Mission-Focused, Productivity-Based Model for Sustainable Support of Academic Hematology/Oncology Faculty and Divisions

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Abstract

Purpose: Adoption of a mission-focused, productivity-based funds-flow model recognizes faculty activities regardless of their primary mission and incentivizes and financially rewards both academic and clinical productivity. We describe here how such a model could be utilized for an academic division of hematology and medical oncology.

Methods: On the basis of our own experience in managing the Division of Hematology/Oncology at the University of California at Irvine, and results of a survey of hematology/oncology division chiefs, a new model was developed with clear definitions of missions (ascertaining faculty effort toward each mission and definition of productivity benchmarks for each), careful identification of revenue streams, and establishment of base and incentive salary

support that rewards productivity. Ongoing performance improvement and monitoring was incorporated into the model.

Results: A model for sustainable support of hematology/oncology faculty and divisions was developed that was transparent, flexible, and had buy-in from both the faculty and departmental/school administration. Development of the model was supported by a survey of hematology/oncology division chiefs.

Conclusion: It is possible to reorganize a faculty practice and salary structure to achieve a mission-focused, productivity-based paradigm. Although the model described is specifically targeted at academic hematology and medical oncology divisions, with modification, it could serve as a framework for other departments or throughout schools of medicine.

Introduction

Academic hematology and medical oncology divisions face increasing challenges in supporting their faculty, operations, and missions as a result of widespread financial difficulties in many US medical schools, sustained reductions in reimbursement for clinical activity, increased pressures in obtaining research funding, and lack of sufficient support for teaching.¹ To address this, many hematology/oncology divisions, as well as clinical departments and schools of medicine, are implementing mission-based budgeting and mission-aligned funds-flow models to balance revenue streams with expenditures according to specific missions.¹⁻⁴ It is our contention that these initiatives are often unsustainable for hematology/oncology divisions because of two fundamental reasons: first, activities are often mischaracterized as missions, and second, specific missions, in the current funding model of US schools of medicine, will never manifest sufficient revenue inflow for adequate support. Pressure to improve efficiency and productivity led us to completely reorganize our divisional model for revenue, expenditures, faculty salaries, and productivity tracking. Our effort differs from the traditional mission-based budgeting in the way in which missions are defined, that is, by equalizing the importance of each core mission within the strategic plan of the division, recognizing that both defined and prospective cross-subsidization of insufficiently supported core missions will be necessary, establishing a standardized faculty base reimbursement model according to effort allocation among different missions, and incorporating detailed productivity measures and targets for all of the missions, which are then used to support a productivity-based incentive structure. In this report, we describe this new mission-focused funds-flow model, the principles of which

could serve as a paradigm for other academic hematology and medical oncology divisions, other departments within a school of medicine, or, with some minor modifications, a school of medicine/faculty practice organization.

Methods

Our goal was to develop a model for sustainable support of an academic hematology/oncology division achieving buy-in from both faculty and school of medicine administration and satisfying the following key aims:

- Recognizes the core missions of the faculty and their effort toward each
- Analyzes revenue streams according to mission
- Prospectively identifies missions requiring revenue cross-subsidization
- Allows for definable measures of productivity, both academic and clinical
- Rewards and encourages productivity by tying it to compensation
- Facilitates ongoing quality improvement
- Remains consistent with federal and state research efforts reporting and faculty practice plan guidelines

Mission Focused

Defining real missions. One of our first undertakings was to give careful consideration to defining our missions. We determined that there were only three core missions that should be included in our productivity-based funds-flow model: clinical care, research, and teaching (CRT). Other approaches to defining missions include the creation of a separate category for administration.⁵ However, there is much confusion regarding

the designation “administrative.” In essence, this comprises two different and distinct activities. One involves an administrative role or post held by a faculty member for the overall benefit of the division, department, medical center, or school. Medical director of the oncology clinic or assistant dean for research would be two examples. We determined that these functions are individually negotiated and generally contracted for specified periods of time, and as such, when these activities are compensated, reimbursement should remain outside the divisional funds-flow model. Another activity often labeled as part of administration involves support of divisional administrative personnel and operational expenses. In this activity, there is rarely an obvious revenue flow, and the activity is not an end in itself but rather supportive of one of the core missions.

Defining faculty effort according to mission. We developed a simple spreadsheet tool that each faculty member could use to define CRT efforts. Teaching activities among the divisional faculty centered primarily on instruction in clinical care for medical students, residents, and fellows and were difficult to quantify and distinguish from clinical care activities. In addition, there was significant debate as to whether practicing with students, residents, and fellows made the faculty member less or more efficient from a clinical perspective (ie, lower versus higher productivity for time spent). In general, it was felt that students and residents belonged in the former category, and fellows in the latter. Additionally, faculty may have administrative duties for which they are not compensated but are still taking time from clinical- and research-revenue-generating activities. Because of these difficulties, we assigned 10% effort to clinical-based teaching and administrative duties for all faculty. Thus, a full-time clinician in our practice was defined as performing 90% clinical activity. The clinical productivity benchmark is tied directly to the percentage of time attributable to clinical activity, so support for the 10% allocation for teaching/service had to be built into the reimbursement model. Once this tool was implemented, it became apparent that some faculty had significant discrepancies between their reported CRT time and the amount of time for which they received support for each. For example, a faculty member could have reported that he or she performs only 40% clinical and 60% research activities on the basis of the number of hours he or she devotes to each per week, and yet only 5% of his or her time may have been compensated by any type of research funding. Even if no components of the mission-focused funds-flow model are adopted, use of this tool alone is exceedingly valuable in reconciling discrepancies in time/effort allocation and identifying goals and expectations for individual faculty members across each of the core CRT missions. Data generated from this tool often directly explained disparities, either high or low, from expected clinical activity benchmarks.

Defining productivity benchmarks. Defining clinical activity benchmarks was straightforward using work relative value unit (wRVU) data for academic hematologists and academic medical oncologists from sources such as the Medical Group Management Association⁶ or Faculty Practice Solutions Center.⁷

The source of data used must be carefully considered because sources are not always the same. Additionally, the level of the wRVU benchmark must be agreed on (eg, median, 65th percentile, 75th percentile). This may depend in part on the practice specifics and overall efficiency of institutional operations. Teaching benchmarks can be established as the number of lectures per year to residents and fellows and the amount of time covering fellows clinic. If these benchmarks are not met, salary is at risk. Evaluations by students, residents, and fellows can be used to determine incentives; for example, an above-average evaluation could qualify a faculty member for a bonus. Research benchmarks can include number of publications, number of clinical trials conducted, number of clinical trials initiated or completed, success in obtaining extramural grant funding, and number of invitations as a guest speaker at national or regional forums. The benchmarks are calculated using the percent effort spent on each mission. For example, a faculty member with 75% clinical effort would be expected to achieve 75% of the agreed-on clinical benchmark. Any criteria that incentivizes faculty to conduct activities that promote the three core missions could be included. Productivity criteria for all of the missions must be freely available to the entire faculty and should be reviewed and agreed on annually.

Productivity-Based Funds Flow

Identifying revenue sources by mission. Our next step was to identify all available revenue sources for each of the three missions. First, clinical care revenue is the primary source of funding to the division, including physician professional fee reimbursement and, directly or indirectly, profits from the technical components of infusion services. For hematology and medical oncology divisions, professional fee revenue is rarely adequate to support faculty salaries and sustain the clinical enterprise. It is critical to acquire access to infusion center profits⁸ to support the clinical care mission as well as the under-supported teaching and research missions. This can be achieved, without violating the Stark amendment,⁹ through one of three practice structures: one, direct divisional operation of the infusion center (eg, leasing the space from the medical center); two, establishment of an off-site practice with infusion services; or three, an annual allocation from the dean's office. Using the latter model, we negotiated an annual allocation tied directly to wRVU, because overall divisional faculty wRVU is directly proportional to the hematology and medical oncology component of infusion center activity and profits. This provides stable support, is based on easily accessible information, allows prospective budgeting, and incentivizes practice growth and expansion. Other parameters such as the number of outpatient and inpatient encounters, number of new patient referrals, and number of infusion center encounters could also be utilized.

Second, research support is typically restricted to specific individuals and not amenable to reallocation. An indirect (facilities and administration) cost allocation to the division should support administration involved in the research mission, although the amount finally arriving at the divisional level, after

assessments by the university, dean's office, and department, is often inadequate. When inadequate to support the research administrative infrastructure, additional funds will need to be allocated from other sources. Additionally, similar to the teaching mission, supplementation from other revenue sources for research-based productivity incentives is necessary.

Third, regarding teaching, any research-focused faculty receive partial base salary support through a state full-time equivalent, which is considered support for teaching and research. This is generally unavailable for clinical faculty. Some divisions receive an allocation from the dean's office to support teaching (ours does not). We determined that the teaching mission in our division was under-supported and required supplementation from other sources. These funds were allocated toward the built-in 10% teaching effort for clinical faculty and teaching incentives for all faculty.

To ascertain the degree to which divisional revenue flow is dependent on infusion center activity at other institutions, we distributed an e-mail survey to hematology and medical oncology division chiefs at each of the 130 schools of medicine in the United States. Forty-four (34%) division chiefs responded, and selected survey results are depicted in Figure 1. The vast majority of programs (81%) did not control revenue flow from the infusion center at the main practice site (Fig 1A), but nearly half maintained an off-site practice location from which some proportion of the revenue generated supported divisional operations and salaries (Fig 1B). Ten percent received a proportion of infusion center technical revenue directly from the school of medicine or academic medical center, and another 38% received indirect support (Fig 1C). More than half, however, received no such allocation, although 60% indicated that an arrangement with the school of medicine or medical center supporting the clinical enterprise, distinct from revenue generation in the infusion center, was in place (Fig 1D). Still, 59% of division chiefs characterized divisional support as "inadequate" or "wholly inadequate" (Fig 1F). More than two thirds of divisions used clinically generated revenue to support teaching or research missions (Fig 1E). The survey results are supportive of the development of a new model for sustainable support of divisions of hematology and oncology.

Mission-focused base salary reimbursement. In consultation with the faculty, we developed scales for base salary support attainable when individual clinical or academic (research and teaching) productivity targets are met. Recognizing that clinical faculty are reimbursed at a higher level than research faculty, two separate salary scales were established (Table 1). The clinical scale was created on the basis of national median compensation data for academic hematologists and oncologists, and the academic scale was created roughly on the basis of the National Institutes of Health cap and market forces (eg, cost of living, salaries at comparable local institutions). Using the Faculty Effort Tool (Data Supplement, online only), each faculty member was assigned a percent effort as either clinical or academic, and base salary was calculated as a function of that percentage from each scale. Ten percent of (clinical) base salary was withheld to

be paid on achievement of the base productivity targets and therefore was designated as clinical salary at risk. For most, it was expected that a defined revenue stream be available from grants, contracts, or a state-supported full-time equivalent base for effort on the academic scale. Therefore, to comply fully with federal and institutional regulations on effort reporting, it would be unusual to have any academic salary at risk. Each of the salary scales had incremental increases for rank (assistant, associate, or full professor) as well as steps at each rank roughly proportional to the number of years at a particular rank. Thus, as opposed to some mission-based models that exclude consideration of academic rank in defining reimbursement,⁶ our model rewards academic advancement, as is the case for other members of the university academic community.

Incentivizing and rewarding productivity. Achieving clinical benchmarks restores the clinical component of base salary, but the imperative is that the funds-flow model leads to improved productivity and rewards faculty directly for this. Incentives, both academic and clinical, are apportioned on the basis of the percent effort of an individual faculty member for the specific missions. The incentives are defined, transparent, and reviewed by the faculty annually for possible modification. We defined clinical productivity incentives based directly on wRVU benchmarks. For each 10% above the median wRVU target, an incentive bonus was provided. Additional fixed stipend bonuses rewarding quality of care and professionalism are provided. Academic incentive bonuses are realized in two ways. Faculty demonstrating academic productivity move up the ladder in professional rank (and steps in the university community system), and this leads to increases in base salaries. Additional fixed stipend bonuses were agreed on by the faculty and include rewards for obtaining new grants and contracts, initiating clinical trials, completing clinical trials, receiving speaking invitations at national professional forums, and publishing peer-reviewed manuscripts. Fixed stipend teaching bonuses were also established. In general, the revenue source for clinical and academic incentives is derived from the negotiated annual divisional allocation or directly from infusion center-generated revenue depending on the particular arrangements of a division with the department and/or school. It is important that the amount of revenue reapportioned toward the teaching and research missions is clearly defined and acknowledged so that sufficient funds are available to reimburse the faculty members who qualify for productivity bonuses. By extension, this reduces the pool of funds potentially available for clinical productivity bonuses. Buy-in from the entire faculty on the necessity for this redistribution is essential to engender support for the model.

Monitoring and improving performance. Academic productivity and teaching evaluations are reviewed with each faculty member on an annual basis. Clinical productivity is monitored continuously by charting wRVU, charges and revenue, professional fee coding trends, and payer mix for each faculty member and for the division as a whole. Work RVU benchmarks are calculated on the basis of the percent effort attributed to the clinical mission, the level of which is adjusted annually after

Figure 1. Survey results of US hematology and medical oncology division chiefs.

review by the division chief and faculty member of the clinical activity of the previous year and anticipated extramural funding to be available in support of research activities. Even in the absence of adoption of a comprehensive mission-focused, productivity-based funds-flow model, this exercise has proved invaluable for clinically active faculty in identifying areas of improvement in documentation and billing practices that promote an improved reimbursement profile and identifying when additional efforts toward practice growth are required.

Results

Key Steps Necessary for Implementation

Faculty buy-in. The faculty must accept that some portion of their salaries is at risk, and if benchmarks are not met, base

salaries of the subsequent year may be adjusted downward. They must also accept the concept of two salary scales: one for academic and one for clinical activities. Because of this mission-focused salary structure, provision for salary differentials according to academic rank, and significant incentive components toward total annual salary, the faculty must accept that salary disparities will occur. Faculty will need to accept that they will be paid on the basis of defined measures of productivity.

Department and medical school buy-in. External stakeholders must trust the divisional leadership and, most importantly, be willing to share infusion center profits generated from the chemotherapy concession to sufficiently fund CRT enterprises. Because the model is productivity based and highly incentivized, investment in the model makes good business

Table 1. Sample Academic and Clinical Base Salary Scales

	Clinical				Academic	
Academic Rank	Salary Scale Pay Plan (\$)	Base Compensation (\$)	90% of Target Base Salary (\$)	Built-In Incentive to Achieve wRVU Benchmark (10% salary at risk; \$)	Current Salary Range (\$)	Salary Range As Proportion of NIH Cap (%)
Assistant professor		162,000			110,000-140,000	58.9-75.0
I	154,000		138,600	15,400		
II	158,000		142,200	15,800		
III	162,000		145,800	16,200		
IV	166,000		149,400	16,600		
V	170,000		153,000	17,000		
Associate professor		193,500			130,000-160,000	69.7-85.7
I	185,500		166,950	18,550		
II	189,500		170,550	18,950		
III	193,500		174,150	19,350		
IV	197,500		177,750	19,750		
V	201,500		181,350	20,150		
Professor		252,000			160,000-200,000	85.7-107.2
I	208,000		187,200	20,800		
II	216,000		194,400	21,600		
III	224,000		201,600	22,400		
IV	232,000		208,800	23,200		
V	240,000		216,000	24,000		
VI	252,000		226,800	25,200		
VII	260,000		234,000	26,000		

Abbreviations: wRVU, work relative value unit; NIH, National Institutes of Health.

sense. Only when the technical components of chemotherapy administration are recognized can academic hematology and medical oncology programs be profitable, even in the absence of credit for referrals to surgery and radiation oncology. Underfunding the enterprise will result in a loss of the ability to incentivize appropriately, and the model, while remaining mission focused, will cease to be productivity based. The source of allocation can change, but essentially, a revenue stream aside from pro-fee revenue is needed to fund the productivity-based enterprise.

Transparency. Salary scale and incentive information must be made freely available to the faculty for the model to be sustainable. Separate deals, except for negotiated administrative stipends, should be avoided.

Flexibility. Criteria should be reviewed annually by all stakeholders. Special circumstances that require support must be recognized, such as extraordinary teaching commitments or development of new curricula, leadership roles in performance improvement projects, significant efforts related to divisional practice growth initiatives, extraordinary contributions to the mentoring of junior faculty, and support of defined research efforts by newly recruited junior faculty.

Discussion

Adoption of a mission-focused, productivity-based funds-flow model recognizes faculty activities regardless of their primary

mission and incentivizes and rewards both academic and clinical productivity. We describe here how such a model could be utilized for an academic division of hematology and medical oncology, although the same principles could be applied to other divisions and departments or throughout a school of medicine.

Author note: The first full year of implementation of this model at University of California at Irvine resulted in an increase in divisional faculty wRVU of 26%.

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Although all authors completed the disclosure declaration, the following author(s) indicated a financial or other interest that is relevant to the subject matter under consideration in this article. Certain relationships marked with a "U" are those for which no compensation was received; those relationships marked with a "C" were compensated. For a detailed description of the disclosure categories, or for more information about ASCO's conflict of interest policy, please refer to the Author Disclosure Declaration and the Disclosures of Potential Conflicts of Interest section in Information for Contributors.

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Commentary: Observations on the University of California at Irvine Experience: Common Ground With Community Practices

By John Hennessy, CMPE

Holcombe et al¹ from the Division of Hematology/Oncology at the University of California at Irvine (UCI) take a prudent and thoughtful approach to developing a compensation program that will work not only for the physicians but also for the larger institution. This is an approach that is not unique to academic practice, so it may be used by community practices as well. Key elements of the UCI program are focused on what is important, what to measure, how to be transparent, and how to reward. Any system of recognizing and incentivizing performance within a practice will fall short if it does not have each of these measures.

The focus on and definition of mission are critical. UCI does not focus on what is getting done but instead on what ought to be done. In community practice, we too often focus on the patient in front of us and prepare for the one sitting in the exam room next door. In reality, for many of our practices, what we do has a much larger impact on our communities. We are often the interface between patients and large multicenter clinical trials, which continue to advance the practice of oncology. Even if we are not involved in formal teaching programs, we are in a continuous learning environment. Taking time to be thoughtful about what we do and how we do it contributes to every patient's experience, both today and tomorrow. In that sense, mission is less about a grand sweeping statement and more about what the organization aspires to do and become, as a favorable consequence of working together rather than of uncoordinated individual efforts.

UCI also defines all the elements that contribute to mission and recognizes them explicitly as critical to delivering the en-

tirety of care. There is clear acknowledgment that each element of delivering oncology care cannot stand on its own economically. We face this dilemma in community oncology regularly. Clinical research trials, whether industry trials or through cooperative groups, are often an economic drag on practices, but they are critical to ensuring our patients have access to the best care available. We also know that a practice needs leaders that will take time away from clinical care to focus on improving the administrative side of the practice. Without that focus, the practice would cease to exist. Although these activities do not directly generate high margins, without them, long-term margins would disappear.

UCI recognizes that measurement is key in any performance-based compensation model, but it extends that measurement to all contributions to the practice. UCI uses work relative value unit (wRVU) data to measure clinical activity. Although we can argue about whether this is a fair measurement of work, it is at least a consistent measure, when comparing similar practices. Those of us in multispecialty settings might be more challenged by this measurement tool, but other tools may be available. Community oncology practices can be hamstrung by the wRVU production model when practice economics are largely driven by infusion or other ancillary services. UCI is somewhat removed from the infusion suite, as are many of the academic practices surveyed, but community practices find this hard to ignore. How to integrate positive economic effects, or in some cases negative, into a physician compensation scheme in both a compliant and sound fashion remains a challenge for community practices.