Family Physician Satisfaction With Two Different Academic Compensation Schemes

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BACKGROUND AND OBJECTIVES: A growing body of evidence suggests that comprehensive relative-value-based incentive plans (CRVPs) are more effective at tracking and improving academic productivity than other types of academic compensation schemes (ACSs). However, there is little literature to date exploring physician satisfaction with CRVPs.

METHODS: Physicians in two academic family medicine departments in Toronto, Ontario, completed an anonymous satisfaction survey. One of these departments used a CRVP to compensate for non-clinical activities; the control group used a monthly stipend based on full-time equivalents (FTEs).

RESULTS: When compared with controls, physicians compensated by a CRVP were more likely to increase their involvement in non-clinical activities, to report being “very satisfied” with their ACS, to feel that their ACS made them “more likely” to continue working in their department, and to feel that their ACS was “fair.”

CONCLUSIONS: Physicians in a family medicine department that used a CRVP felt a greater sense of satisfaction and fairness in terms of their compensation for non-clinical activities. CRVP physicians also perceived an increased involvement in academic activities, were more likely to continue to work in their current department, and to feel that the compensation for non-clinical activities was adequate.

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Academic family physicians are typically required to be involved in many activities other than clinical work, including research, administration, and teaching. These activities are not always reimbursed to the same level as clinical work. Reduced income in academic settings may act as a disincentive for physicians, particularly family physicians, to pursue academic medical careers and may also cause a deterioration in the quality of clinical education.

Many academic compensation schemes (ACSs) have been developed in an attempt to compensate academic physicians for the full spectrum of their activities. Reimbursement of non-clinical activities according to a relative value scale model using relative value units is one type of ACS. These reimbursement plans are also referred to as comprehensive relative-value-based incentive plans (CRVPs). CRVPs generally have three essential characteristics; they (1) include a “comprehensive” list of activities, including clinical, teaching, research, administrative, and other activities relevant to the department mission, (2) assign “relative” merit, and (3) monetary “value” to these activities.

A recent systematic review of the effects of ACSs included studies of eight different compensation schemes; six of these compensation schemes were CRVPs. The review concluded that CRVPs improved research productivity and possibly clinical productivity but had no effect on physician engagement in teaching. This review noted that only one included study considered physician satisfaction and that in this study “...physician satisfaction varied among faculty and was associated with faculty understanding of the plan and inversely associated with years of service.”

Other studies not included in this systematic review have shown varying levels of physician satisfaction with the use of CRVPs to reimburse

From the University of Toronto.
non-clinical activities. Of particular interest to family physicians is the fact that the only published study considering CRVP satisfaction in an academic family medicine department found that only 35% of respondents were satisfied with this form of remuneration. In contrast, studies of CRVPs in internal medicine and surgery departments have shown high physician satisfaction (70%–90%).

We felt that this difference in satisfaction with CRVPs in family medicine compared with other specialties deserved a more detailed exploration. One of the more likely reasons for the low CRVP satisfaction in academic family medicine is that the Willis study was a description and evaluation of a newly implemented CRVP. With this in mind, our objective was to determine if the same low levels of satisfaction would hold true for a well-established family medicine CRVP. We also decided to introduce a control group in order to have a better baseline against which to compare CRVP satisfaction. To accomplish this, we looked at physician satisfaction in an academic family medicine department that had used a CRVP since 1999 to compensate non-clinical activities. The same satisfaction survey was given to physicians in another academic family medicine department in the same university with a different ACS.

Our study also seeks to address several other important gaps in the existing CRVP literature. Previous studies have not been able to determine how CRVP satisfaction compares with satisfaction with other types of remuneration as no studies prior to ours have used a control group to analyze physician satisfaction with ACSs. Further, there appears to have been no studies looking specifically at reasons for physician satisfaction (or dissatisfaction) with CRVPs. As well, all existing published studies have been limited to departments in the United States. Although these US CRVPs are generally funded and structured in a similar manner to those reviewed in this study (ie, through redistribution of a defined portion of pooled clinical billings), given the unique features of the US health care system, we thought it would be useful to analyze the effectiveness of CRVPs outside of the United States.

**Methods**

**Study Locations**

This study analyzed two academic family medicine departments associated with the Department of Community and Family Medicine (DFCM) in the Faculty of Medicine at the University of Toronto. One department was affiliated with St. Michael’s Hospital (SMH), a large academic tertiary care hospital in downtown Toronto, and was composed of five different clinic sites. The other department was affiliated with the Toronto East General Hospital (TEGH), a large academic community hospital in eastern Toronto, and was composed of two clinic sites. These departments were chosen based on convenience, with two of the researchers working in each department. Though the two departments differed in some ways (Table 1), both shared similar academic departmental goals (eg,

### Table 1: Department Characteristics

<table>
<thead>
<tr>
<th></th>
<th>TEGH</th>
<th>SMH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of physicians</td>
<td>19</td>
<td>55</td>
</tr>
<tr>
<td>Number of female physicians</td>
<td>13</td>
<td>34</td>
</tr>
<tr>
<td>Total number of clinical full-time equivalents (FTEs)</td>
<td>10.1</td>
<td>30.4</td>
</tr>
<tr>
<td>Total non-clinical (teaching, research, administration) FTEs</td>
<td>Not available</td>
<td>13.0</td>
</tr>
<tr>
<td>Number of patients</td>
<td>6,631</td>
<td>31,950</td>
</tr>
<tr>
<td>Patient visits/year</td>
<td>63,069</td>
<td>133,161</td>
</tr>
<tr>
<td>Number of new patients (April 1, 2011–March 31, 2012)</td>
<td>1,031</td>
<td>4,619</td>
</tr>
<tr>
<td>Main funding source for academic compensation scheme (&gt;90%)</td>
<td>University/DFCM</td>
<td>Clinical revenue</td>
</tr>
<tr>
<td>Other funding sources for academic compensation scheme (&lt;10%)</td>
<td>Hospital Provincial Ministry of Health</td>
<td>University/DFCM Hospital Provincial Ministry of Health</td>
</tr>
<tr>
<td>Location</td>
<td>Urban</td>
<td>Inner city</td>
</tr>
<tr>
<td>Number of clinic sites</td>
<td>2</td>
<td>5</td>
</tr>
</tbody>
</table>

TEGH—Toronto East General Hospital
SMH—St. Michael’s Hospital
DFCM—Department of Family and Community Medicine
producing research, teaching medical students and residents, educating their practice communities, etc) that were mandated by the DFCM at the University of Toronto. Research Ethics Board approval for this study was obtained from both hospitals’ Institutional Review Boards.

SMH implemented a CRVP for compensation of non-clinical work in 1999. Prior to this change, compensation for non-clinical activities was done mostly on the basis of seniority and on full-time equivalents (FTEs). The core elements of the SMH CRVP are the CRVP “manual” (a detailed list of all the non-clinical activities that are eligible for compensation, along with the value of these activities) and the CRVP “log” (which members use to submit their list of their non-clinical activities to the committee that oversees CRVP payments). The manuals and logs from 2006 onward can be accessed at http://128.100.126.64/stmikes/default.htm. SMH department members contribute approximately 5%–10% of their annual clinical billings into the CRVP. The exact percentage varies from year to year depending on what other sources of academic funding are available to the department.

TEGH has no formal compensation scheme for non-clinical activities. Physicians who engage in non-clinical activities, such as resident or medical student supervision, receive a small monthly stipend from the university that is based on their FTE. Those physicians who are in departmental designated positions, such as chief, deputy chief, and heads of certain programs such as postgraduate and undergraduate education, receive compensation from funds transferred to the teaching unit of the TEGH from the DFCM. Physicians engaged in research either find compensation in the form of grants or are supported from funds allocated to the TEGH family medicine unit from the DFCM.

Survey
In April 2012, a link to an online survey consisting of 18 questions and hosted on the SurveyMonkey website (www.surveymonkey.com), along with an introductory letter, was distributed to all full-time physicians at both departments via an email sent by a departmental administrative assistant (available at http://128.100.126.64/stmikes/default.htm). Staff from both departments had approximately 2 weeks to complete the survey. A follow-up reminder email was sent 10 days after the initial distribution of the survey. Survey questions were identical with the exception of one question that referenced the specific compensation schemes in participants’ departments. All survey questions were mandatory in order to complete the survey. Participant consent was implied if they decided to complete the survey.

Data Analysis
Data from SurveyMonkey was downloaded in Microsoft Excel format and then transferred to SPSS (Version 20, IBM Corporation) for analysis. Two-tailed P values were calculated using Pearson’s chi-squared test. All open-ended question responses were independently reviewed for common themes by two of the researchers (RG and AH).

Results
Demographics (Table 2)
The survey response rate was 53% and 64% from TEGH and SMH, respectively, with an overall response rate of 57%.

<table>
<thead>
<tr>
<th>Table 2: Characteristics of Respondents</th>
</tr>
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<tbody>
<tr>
<td>Number of respondents</td>
</tr>
<tr>
<td>Gender</td>
</tr>
<tr>
<td>Male</td>
</tr>
<tr>
<td>Female</td>
</tr>
<tr>
<td>Age</td>
</tr>
<tr>
<td>20–30</td>
</tr>
<tr>
<td>31–40</td>
</tr>
<tr>
<td>41–50</td>
</tr>
<tr>
<td>51–60</td>
</tr>
<tr>
<td>&gt;60</td>
</tr>
<tr>
<td>Years after residency**</td>
</tr>
<tr>
<td>0–5</td>
</tr>
</tbody>
</table>

TEGH—Toronto East General Hospital
SMH—St. Michael’s Hospital
* One TEGH department member did not complete all survey questions.
** P<.05
rate of 61%. Respondents from SMH were more likely to be further removed from their residency training than physicians at TEGH ($P<.05$).

**Satisfaction** (Figure 1 and Table 3)

Several major themes emerged in the 35 open responses from SMH physicians regarding what worked well about their department’s ACS. These included the fact that the scheme was very “transparent” (mentioned by 16 physicians), “fair” (eight physicians), and “dynamic” (seven physicians). Other major themes were that the scheme encouraged academic or non-clinical activity (seven physicians) and offered “generous” or “appropriate” compensation (five physicians).

The major themes emerging from the 35 SMH physician responses regarding what they would change about their department’s ACS included changing the number of points applied to certain activities, adding other non-clinical activities to the list of reimbursable activities under the scheme, and removing certain activities from the points system. Eleven respondents thought that “nothing” should be changed about their ACS.

Three themes surfaced in open responses from TEGH respondents regarding what worked well about their department’s ACS. First, the most common theme was that, since it was based on FTEs, their compensation scheme did not require them to document and submit their non-clinical activities. The second major theme was that there was at least “some compensation” (eg, university stipends) for non-clinical activities, which was better than no compensation at all. Another theme was that their ACS worked well with a small group of physicians.

Two major themes surfaced in open responses from TEGH physicians regarding changes they wished to see to their department’s ACS. The first was the creation of an ACS based on the amount of time department members spend completing non-clinical activities. The second was that a portion of departmental earnings from clinical activities should be pooled and used to fund non-clinical activities by department members.

Two major themes surfaced in open responses from TEGH physicians regarding changes they wished to see to their department’s ACS. The first was the creation of an ACS based on the amount of time department members spend completing non-clinical activities. The second was that a portion of departmental earnings from clinical activities should be pooled and used to fund non-clinical activities by department members.

**Effect on Involvement in Non-Clinical Activities** (Table 4)

Non-clinical activities that respondents from SMH felt were increased due to their department’s ACS were: clinical and/or didactic teaching (mentioned by 17 of 23 respondents), administrative or committee work (seven respondents), research (three respondents), and presentations (three respondents).

Only one respondent from TEGH noted that their department’s ACS increased his involvement in non-clinical activities. Unfortunately, this individual did not finish the survey so no open-ended responses were captured. Of those from TEGH who said that their department’s ACS did not increase their involvement in non-clinical activities, five responded that other non-financial motivators drove them to pursue these types of activities.

**Effect on Staff Retention**

A total of 83% of SMH respondents, versus 33% of TEGH respondents, noted that their department’s ACS made them “more likely” to want to continue working in their respective departments. A total of 67% of TEGH respondents, versus 14% of SMH respondents, said that their department’s compensation scheme made “no difference” in their desire to continue working in their respective departments.

Of 29 SMH respondents, 24 indicated in open-ended responses that their department’s ACS made them feel “recognized” and “appreciated.” For the five physicians at SMH who felt that their ACS made no difference in their continued work at SMH, an intrinsic motivation to perform non-clinical activities was cited as their main motivation. Of the three TEGH physicians who stated that their department’s ACS motivated them to keep working at TEGH, only two provided open responses. One noted that he enjoyed getting paid for non-clinical work but that he enjoyed performing this work even without pay. The other noted that he felt that less involved department members should “pony up” and take on their fair share of non-clinical activities. For those six TEGH respondents who noted that their ACS made no difference on their continued desire to work at TEGH,
Table 3: Why Are You Satisfied With the Current Financial Compensation Scheme for Non-Clinical Activities in Your Department? (Multiple Responses Were Possible)

<table>
<thead>
<tr>
<th>Response</th>
<th>TEGH (n=8)</th>
<th>SMH (n=33)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fair</td>
<td>25%</td>
<td>64%</td>
</tr>
<tr>
<td>Adequately compensates</td>
<td>38%</td>
<td>58%</td>
</tr>
<tr>
<td>Better than other schemes I’ve experienced</td>
<td>12%</td>
<td>12%</td>
</tr>
<tr>
<td>This is the only scheme I’ve experienced</td>
<td>88%</td>
<td>58%</td>
</tr>
<tr>
<td>Other (open comment)</td>
<td>“Previously there was no compensation for these activities—some compensation is better than none.”</td>
<td>“Encourages us to meet personal and departmental goals for non-clinical activity.”</td>
</tr>
<tr>
<td></td>
<td>“It encourages creative contributions—people feel it is worth the time to bother to try.”</td>
<td>“Compensates based on work done rather than just experience.”</td>
</tr>
</tbody>
</table>

TEGH—Toronto East General Hospital
SMH—St. Michael’s Hospital

Table 4: Do You Think the Current Financial Compensation Scheme (for Non-Clinical Activities) Increases Your Involvement in Non-Clinical Activities (Teaching, Research, Administration, Advocacy, Etc) Compared to Other Models of Compensation?

<table>
<thead>
<tr>
<th>Question</th>
<th>SMH</th>
<th>TEGH</th>
<th>SMH</th>
<th>TEGH</th>
<th>SMH</th>
<th>TEGH</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you think the current financial compensation scheme for non-clinical activities increases your involvement in non-clinical activities compared to other models of compensation? (SMH n=35, TEGH n=10)</td>
<td>66%</td>
<td>10%</td>
<td>11%</td>
<td>50%</td>
<td>23%</td>
<td>40%</td>
<td>&lt;.004</td>
</tr>
<tr>
<td>Do you think the current financial compensation scheme for non-clinical work is fair? (SMH n=35, TEGH n=9)</td>
<td>91%</td>
<td>33%</td>
<td>9%</td>
<td>67%</td>
<td>n/a</td>
<td>n/a</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Do you think the current financial compensation scheme for non-clinical activities increases your income more than other types of compensation models? (SMH n=35, TEGH n=10)</td>
<td>20%</td>
<td>0%</td>
<td>20%</td>
<td>20%</td>
<td>60%</td>
<td>80%</td>
<td>&lt;.289</td>
</tr>
</tbody>
</table>

TEGH—Toronto East General Hospital
SMH—St. Michael’s Hospital

five said that an intrinsic enjoyment of their non-clinical activities was a greater motivator than financial incentive for them to continue working at TEGH.

Fairness of Compensation Scheme
In 32 open-ended responses from the SMH respondents, the most common themes were that the SMH ACS was fair because it provided adequate compensation for non-clinical work (11 respondents) and was “transparent” (seven respondents). Another recurring theme was that the ACS resulted in an equitable distribution of departmental income based on the amount of non-clinical work performed by a department member (six respondents). Other commonly occurring themes were the amount of compensation (four respondents), the range of activities compensated (four respondents), and the dynamic nature of the ACS (three respondents). Three of 35 SMH respondents thought their department’s ACS was unfair. The main reason cited was inadequate compensation for certain activities (ie, teaching).

Of the three TEGH physicians that thought their department’s ACS was fair, one commented that they thought it was fair because some payment was available and that this was “better than other departments.”
Another noted that he felt it was fair because all department members performed “a lot” of non-clinical activities, and that it was fair if all were compensated about the same amount.

The most common theme emerging from open responses from TEGH staff who felt that their department’s ACS was unfair was that the amount of time spent doing non-clinical activities was not linked to the pay received for doing these activities (mentioned by four of six respondents). Another recurring theme was that only certain types of non-clinical activities were eligible for compensation under the existing ACS.

Discussion
We have shown that academic family physicians compensated for their non-clinical activities via a CRVP are more satisfied, perceive themselves to be more involved in non-clinical activities, and are more likely to want to continue working in their current department than their peers who received an FTE-based stipend. A perceived sense of “fairness” in compensation and adequate reimbursement for non-clinical activities contributed to physician satisfaction in both departments, but both were greater for the department with the CRVP. Based on responses to open-ended questions, “fairness” appears to be related to adequate compensation, transparency, equitable distribution of department funds, and the dynamic nature of the CRVP. Further, these aspects of the CRVP appear to increase physician satisfaction as well.

The main aspect of a CRVP contributing to physician dissatisfaction appears to be the increased time demands required to create and manage the CRVP and to monitor physician non-clinical activities. However, this obligatory detailed tracking of physician activities could help department chiefs to promote individuals more appropriately and better manage their departments. As well, the DFCM relies on such information to determine funding allocations to its various affiliated departments.

It seems that in the smaller department at TEGH, physicians may have previously relied more on personal relationships and knowledge of other members’ non-clinical activities to both reward and encourage physician involvement in non-clinical activities. As the TEGH department is currently expanding, it has become more difficult for all department members to have an adequate knowledge of other members’ activities, which may have resulted in certain department members performing a disproportionate amount of the department’s academic activities. As reflected in responses to open-ended questions, inequitable distribution of academic tasks may have resulted in a certain level of resentment among some department members toward less academically involved staff. Interestingly, several members of the TEGH department suggested the development of traditional elements of a CRVP as ways to improve their existing compensation scheme. This suggests that the decreased satisfaction at TEGH versus SMH may be related to TEGH’s compensation scheme rather than organizational culture or other differences between the two departments. The results from TEGH also suggest that academic family medicine departments may want to consider implementing a CRVP to compensate non-clinical activities as they grow, perhaps in part to improve physician satisfaction, involvement in non-clinical activities, and retention.

This is the first study of Canadian academic family physicians’ attitudes toward their departmental reimbursement plans for non-clinical activities. While many similar challenges face both American and Canadian academic family physicians, this study makes an important contribution by demonstrating that academic family physicians outside of the United States can be satisfied with being compensated for non-clinical work through a CRVP. Indeed, CRVPs may work even better outside the United States, as suggested by the fact that our Canadian study found a higher CRVP satisfaction rate than a similar study involving an academic family medicine department in the United States.4 This higher satisfaction rate may also be due to the well-established nature of the CRVP analyzed in this study compared to the newly implemented CRVP reported on from the United States.8

The responses from SMH physicians also reinforce the idea that the amount of clinical funds allocated to the CRVP need not be large for it to be effective in driving physician behavior. As shown in other studies, even if a small proportion of a physician’s income comes from non-clinical activities reimbursed via a CRVP, it can still have a large impact on a physician’s involvement in these activities.13

Limitations
There are a number of limitations to consider when interpreting the results of this study. First, generalizability of the results to other settings may be limited to departments with similar missions and organizational structure. Second, more than half of the respondents from both departments had never worked under another academic compensation scheme, which could have complicated their ability to critically reflect on their existing ACS. Third, the potential existed for the same respondent to complete the online survey multiple times. The heterogeneity in the demographics of respondents suggests that duplicate responses were unlikely, but there is no way to verify that this did not occur. While the overall percentage of respondents was similar to published literature on expected physician response rates,14 the low absolute number of respondents, specifically from TEGH, poses further limitations to

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the statistical power and generalizability of the results. Finally, as this was a voluntary, non-randomized survey, a self-selection bias may have also existed.

Future Directions
Thus far, most of the research on CRVPs has looked at validating CRVPs in terms of improving clinical and academic productivity. The available evidence suggests that CRVPs represent the gold-standard among the various ACSs that have been studied. However, CRVPs are complex and involve a significant commitment of time and money. This suggests that the focus of research should shift toward sharing CRVP best practices among existing CRVP users and providing academic health science centers with the resources necessary to more easily make the transition to a CRVP should they choose to do so.

Conclusions
In this comparison of Canadian family physicians’ attitudes toward their non-clinical compensation schemes in two different academic family medicine departments, the physicians in the department that reimbursed non-clinical activities via a CRVP were more likely to be “very satisfied” with their compensation scheme for non-clinical work. Key reasons for greater physician satisfaction with compensation via a CRVP were a greater sense of “fairness” and adequate compensation for their activities. Physicians that had their non-clinical activities reimbursed via a CRVP were also more likely to perceive greater involvement in non-clinical activities, especially teaching and to want to continue working in their current department.

CONFLICTS OF INTEREST: Chris Cavacuiti is a staff physician at Saint Michael’s Hospital. Geordie Falls is a physician at the Toronto East General Hospital. Aaron Harris was a resident physician at Toronto East General Hospital at the time this research was conducted. Rajesh Girdhari was a resident physician at Saint Michael’s Hospital at the time the research was conducted. Babak Aliarzadeh has no conflicts to declare.

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References