

The Role of Academic Incentives in Applied Health Services Research and Knowledge Transfer

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Summary

Background: Since its inception there have been calls from within the field of health services research to do a better job of translating findings into policy and practice. Some have argued that the gap between the field's expectations and its practice is a result of misalignment of incentives in traditional university promotion and tenure systems. We explore whether university-based health services researchers themselves perceive promotion and tenure criteria as an impediment to doing applied research and knowledge translation.

Methods: This is a qualitative study based on interviews with 24 junior and senior faculty at 16 universities across the country, conducted in the spring of 2008. We also reviewed university guidelines on promotion and tenure.

Findings: Our findings suggest that there are radically divergent perspectives on whether tenure and promotion incentives inhibit applied research and knowledge translation. Many argued that the current system is antiquated and in need of reform, while others believe that so long as the research it is of "good quality", it can, in fact, be rewarded under the current system. Junior faculty and those employed by newer, smaller and public universities appeared to be more dissatisfied with the system. A number of trends, including the proliferation of web-based publication and pressure from funding agencies, were cited as exacerbating the debate. Among the 16 universities in the study, five were engaged in some form of reform to their promotion and tenure systems.

Discussion: For those universities interested in reforming their systems, there are a number of approaches currently being tested that are worthy of evaluation. There are also important ways that research associations and other actors can encourage debate and offer supplemental metrics to assess academic achievement in non-traditional areas.

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Background

Health Services Research (HSR) is a field of interdisciplinary study that since its inception has been defined as applied in nature (Lohr and Steinwachs 2002). Yet from the start there has been a call, both from within the field and from the users of health services research, to do more applied work and to do a better job of translating findings into policy and practice.

At the first meeting of the Association for Health Services Researchers in 1984, Board Chair Robert J. Blendon's keynote asked pointedly "how can this applied field make better use of its findings to speed along necessary improvements in the nation's health care system?" Twenty four years later at AcademyHealth's 2008 Annual Research Meeting, Board Chair Margarita Alegria similarly challenged the field to move from "the science of recommendation to the science of implementation," and to help close the distance between the producers of research and those who use it.

One hypothesis that would explain this persistent concern is that university-based researchers are not rewarded for applied research and that the system may in fact discourage them from engaging with research users. In particular, university promotion and tenure systems around the country may not value applied research and knowledge translation activities as highly as the easily quantifiable and verifiable numbers of government research grants and peer reviewed publications that tend to dominate review processes.

To explore whether university-based health services researchers themselves perceive promotion and tenure criteria as an impediment to doing more applied research and knowledge translation, we interviewed 24 junior and senior faculty at 16 universities across the country. Our findings suggest that there are divergent views on this issue, with many viewing the current system as antiquated and in need of reform, and others believing that applied research, so long as it is good quality, can be rewarded under the current system.

Promotion and Tenure in a Changing Environment

Promotion and tenure criteria are fairly consistent across universities in the United States. The full tenure timeline of six to seven years is marked by step promotions from assistant to associate and then to full professor. Achievement of tenure typically occurs when an assistant professor is promoted to associate. At each step in the promotion timeline, candidates must submit a dossier of their work to either their school or university promotion and tenure commit-

tee. Traditionally, when universities have granted tenure, they have given up the right to terminate faculty except for narrowly defined causes. Tenured faculty members have the academic freedom to criticize the university, funders, and society at large.

Promotion and tenure committees rely on a longstanding triad of criteria based on research, teaching, and service, with the greatest weight placed on demonstrated excellence in research. Assessment is based on a candidate's ability to raise funds necessary to conduct research, ability to conduct and complete the research, and finally, the ability to disseminate his or her scholarship. Peer-reviewed journal articles play a decisive role in a promotion and tenure committee's evaluation of excellence.

Peer assessment also plays a critical role in evaluating a candidate's dossier. Candidates must procure letters of recommendation from experts in their field. A few of the institutions we spoke with allowed candidates to include letters of recommendation from outside academia, for example community leaders that worked with the candidate. In general, however, most of the institutions required letters from tenured faculty members.

While the basic promotion and tenure process varies little across institutions, there are several trends that are relevant to understanding the current environment, in particular the security that these decisions once offered and the increasing value placed on a faculty member's ability to raise funds to support his or her salary. Many universities have decreased the financial support offered to faculty appointments. In some universities, faculty positions are tenured, but there is no promise of university financial support. These positions are sometimes described as "in residence" faculty or "without tenure." Some institutions have moved to a system in which all the appointments are fixed term appointments, subject to renewal.

According to the American Association of University Professors, overall there has been a reduction in the number of tenured positions and an expanded role of adjunct faculty to meet teaching requirements (Curtis and Jacobe 2006). Among all degree-granting institutions, they report that full time tenured faculty dropped from 36.5 percent in 1975 to 24.1 percent in 2003. Over the same period, full time non-tenure track positions increased from 13.0 percent to 18.7 percent, and part-time faculty jumped from 30.2 percent to 46.3 percent. This trend has made the competition for tenure increasingly brutal, requiring promotion committees to show "hard" measures of scholarship, which in turn may be reduced to such quantifiable and verifiable measures as the number of research grants or peer-reviewed publications.

There are also a number of changes occurring in the HSR environment that are affecting university-based researchers. Perhaps the most significant is that some researchers believe a massive amount of clinical data will become available as a by-product of care delivery. Paul Wallace of Kaiser Permanente has referred to this as a disruptive shift for the field. He sees a transformation from the researcher as "hunter-gatherer" with a mentality of scarcity, to the researcher as "farmer" who in an era of abundance must partner with decision-makers to identify the right questions (Wallace 2009). As health information systems spread and are standardized, data and events will be automatically linked, making research far less costly and potentially diminishing the need for investigator initiated research. Moreover, Wallace argues, there will likely be a blurring of local and national level research, with many studies generated at the local level feeding directly into policy and management systems.

Regardless of whether one believes that such transformations are underway, there is no doubt that the field itself has grown exponentially. According to a 2007 study commissioned by Academy-Health, the field has more than doubled in size in the last 15 years (Moore and McGinnis 2009). In addition, more graduates are choosing to work in private health systems where they have access to data (Pittman and Holve 2009).

This growth also has implications for university-based researchers. Funding levels for HSR at the National Institutes of Health (NIH), the Veteran's Administration (VA), the Center for Disease Control (CDC) and the Agency for Healthcare Research and Quality (AHRQ) have remained level, resulting in a drop in inflation adjusted dollars available to the field (Thornton and Brown 2009). Recent allocation of funds for comparative effectiveness research may partially alleviate this trend, but obviously does not impact the non-clinical research in many other areas, including access, organization and delivery of services, financing, disparities, workforce, etc.

Implications of the Shift Toward Contract Research

Health services researchers are also facing a shift in the relative importance of contracts as opposed to research grants. The Coalition for Health Services Research reports that, based on the president's FY 2008 budget, AHRQ projected that the number of new and competing awards would fall significantly from 156 in FY 2007 to just 57 in FY 2008, with funding in this category dropping from \$44.4 million in FY 2007 to just \$9.6 million in FY 2008. Meanwhile, funding for AHRQ *contracts* and inter-agency agreements has grown steadily over the last several years, from \$116.7 in FY 2005 to an estimated \$144.7 million in FY 2008 (Coalition for Health Services Research 2008). This trend may be the result of Congressional calls for government agencies to demonstrate the impact of their research funding. It may also be moderated by the announcement of AHRQ's new Innovations Portfolio which supports investigator initiated research.

The problem with contracts for university-based researchers is that they do not necessarily allow for peer review publications. Most contracts require quick turn-around deliverables that are generally not recognized by universities as “peer reviewed” in and of themselves. In addition, to the extent that they are put in the public domain, peer review journals refuse to accept papers reporting the same findings. Moreover, some contracts explicitly restrict publication rights, a condition that most universities are unwilling to accept. In a 2007 survey of its members, AcademyHealth found that 13 percent of respondents stated that they had experienced problems with content restrictions—problems such as prior review, editing and/or approval of research results for publication or other dissemination—related to government-funded research (AcademyHealth 2007).

Foundation grants, meanwhile, have remained steady in recent years (Thornton and Brown 2009). Foundation grants, however, have never been as highly valued as federal agency grants, because they do not provide the same level of overhead funding as federal agencies. In addition, as foundations also seek visible impact on policy and practice, peer-reviewed publications are often not considered a sufficient dissemination and translation vehicle. Web-based reports have become increasingly popular among Foundations and such reports preempt the possibility of a peer review publication for authors.

These trends reflect a situation in which university faculty are effectively being squeezed from both sides. On the one hand, universities are reducing funding for research and tenure positions, forcing faculty to look outside for support. On the other, there is less funding available for traditional grants and researchers are forced to do more contract and foundation work, both of which often result in grey literature reports that are not counted in traditional tenure and promotion processes. Moreover, if Wallace is right, the role of health systems based researchers is likely to be heightened vis-à-vis their university colleagues, unless faculty begin to partner with delivery systems to do more applied work. It is in this context that the debate over whether promotion and tenure criteria need to adapt has become more intense.

The debate over the role of universities

The pressures faced by university-based health services research faculty occur in the context of a larger debate over the role of the university in the 21st Century. While universities bear responsibility for generating new knowledge and the brainpower needed for the future, many also believe the university role should be more active in helping find solutions to the problems of a rapidly changing world.

In his seminal 1990 report, *Scholarship Reconsidered: Priorities of the Professoriate*, Ernest Boyer lamented that “increasingly, the campus is being viewed as a place where students get credentialed and faculty get tenured, while the overall work of the academy does not seem particularly relevant to the nation’s . . . problems.” He suggested that “The academy must become a more vigorous partner in the search for answers to our most pressing social, civic, economic and moral problems, and must reaffirm its historic commitment to what I call the *scholarship of engagement*” (Boyer 1996).

Nowhere does the tension between these two viewpoints manifest itself more clearly than in the university promotion and tenure system. Promotion presumably occurs when faculty members demonstrate excellence in scholarship. Scholarship is theoretically based on three areas: research, teaching, and service (Sandmann 2006). However, numerous studies have suggested that in many disciplines, including public health and the health professions, perceptions of scholarship by promotion and tenure committees is primarily based on the candidate’s ability to obtain research grants and to publish in the most prestigious peer-reviewed journals (Ellison and Eatman 2008; Commission on Community-Engaged Scholarship in the Health Professions 2005; Committee on Assuring the Health of the Public in the 21st Century 2002).

The field of HSR appears to be no different. In a study funded by the Canadian Health Services Research Foundation (CHSRF), Phaneuf and colleagues surveyed 63 HSR faculty, all of whom rated research as more important than teaching and community service in promotion reviews. Furthermore, the study results showed that “new scholarly practices of applied researchers—interdisciplinary research, collaboration with non-academics, and knowledge transfer” are valued less than traditional indicators of research output (Phaneuf et al. 2007).

Critics of the traditional promotion and tenure system believe that it discourages a relationship between researchers and potential users of their work (Jacobson, Butterill, and Goering 2004). Among health services researchers, Mark Smith, President of the California Health Care Foundation has been outspoken on this issue. He has remarked that, just as in health care delivery systems, where misalignment of financial incentives results in the overuse of services without a corresponding improvement in health outcomes, so too do university incentives distort the purposes of research. “If the health care system creates visits,” he has said, “health services research creates tenure” (Sandmann 2006).

Among those who defend the system, the primacy of peer review as a means for measuring excellence is viewed as essential, not just to protect standards of scientific rigor, but also as a way to protect the university’s role as incubator of original, and sometimes controver-

sial, knowledge. Tenure, they argue, allows faculty the freedom to raise provocative questions while retaining job security.

In this context the question is whether non-peer reviewed research related activities should also be assessed and form part of the measurement of scholarship. Boyer himself recognized the importance of academic freedom, but suggested that the solution to this debate lies in an expanded taxonomy of scholarship. He proposed four types as follows:

- **Scholarship of discovery:** usually investigator-driven research that generates new knowledge;
- **Scholarship of teaching:** the science of transmitting knowledge;
- **Scholarship of integration:** discoveries that require interdisciplinary approaches, synthesis of knowledge and/or situating knowledge in a broader context;
- **Scholarship of application:** connection of knowledge to use (Sandmann 2006).

Since then, other authors have further developed these concepts. Charles Glassick in *Scholarship Assessed* suggested a set of guidelines for defining excellence in scholarship that extends beyond peer-reviewed literature (Commission on Community-Engaged Scholarship in the Health Professions 2005). Also of interest was the work of Phaneuf and colleagues who conceptualized a schematic of traditional and nontraditional research outputs, the latter of which, they suggest, are more likely to be associated with applied rather than pure research. Examples of traditional research outputs include articles published in peer-reviewed journals, strong letters of reference from recognized experts in your field, first author of an article in a high-impact peer-reviewed journal, competitive grants, awards, and an invitation to present a scholarly paper at an academic conference. Nontraditional outputs, which they suggest should also be considered as measures of scholarly excellence, relate to the ability to engage in interdisciplinary research teams, collaboration with non-academics, and knowledge transfer products such as “plain language” documents for decision makers, a research synthesis, or the creation of organizational structures that link the university to the community (Phaneuf et al. 2007). It is in the context of this debate and Boyers’ expanded definition of scholarship that there has been an interest by some university leaders in reforming the promotion and tenure systems.

There are at least three national initiatives that have sought reforms in the spirit of Boyer’s recommendations: the Campus Compact, a network that promotes civic-engagement in higher education (Gibson 2006; Stanton 2007); Imaging America (IA), which produced the 2008 report *Scholarship in Public: Knowledge Creation and Tenure Policy in the Engaged University*; (Ellison and Eatman 2008) and the Community-Campus Partnerships for Health (CCPH) a membership organization that seeks to build the capacity of communities and higher educational institutions to engage each other as partners (Commission on Community-Engaged Scholarship in the Health Professions 2005).

It is beyond the scope of this report to assess the extent to which such national efforts have penetrated university practices, and in particular whether they have affected promotion and tenure practices used in departments of HSR. They do, however, suggest that the issues faced by health services research are not unique and they form part of a broader set of societal tensions and, possibly, of change.

Methods

AcademyHealth undertook this exploratory study to learn whether health services research faculty view promotion and tenure criteria as a barrier to producing applied health services research and knowledge transfer, and whether there are examples of universities or departments that are in the process of reforming their systems.

In the spring of 2008 we employed semi-structured interviews with 24 HSR faculty members within schools of public health and departments of health services research across 16 universities. (Authors can provide profiles of the universities interviewed upon request.) Sampling criteria was purposeful in order to ensure a mix of work settings that included large and small, public and private, well-established prestigious schools and newer, less well-known schools. We also selected universities from across the country to ensure geographic variety. Within each university, we sought to interview one assistant or associate faculty member and one fully tenured faculty member in order to have both a junior and a senior perspective. In several cases, we also interviewed top leadership, such as the dean or chair of the department. Lastly, we reviewed promotion and tenure criteria used by those institutions included in the sample. Informants were assured of anonymity and confidentiality and all participants were given an opportunity to review and comment on a draft of the paper.

FIGURE 1. HSR Activity



Study Findings

For the purposes of the interviews, we referred to three types of activities that are integral to HSR: traditional research, applied research, and knowledge translation (see Figure 1). While there is certainly a range within each of these three categories and they are not mutually exclusive, for analytic purposes respondents were asked whether and to what extent their promotion and tenure systems rewarded that the latter two: applied research and knowledge transfer. We provided the following working definition of applied research during the course of our interviews: “research designed for the purpose of producing results that apply to real world situations.”

The meaning of “applied” research

While HSR is generally defined as a field of applied research, our first finding was that the concept of applied research meant different things to different study participants. As interviews evolved, it became clear that some people focused on the issue of policy relevance, while others used the term as short-hand for non peer-reviewed research products. Still others appeared to be referring to knowledge transfer activities (dissemination of research, research synthesis, interaction with decision makers, etc.). Two interviewees, who were familiar with Boyer’s work, preferred the term “engaged scholarship.” This lack of definitional consistency appears to indicate not only that Boyer’s work has yet to fully permeate this field, but that to date discussions around this topic in academic HSR settings have been fairly “light”.

Is “good” applied research always publishable?

Among the health services research faculty that participated in the study there were three distinct viewpoints with regard to the question of how applied research is valued in academia and how it relates to the promotion and tenure processes. While some believed the current system is necessary to guarantee high quality research, others saw it as antiquated but possible to work within. The largest group of respondents, however, viewed the promotion and tenure system as counterproductive to the purpose of health services research. At the core of the dispute was whether or not all “good” applied research is publishable in peer-reviewed journals.

Among the faculty members with whom we spoke who were comfortable with the current system, there was an emphasis on the value of peer-reviewed publications. These faculty members believe that applied research, when structured appropriately, should result in research that is suitable for publication in a peer-reviewed journal. “Most HSR is applied and people will find the opportunity to publish their work if their work is well done,” said one who summed up this view.

An assistant professor at a highly ranked state school of public health who shared the view that good applied research is “publishable,” stressed that peer-reviewed publication makes the research “a lot more legitimate.” He explained that “the peer-review process is helpful in sharpening and making his publication articles better.”

Several interviewees pointed out that some peer-reviewed journals have, in fact, an applied, policy orientation. Examples include *Health Affairs*, *Public Health Reports*, and the *Journal of Public Health Management*.

One senior faculty member expressed some irritation in regard to complaints about promotion criteria. He asserted that faculty should follow the rules within the university tenure system, describing it as a “club that [puts] the rules out at the front door that says if you want to come in...there’s a price.” The “price,” presumably, is that there are certain kinds of research tasks for which you will not be rewarded.

The second viewpoint was that the promotion and tenure system was flawed, but that it was possible to work within it. “This is not a great system...it is like trying to fit a round peg into a square hole,” said one informant, who then went on to report that he had “found ways to make it work by understanding and accepting the rules when he first entered the arena.” One academic authority at a public university agreed that it was a challenge, but commented that “applied research can yield scholarly publications, especially if we use the approach of community-based participatory research,” which, he points out, allows for real-time use of findings, before publication occurs.

The third viewpoint present among study participants affirmed that the promotion and tenure process as currently configured excludes valuable research that is not discovery-oriented, but that has significant community benefit. Some of these faculty also argued that, by its nature, applied research does not always translate well into findings that are suitable for a peer-reviewed journal. “Cost analysis, program evaluation, etc. is harder to publish,” said one. In a similar vein, another faculty member noted that “community-based research does not produce the same number of publications as a traditional NIH grant.”

The growth of Web-based grey literature

Among those concerned about the system, several commented that the proliferation of Web-based applied research reports, including foundation and federal documents that are disseminated electronically, was a growing problem for promotion and tenure committees under pressure to expand the types of publications they will consider. One senior faculty member remarked that the pressure on promotion and tenure going forward is due in large part to the explosion of non-print outlets for academic work and begs the question of how one keeps up with the quality since not all the work is peer-reviewed or equal. Another senior faculty member commented that when she served on her institution’s promotion and tenure committee, grey literature created a lot of “white noise,” meaning that it was difficult for members of the committee to judge the quality of these publications.

Faculty also pointed out that grey literature can be a barrier to publication. Funders often expect or even require Web-based publication soon after the work is completed, but many academic journals will refuse to consider publishing findings that have been previously released in other settings. While the work may be of high enough quality to be publishable in a peer-reviewed journal, prior publication rules will block its publication. “If a report is already out related to the potential article; [such] grey literature cannot be turned into peer-reviewed literature because [it] [is] then not viewed as innovative,” said one participant. At the same time, many faculty defended the importance of grey literature, which is often more timely than peer-reviewed publications.

In two universities, promotion and tenure committees were, in fact, trying to take into account grey literature. One senior faculty member commented that his department considers “grey research” in the context of the promotion and tenure committee’s criteria concerning impact. In another case, a committee had decided to ask outside peer experts to evaluate these publications on a case by case basis. Another commented that promotion and tenure committees need a better understanding that AHRQ reports, in particular, are indeed peer-reviewed extensively, in some instances even more than standard journal articles.

The value of knowledge transfer activities

Most interviewees indicated that research-related and research-informed activities that are commonly recommended in the knowledge transfer literature—research syntheses, policy briefs, user guides toolkits, cyber seminars, etc.—are not considered in the promotion and tenure process because they are not peer-reviewed. There was a lesser level of importance given to this type of work, even among faculty that supported recognition of high quality grey literature. “This type of work is really not valued in terms of the promotion process, despite the fact that it is encouraged,” said one associate faculty member.

Another participant from a state school of public health said that KT work would fall under the category of professional activities and service, which receives weight; but it would be incumbent upon junior faculty person to decide how much time he/she should spend on that. He emphasized that if any work has not gone through the peer-review process, then it is difficult for a promotion committee to consider because the committee often relies on that person’s peers for evaluation of the individual’s work; especially when those on the committee do not have the background to evaluate such work.

One junior faculty member was more explicit in her calculations regarding knowledge transfer work. “The closer I get to my tenure decision, the more I’ve realized that my productivity [suffered] from other things [relating to KT] that I previously thought were important.” The reality for her is that she cannot afford to undertake as much knowledge transfer work as before, even though she still values it. However, she implied that if this type of work would further some other objective she has, such as learning a new skill or an opportunity to work with a new colleague, then she would be willing to take it on as a building block towards helping with promotion later.

Differences between junior and senior faculty

In looking specifically at whether there are differences between junior and senior faculty experiences and perceptions, we found that junior faculty articulated several challenges in the promotion and tenure process.

First, several commented that the guidelines lack clarity. While each institution has school- or university-wide promotion and tenure guidelines, they are sufficiently general to create confusion. Research, teaching, and service are clearly important criteria, but how they are weighted in relation to one another is not spelled out.

One assistant professor expressed frustration that “the university is not very transparent about the [promotion] process; I have not been coached well and was told to go figure it out on my own, print

stuff from the Internet.” She called for “greater transparency” in the promotion process. This frustration was echoed in another interview with an associate professor. “There is nothing in writing that says exactly what it takes to get promoted,” she said. She described the perils of weighting one’s dossier with applied research, commenting that “junior researchers should be told early on what to do or not to do in regards to the work they plan to get involved with.”

Several junior faculty also expressed frustration that at the outset of their careers, they were unaware of the lack of value accorded to applied research in the context of promotion decisions. Pursuit of applied research opportunities early in the careers of these faculty meant lost opportunities for promotion and tenure points.

Several professors—both senior and junior – commented that strong mentorship early in one’s career can make a critical difference in this regard. Senior professors also noted the importance of mentorship in the context of preparation for promotion and tenure consideration. “(Faculty) can create a very good dossier with good mentoring,” said one.

Another noted that while senior faculty are not encouraged to mentor junior faculty, such mentoring is critical in those cases where a candidate’s dossier includes applied research. “A senior person, who values applied research, can run interference for a junior person at key moments. . .and hold their research up to rigorous standards.”

Related to the important role of mentoring was recognition by senior faculty that they should encourage junior faculty to delay conducting more applied research and knowledge translation until they have secured tenure. Said one tenured faculty member, “I would rather have junior faculty working on publishing in top peer-reviewed journals because this would give them a comparative advantage in managing their whole career in terms of their translational work.” Senior faculty from one HSR center indicted that they discourage junior faculty from working on some of their federal contracts which address “quick turn around questions that have an immediate impact” because this type of work “does not leave a lot of footprints.” On the other hand, they reported, deans and chancellors like getting involved with such work to demonstrate engagement with community.

A final issue specific to junior faculty relates to obstacles faced by minority and female faculty. One senior faculty member expressed the view that “For a young woman of color, there are all kinds of community work that (she) will want to do and people will ask (her) to do; she will get sucked into these activities that do not lead to promotion and tenure,” he said. While our sample was small, female junior faculty did express greater frustration with the promotion and tenure process than their male counterparts, particularly in regard to the issues of

lack of coaching and transparency in the process. One noted her concern that perhaps the idea of “old boys club, favorites, and gender biases are part of the process realistically.”

HSR funding pressures

Across our interviews, a candidate’s ability to generate external funding was cited as critical to his or her success in the tenure process. As one associate faculty member noted, “If one is generating a lot of money for the university, then a lot of shortcomings are often overlooked.” There was consensus among study participants, however, that funding opportunities have changed with fewer government grants and less unrestricted research support from states.

Participants reported that this has been problematic because not all funding sources are equally valued by promotion and tenure committees. NIH RO1 funding is clearly the most highly valued. Foundation grants, which often fund projects with local community benefit, are viewed as problematic by some, although not all institutions, due to lower overhead margins associated with these grants. A senior faculty member at a state based school of public health commented that “since foundations don’t pay a lot of overhead, this type of funding is not encouraged.” She went on to explain “every dollar that comes in from these foundations means a loss.”

As State budget constraints have become more pronounced, there are more limits on state funding for research time. At the University of Nebraska Medical Center, College of Public Health, for example, faculty now receive almost no state support for research time. At UCLA, in the Department of Health Services only a fixed number of positions—appointments with tenure at the associate professor level and above—receive financial support from the state, leaving “in residence” positions with no commitment of state funds to salary. Reflecting on this trend, one faculty member described tenure as a “degraded process” that has come to mean promotion and career advancement more broadly, in lieu of long term career security.

The need to look for alternative funding mechanisms, either for contract work with government or the private sector, has been met with varied responses. While some study participants complained that such arrangements reduce their academic freedom, others see it as an opportunity to learn new skills. One fully tenured professor at a state university public health school commented that funding pressures have resulted in an “entrepreneurial environment” because faculty members “have to be out there getting grants or contracts to help cover their salary.”

Is change occurring?

As the funding base changes, as the location of data bases shift from academia to the private sector, and as funders become more interested in the dissemination and uptake of research results, the

question is whether those researchers that adapt will be penalized or whether promotion and tenure is evolving to accommodate these new realities.

Not surprisingly, participants had divergent views. On the one hand, there were a number of faculty we interviewed who reported that change is occurring, albeit slowly, in the promotion and tenure systems. “Promotion processes have been changing to recognize more and more applied research and it takes time for this to take into effect from the department to the institutional level” reported one faculty member. He believes the primary driver of that change is the “drive from funding agencies for researchers to show dissemination and use of results, which is difficult to do through traditional promotion practices.”

On the other hand, several academic authorities were skeptical. They affirmed that changes to the current system of promotion and tenure would be difficult to achieve. “Wholesale changes” within the promotion and tenure system are “not a fight worth taking on,” said one.

University characteristics that may be associated with change

During the course of our interviews and the review of documents, several institution characteristics emerged as potentially operating either to enable or to impede a university’s interest in and willingness to reform their promotion and tenure criteria.

Among the institutions included in our small sample, private institutions and state institutions with public health schools that are highly ranked by *U.S. News and World Report* tended to place far greater value on discovery-oriented scholarship, allowing little room for consideration of applied research that is not peer refereed in the promotion and tenure process. Younger, less well established institutions, and those that rely on public funding, on the other hand, tended to place value on applied research *in addition to* peer refereed scholarly outputs.

Whether this is a function of funding sources, or whether these practices are, in fact, part of a constellation of factors that qualify certain schools as top ranked, is beyond the scope of this study. The difference, however, may be important to understanding the potential for and the limits of reform efforts in different kinds of universities.

- Highly ranked schools of public health tended to emphasize the primacy of peer-reviewed scholarship. As discussed in the section above, faculty from these institutions expressed two related views of applied research. First, applied research that is not peer-reviewed is not acceptable for inclusion in one’s CV for promotion and tenure consideration. And, second, if done right, applied research should result in a peer-reviewed journal article.
- Younger, less well-established institutions demonstrate greater flexibility. These institutions have begun to introduce promotion and tenure criteria that value applied research that is not peer-refereed, while still acknowledging the importance of peer-reviewed publications. At one relatively new school of public health, faculty can advance from assistant to associate professor doing applied research; to advance to full professor, faculty need to show more work in journal publications. This same school allows candidates to include letters of recommendation from policymakers as well as peers.
- State schools face explicit pressure to demonstrate public good, and are more likely to view community engagement and the applied research products that typically result from this type of engagement as central to their mission. These institutions spoke of the pressures by university authorities to participate in applied research that has an impact at the local community level. While this pressure has not necessarily translated to broad reform of these institutions’ promotion and tenure criteria, for many of them it has translated into greater flexibility in the context of promotion and tenure deliberations.
- The department chair at a relatively new state university-based school of public health said that “faculty need to show their impact on the community and state; this means that they need to do applied research.” As a result, the school explicitly recognizes work such as policy briefs and issue briefs in the promotion process; this is because such work makes a difference in the ability to garner support for the college and university.
- School location can also play a role. Several senior faculty noted that their schools’ location played a role, albeit a small one, in the extent to which their institution valued applied research. One senior professor at a school centrally located in a dense urban center commented that “the location forces them to be more applied than they would otherwise be because there are a lot of community-based activities going on (in the area).”
- Location has other effects on the promotion and tenure process as well. A fully tenured professor at a university set in a high tech corridor commented that the “tech-friendly” corporate culture of the city has made the university “more in tune with internet publications” as long as they are peer-reviewed however.
- Placement of promotion and tenure committee affects flexibility of criteria. In many institutions, promotion and tenure committee members are comprised of faculty across the university’s various schools. In others, promotion and tenure committees may be based within a school of public health, but final decisions on promotions may rest with the university’s chancellor or other authority. Researchers from several schools of public

health that we interviewed reported having committees that are dedicated to those schools and are made up of faculty from various departments within those schools. As we discuss later, it is those public health schools with dedicated P&T committees that demonstrated more flexibility in considering applied research in the context of their decision-making.

- University-based health services research “centers” experience their special challenges when it comes to the promotion and tenure process. A research director based in one such center explained that his inter-disciplinary center has little impact on P&T since tenure is granted through disciplinary departments. He described his efforts to support candidates, particularly those who may have contract work in their dossier, by writing letters on their behalf that explain the intellectual contribution of the work, and how it has advanced the field.
- Importance of teaching varies by institution. At the majority of institutions from which we selected researchers to interview, it appears that excellence in teaching is considered by the committee only if a candidate has received poor teaching scores, in which case it counts negatively. An associate professor summed up the general view among interviewees when she said “teaching well does not count positively towards promotion but poor teaching can pull you down.”

At the same time, several interviewees reported that at some institutions, committees are beginning to pay more attention to candidates’ teaching records. “More universities are recognizing the importance of teaching and the learning process, which are core elements of what academic institutions do” said one informant. This may be a result of the popular use of on-line student evaluations, which are often made public to students as they select classes. It may also be related to the competition for students among public health schools which interviewees believe has intensified. One fully tenured professor at a state university-based school of public health remarked that “teaching has become more important as tuition has become so expensive and there is not time for the university to deal with the consequences associated with poor teachers.”

Reforms

Findings from our interviews and document reviews suggest three basic approaches that schools of public health and health services research departments have taken to increase the value placed on applied research:

1. Creation of a separate “practice” track with greater focus on applied research,
2. Development of new P&T criteria to explicitly value applied research,

3. Institution-wide reforms that seek to connect the institution more closely to the local community through scholarly endeavors.

Separate practice track

The University of Washington, School of Public Health and Community Medicine, first established a public health practice tenure “track” in 2000. Oriented toward knowledge transfer and translation of policy into practice, this track values publication in journals that do not have as high an “impact” factor, in addition to traditional high-impact journals. For example, the track enables faculty to prepare toolkits for decision makers and have this type of product count in their promotion and tenure dossier. The track also places greater emphasis on community-based participatory work.

While the University of Washington was consistently identified during our interviews as a leader in supporting applied research by having developed a separate “practice” tenure track, in fact, few faculty (4 to 6) have chosen to pursue or been recruited for the applied research track within the School of Public Health and Community Medicine. Even though University of Washington has worked hard to elevate this practice track, it is still carries with it a “second class status,” according to one interviewee.

Other schools that have pursued the two track approach include the schools of public health at the University of North Carolina, and the University of Alabama. The University of Alabama, School of Public Health, has had a “public health practice scholarship practice in place for the past 10 years,” stated a senior faculty member. “No one goes down that path,” he explained, because its end is untested and unknown and because one is expected to still achieve a national reputation, which is difficult to do without publications. As a result, academic leaders at the school are “always push(ing) towards achieving a peer-reviewed article.”

At Johns Hopkins University, a DrPH program is intended to respond to the importance of applied research or practice, in which faculty prepare their dissertation in the context of their employer using the same methods and tools used in academia. One interviewee commented, however, “It is a little fuzzy sometimes what is considered applied research or practice because sometimes the validity of the DrPH students’ research can be threatened by the employer context.”

Overall, however, the School of Public Health at Hopkins has shifted from a focus on applied work that addressed problems in the public health sector to more of a NIH research institution as a large fraction of their funding comes from NIH, AHRQ, and also from CDC. As a result, “. . . there is a concern that faculty are not

Portland State University, Excerpts from Promotion & Tenure Guidelines

Evaluation of Scholarship: Scholarly accomplishments in the areas of research, teaching, and community outreach all enter into the evaluation of faculty performance. Scholarly profiles will vary depending on individual faculty members' areas of emphasis. The weight to be given factors relevant to the determination of promotion, tenure, and merit necessarily varies with the individual faculty member's assigned role and from one academic field to another. However, one should recognize that research, teaching, and community outreach often overlap. For example, a service learning project may reflect both teaching and community outreach. Some research projects may involve both research and community outreach. Pedagogical research may involve both research and teaching.

Community Outreach: A significant factor in determining a faculty member's advancement is the individual's accomplishments in community outreach when such activities are part of a faculty member's responsibilities. Scholars can draw on their professional expertise to engage in a wide array of community outreach. Such activities can include defining or resolving relevant local, national, or international problems or issues...PSU highly values quality community outreach as part of faculty roles and responsibilities. The setting of Portland State University affords faculty many opportunities to make their expertise useful to the community outside the University."

as in involved in the profession and so [they have] undertaken a process of trying to elevate public health practice and the applied research component as being more important." Several years ago, the promotion and tenure criteria at Johns Hopkins were expanded to recognize scholarly contributions to practice and to recognize scholarly contributions to teaching, but, said one interviewee, "one still needs to have publications based on research."

One university chancellor commented that when colleges implement differently-focused tracks, the "research track becomes more prestigious." This view was echoed by a senior academic from another institution who said that "there exists the perception that a second track for public service and practice devalues scholarship and dilutes the work (applied researchers) do."

These comments reflect the sense that a separate practice track can be viewed as the field's first effort to find a home for applied research within the university setting. Our findings show that this approach represents an early attempt at reform that may become antiquated with the emergence of other more successful approaches to remedying the balance of power between traditional and nontraditional scholarly outputs.

Explicit valuation of applied research in P&T guidelines

Portland State University has a 12 year track record in valuing scholarship related to community outreach. It is also the first institution to embrace Boyer's principles in the context of P&T decisions, stating explicitly, "scholarly accomplishments in the areas of research, teaching, and community outreach all enter into the evaluation of faculty performance." The guidelines acknowledge that accomplishments related to research, teaching and service overlap, and make clear that community outreach should play a significant role in a faculty member's career. See Table 1.

According to one interviewee, Portland State University has "moved away from the number of publications and a list of journals to publish in." Instead, the university focuses on the success of its faculty in achieving advancement through applied, community engagement scholarship work.

A relatively new academic college within the University of Arkansas, the Fay W. Boozman College of Public Health started with funding from the state's tobacco settlement with a clear mandate to improve the health of Arkansans. This mandate is clearly conveyed in the College's promotion and tenure criteria. See Table 2.

At the Fay W. Boozman College of Public Health, the promotion and tenure committee is exclusive to College of Public Health, which affords greater latitude in valuing applied research. Because the members of the committee come from the public health disciplines, they "have a greater appreciation for applied research." And because the school does not have to follow the promotion and tenure guidelines set forth by other colleges, such as the medical school, they are able to emphasize applied research. The committee still places "a lot of weight on peer-reviewed publications," but this should not necessarily be seen as a barrier to applied research. Regardless, publication is a "signal" of the recognition and acceptance of a candidate's work and the committee looks at "a variety of dissemination channels." If reports have not been peer-reviewed, the candidate needs to show evidence of "other signals of acceptance" by relevant national or international organizations. While the committee looks for letters from the candidate's academic discipline, candidates can also include letters from policymakers and practitioners in their dossiers.

University of Arkansas, Boozman College of Public Health, P&T Criteria

“Faculty scholarship is expected to enable improvements to the health of the public or advancement of the science and practice of the discipline. For purposes of faculty evaluation, scholarship is construed to encompass both research and practice. A faculty member at the UAMS College of Public Health may choose to emphasize original research, i.e. the generation of new knowledge pertinent to public health; to emphasize public health practice, i.e. the advancement and / or evaluation of the application of knowledge to enhance the public's health; or to maintain a balance between the two. Both original research and scholarly public health practice require originality of thought and effective dissemination of knowledge through publications, presentations and other appropriate means.” Excerpt, Guidelines: Application for Promotion and Tenure, Fay W. Boozman College of Public Health, University of Arkansas for Medical Sciences

Within the College of Public Health, 6 out of 45 faculty hold joint-staffing agreements with the Arkansas state department of health. In addition to an academic role at the College, these faculty members have direct responsibility for overseeing state programs. A senior faculty member pointed out that one of the benefits of this arrangement to the school is that these individuals tend to be very strong in the service/ practice domain. This staffing arrangement is perhaps the most innovative example uncovered by this study of one college's approach to create a staffing structure that supports faculty members efforts to engage in user driven research and the likelihood of research being used in real word settings.

University-wide efforts to increase public engagement

A third category of institution is emerging, those universities that are pursuing reforms on an institution-wide basis by changing the culture from within. One such example is the University of North Carolina, which recently named a vice chancellor for public service or “engagement.” Serving in this capacity is Michael R. Smith, who also continues in his role as Dean of the School of Government. A driving force behind some of the University of North Carolina's most significant public outreach in recent years, Dean Smith will use his new position to focus on steps the university can take to serve the state in K-12 education, health care, and economic development. It is too early to tell whether this development will be emulated by other institutions, and if so, whether it will trickle down and result in a stronger valuation of applied and community-based scholarship when it comes to the promotion and tenure deliberations of individual departments or schools. Nevertheless, this represents a significant reorientation of the traditional university mission for the few universities leading the way.

Discussion

While our interview sample was small, our findings clearly suggest that most departments of HSR and health policy still rely heavily on discovery-oriented, peer-reviewed publication in reaching promotion and tenure decisions. This reliance is bolstered by a number of factors, including the long-standing culture and mission of these institutions, fierce competition for tenure, the clear and rigorous standard offered by peer-reviewed publications, a lack of clarity surrounding the definition of applied research, and uncertainty regarding the quality of research that is not peer-refereed. The composition of promotion and tenure committees, which are often made up of faculty from outside HSR who are less likely to appreciate the field's interdisciplinary and applied nature, may also play a role in maintaining the traditional reliance of these committees on peer-review publications.

Despite the current dominance of this traditional approach to promotion and tenure, changes appear to be forcing their way into universities. The variation in contract arrangements, and by some accounts, the degrading of tenure, was reported by many faculty. Interviewees also recognized that both public and foundation-based funders are putting more pressure on universities to engage with potential users of their research, to conduct quick turn around studies and to produce web-based reports rather than waiting for acceptance by a peer review journal publication. These factors, in conjunction with the low levels of funding for investigator-initiated research, may mean that the economic realities of the research market place will stimulate changes.

As a result, in many institutions a debate has begun over whether the system needs reform. Most deans and senior faculty, even as they maintain that applied research is publishable in peer-review journals, recognize that the existing promotion and tenure system does not encourage non-traditional research outputs and related activities that promote knowledge transfer. There is still considerable controversy, however, over whether this limitation warrants a call for change. Only a handful of institutions—typically younger and at least partially state funded—have actually modified their promotion and tenure criteria to acknowledge the importance of applied research.

Yet, a key finding of our study is that change is possible. Some institutions, whether because of their location in a high technology corridor, or simply in acknowledgement of the proliferation of online dissemination venues, have changed their views toward Internet publications. Steps taken by institutions such as the University of North Carolina, by appointing a chancellor for civic engagement, suggest however that even more dramatic reforms may be in the making and that some universities are beginning to redefine their relationship to the world beyond academia.

Finally, our report raises broader questions regarding the preeminence of tenure in university settings. Is tenure necessary for a successful academic career? Non-tenure track positions are on the rise and our findings suggest that even among tenured positions the financial security that tenure once offered has eroded. In fact, over the long term, for some universities, tenure may itself prove to be an antiquated practice that lacks relevance as a dominant practice in today's world.

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