the domain of startup and established biopharmaceutical firms, however, innovation in methods of use occurs at the level of the physician and the hospital. Every oncology care delivery system must ensure that the appropriate pharmaceutical regimen is selected, monitored, adjusted, and eventually halted. It must ensure that patients receive effective education and counseling from clinical staff and are engaged through effective compliance with the therapeutic regimen. These delivery system decisions are encouraged or discouraged by the manner in which care providers are paid.

Oncology payment mechanisms vary across nations depending on the history and structure of their health care systems. Nevertheless, the challenges of appropriate drug selection and patient engagement are common to all. This paper describes physician and hospital payment methods for oncology, and the incentives they create, in the United States and France. These two countries are similar in levels of income and cultural affinity for the newest drug treatments, but feature different provider institutions and insurance systems.

* Corresponding author.

E-mail addresses: James.Robinson@berkeley.edu (J.C. Robinson), francis.megerlin@icloud.com (F. Megerlin).

2. Selecting the appropriate drug regimen

Different methods of payment create incentives for physicians to favor more or less expensive drugs for their patients. Payments that reimburse clinical services through a percentage mark-up on the cost of the drugs used, as with “buy and bill” reimbursement for office-infused drugs, implicitly encourage physicians to select the most expensive drugs [2]. Payments made on a bundled “episode-of-illness” basis provide the opposite incentive, implicitly encouraging physicians to select the cheapest regimen so as to maximize the funds available for other services [3]. Reimbursement mechanisms that shift responsibility for purchasing oncology drugs to the hospital, as with diagnosis-related group systems, reward institutions that administratively limit physicians’ prescription of expensive therapies [4]. Insurer requirements providers to obtain authorization before prescribing an expensive drug place providers at risk of non-payment if their selection does not align with what the payer deems appropriate [5].

The complexity of the treatment options in oncology exceeds the decision-making capacity of the individual physician. Professional societies, scientific organizations, and third-party insurers in the United States have developed clinical “guidelines” that delineate an appropriate course of care for each therapeutic indication, albeit with exceptions for patients with special needs [6]. Insurers favor physician adherence to clinical guidelines to reduce unjustified variation and experimentation in drug selection, but they also are interested in the financial implications. Guidelines differ considerably in cost due to the different combinations and prices of the generic, branded, and targeted drugs they recommend. Insurers favor adherence by oncologists to clinical “pathways,” which constitute a subset of guidelines that take financial cost into consideration, promoting the less expensive options within a set of clinically equivalent guidelines for each cancer indication and population segment [7,8].

In the United States, some insurers offer monthly per-patient payments to practices that adhere to clinical pathways, in addition to the fee-for-service payments for patient visits. For example, Anthem offers oncologists \$350 per month for every patient undergoing active chemotherapy if the practice adheres to Anthem-approved pathways for at least 80% of its members [9,10]. The arrangement requires oncologists to register their Anthem patients in the insurer’s oncology data system, providing patient-specific data on stage of disease and biomarker levels that the insurer otherwise could not access.

In France, oncology services largely are provided in hospital-affiliated settings and are reimbursed through the hospital diagnosis-related case rate payment system, termed GHS [11]. In public hospitals, these case rates cover the totality of services provided, including physician and nurse visits, hospital tests and treatments, and drugs and other supplies, albeit with one important set of exceptions. Faced with the continued development of expensive oncology drugs, which are used at varying doses and in varying combinations within the same GHS diagnostic category, hospitals can claim supplemental reimbursement. Drugs contained in the ‘liste en sus’ (based on their high cost and variable use) are fully reimbursed up to reimbursement tariffs. Payment comes out of a national budget that protects hospitals from the costs of expensive new drugs. In private hospitals, the GHS payments do not cover the fees charged by independent oncologists, who are paid separately on a fee-for-service basis. Hospitals and their attending physicians do not face budgetary constraints on the prescription of oncology drugs, including for off-label indications if justified, and face low administrative constraints compared to the ‘prior authorization’ requirements prevalent in the US context.

In France the prescription of oncology drugs (and of other expensive drugs and devices) is promoted administratively by a ‘contract

of appropriate utilization’ between the hospital, the regional health agency, and the national public insurance program. These contracts specify guidelines for drug prescription and clinical follow-up, with compliance reported annually. The regional health agency has the authority to reduce payments for specialty drugs on the ‘liste en sus’ to hospitals that are not performing well with respect to these clinical guidelines.

Supplemental reimbursements weaken the incentive for providers to control the costs of the therapies they prescribe. Indeed, the French budget for drugs covered by the ‘liste en sus’ grew by 15.5% between 2012 and 14; the government has sought to limit its growth to 1.75% for 2016. The governmental council on hospitalization has recommended a tightening of the eligibility criteria to drugs receiving designation as modest to major clinical improvements (AMSR 3, 2, or 1). Since 2012, 27% of oncology drugs have received these AMSR ratings. This tightening of eligibility eventually could reduce by two-thirds the number of drugs contained on the ‘liste en sus’, thereby creating strong new incentives for physicians and hospitals to reduce utilization of expensive drugs and substitute generic chemotherapies and biosimilars where available. It also would pose budgetary stress for the hospitals, 13% of whose revenues come in the form of supplemental payment for drugs and devices included in the ‘liste en sus’ [12].

3. Monitoring and engaging patients

Patients suffering from cancer are at risk of adverse changes in their health and functional ability due to the progression of the disease and the toxicity of their treatment regimens. They benefit from regular monitoring by physicians and caregivers with training in social work and behavioral health. In addition, patients need to monitor and interpret their own health status changes. They should know when to make changes on their own initiative, when to make an appointment with their physician, and when to rush immediately to a hospital. They need a basic understanding of their illness, its probable trajectory, the treatments they are undergoing, and the signs of unexpected and dangerous changes.

Unfortunately, many forms for oncology payment do not adequately reimburse the services needed to monitor, educate, and engage patients in their own health care. Fee-for-service usually is linked to patient visits to a physician, even though much of the important monitoring may be done via the telephone or email, through patient support groups, and using the services of non-physician staff. In principle, fee-for-service reimbursement could permit physicians to employ non-physician caregivers, but all too often these services rely on other funding sources or are neglected altogether. A variety of payment alternatives are emerging that seek to support better monitoring and engagement.

In the United States, some of the principal payers have sought to encourage the development of the “oncology medical home” [13,14]. This involves supplementing fee-for-service for office visits with a monthly payment to the oncologist for each patient undergoing active treatment. These funds are intended to offset the cost of developing and adjusting care plans, hiring staff for patient education and monitoring, ensuring clinical access on evenings and weekends, and maintaining comprehensive electronic medical records. The public Medicare program, which covers 45 million seniors over the age of 65 and accounts for half of the typical oncology practice’s patient volume, has announced its “oncology care management” program, which offers \$160 per patient per month to oncology practices that can document their capabilities to perform selected functions [15]. UnitedHealthcare, one of the largest private insurers, offers participating practices a monthly payment equivalent to what the practice would otherwise have earned from price mark-ups on infused drugs, in exchange for accepting reduced

reimbursement for the drugs themselves [16]. Simultaneously with offering the monthly per-patient payments, United Healthcare has switched its drug reimbursement method from “buy and bill” with a percentage mark-up (which encouraged prescription of the most expensive drug regimens) to invoice reimbursement without mark-up, analogous to the “liste en sus” reimbursement in the French GHS system. United Healthcare recognizes that drug mark-ups had previously funded important patient-oriented activities and need to be replaced lest the patient education, monitoring, and engagement component be reduced.

The “medical home” model sometimes adds a third component to the payment structure for oncology practices, beyond fee-for-service and per-month payments. Case studies suggest that investments by oncology practices in patient monitoring, education, and engagement activities can lower total costs by reducing patient use of emergency departments and the hospital. For example, one study found that, in the absence of such services, incremental expenditure for chemotherapy-related adverse effects among chemotherapy recipients (i.e., expenditure in excess of those made on behalf of the matched individuals not receiving chemotherapy) was \$1271 per person per year [17]. The third component of the Medicare oncology payment initiative predicts the costs that each participating practice will incur for each type of cancer patient in the coming year, and compares actual expenditures against this benchmark to ascertain whether practices are able to reduce spending through their medical home initiatives. Practices that incur lower-than-anticipated costs receive a portion of the “savings” at the end of the year. In order to be eligible for these potentially sizeable disbursements, the oncology practices must also score well on a list of quality metrics established by the payer. United Healthcare has reported that the oncology practices participating in its initiative reduced spending by 40% in the first year, by reducing hospitalization and therapeutic radiology; the study found an increase rather than a decrease in spending on chemotherapy [18].

In France, hospital-salaried oncologists are seeking to increase the role of specialized oncology nurses in patient-centered activities that otherwise would require physician time, thereby increasing the number of patients that any one physician can manage. The hospitals do not receive additional payment to support these specialized nurses and their care management activities but benefit because the additional patients managed by each physician are reimbursed through additional GHS case rates. A successful recent example has been reported at the Hospital St. Antoine in Paris, where specialized nurses are delegated responsibility for follow patients undergoing oral chemotherapy and are treated at home rather than in the hospital [19]. These nurses have the authority to prescribe laboratory and radiology tests, and to prescribe drugs that alleviate toxic side effects of chemotherapies. The goal is to reduce unplanned patient visits to the emergency department. The hospital is willing to finance these additional services out of its GHS revenues. In contrast, French oncologists in private practice who are not employed by hospitals are demanding supplemental fee-for-service payment to cover the costs of these additional patient monitoring and education services.

4. Conclusion

Improvement in the value of cancer care requires innovation in the biopharmaceutical armamentarium, with new products that are more effective, less toxic, and more affordable than those they replace. But it also requires innovation in the clinical and organizational processes in which novel drugs are embedded. These process innovations must address the manner by which drugs are selected, combined, and used, plus the manner by which the patients are

monitored, educated, and engaged in their own health care. This requires change in the structure of oncology practice. Practices need to hire more non-physician staff, ensure patient access on evenings and weekends, acquire and use electronic data systems, coordinate with radiation and surgical specialists, and align with other components of the health care system.

Innovation in clinical processes and organizational capabilities can be supported or impeded by the manner by which oncology practices are reimbursed for the services they provide. Traditional methods of payment—which include fee-for-service for physician office visits, profit margins from office-administered drugs, and case rates for hospital services—impede many of the needed changes. Insurers now are experimenting with changes in payment methods in the hope of removing these impediments and accelerating the needed improvements. These new payment initiatives vary widely across nations and across payers within nations, and each suffers from its own challenges. To be successful, they require adjustments for the risk mix of each patient population, adaptation to the changing standard of care as new tests and treatments are launched, sophisticated data systems, and meaningful quality metrics that permit payers and patients to assess whether care is indeed being improved.

All payment initiatives are imperfect, and all add to the complexity of managing an oncology practice. Unfortunately, there is no easy alternative to payment reform for achieving the desired goals. In principle, the alternative to incentive-oriented payment mechanisms is to divorce physicians’ payments completely from their decisions as to which drugs to use and which patient management activities to support. Physicians could be protected from the economic impacts of their clinical choices. However, removing responsibility for the costs of care from the physician shifts that responsibility to the insurer (through drug coverage and management practices) and to the patient (through out-of-pocket cost sharing).

The pursuit of economic as well as clinical value in oncology goes “beyond the pill” to encompass improvements in the process of caring for patients suffering from cancer. Value-based payment thus goes beyond the amounts reimbursed for the drugs themselves to encompass the methods used to reimburse the physicians and organizations that prescribe, deliver, monitor, and manage those drugs.

Funding

None.

Conflicts of interest

None.

References

- [1] J.C. Robinson, *Purchasing Medical Innovation: The Right Technology, for the Right Patient, at the Right Price*, University of California Press Oakland, CA, 2015.
- [2] L.N. Newcomer, Changing physician incentives for cancer care to reward better patient outcomes instead of use of more costly drugs, *Health Aff. (Millwood)* 31 (4) (2012) 780–785.
- [3] P.B. Bach, J.N. Mirkin, J.L. Luke, Episode-based payment for cancer care: a proposed pilot for Medicare, *Health Aff. (Millwood)* 30 (3) (2011) 500–509.
- [4] Z. Or, Implementation of DRG payment in France: issues and recent developments, *Health Policy* 117 (2) (2014) 146–150.
- [5] K.T. Adams, Prior authorization – still used, still an issue, *Biotechnol. Healthc.* 7 (4) (2010) 28.
- [6] J.K. DeMartino, J.K. Larsen, Equity in cancer care: pathways, protocols, and guidelines, *J. Natl. Compr. Cancer Care Netw.* 10 (2012) S1–S9.
- [7] D.H. Gesme, M. Wiseman, Strategic use of clinical pathways, *J. Oncol. Pract.* 7 (1) (2011) 54–56.

- [8] W.J. Sullivan, Demystifying Pathways in Oncology Managed Care, 2012, <http://www.managedcaremag.com/archives/1206/1206.oncologypathways.html> (accessed 14.03.16).
- [9] A.W. Mathews, Insurers push to rein in spending on cancer care, *Wall Street J.* 27 (May) (2014).
- [10] J. Malin, R. Calandra, Putting cancer care on the right path, *Manag. Care* 24 (10) (2015) 48–49 (54–55).
- [11] Institut National du Cancer Les cancers en France, Édition 2014, January 2015.
- [12] Cour des comptes, Rapport sur les comptes de la sécurité sociale, sept 2015 (Chapitre VIII Les centres de lutte contre le cancer: un positionnement à redéfinir dans l'offre de soins), www.ccomptes.fr.
- [13] J.D. Sprandio, Oncology patient-centered medical home and accountable cancer care, *Community Oncol.* 7 (2010) 565–572.
- [14] D. Sanghavi, K. Patel, K. Samuels, et al., *Transforming Cancer Care and the Role of Payment Reform*, Brookings Institution, Washington, D.C, 2014.
- [15] R.M. Kline, C. Bazell, E. Smith, et al., Centers for Medicare and Medicaid Services: using an episode-based payment model to improve oncology care, *J. Oncol. Pract.* 11 (2) (2015) 114–117.
- [16] R. Abelson, Insurers Test New Cancer Pay Systems, *New York Times*, 2010.
- [17] M.J. Hassett, A.J. O'Malley, J.R. Pakes, et al., Frequency and cost of chemotherapy-related serious adverse effects in a population sample of women with breast cancer, *J. Natl. Cancer Inst.* 98 (16) (2006) 1108–1117.
- [18] L.N. Newcomer, B. Gould, R.D. Page, et al., Changing physician incentives for affordable, quality cancer care: results of an episode payment model, *J. Oncol. Pract.* (2014), <http://dx.doi.org/10.1200/jop.2014.001488>.
- [19] http://www.afsos.org/IMG/pdf/11H30.1_MAINDRAULT.pdf.