# **ADVANCES**

# Variations in monetary distribution among Ontario's Alternative Funding Agreement workload model hospitals

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#### ABSTRACT

**Objectives:** Alternative Funding Agreements (AFAs) were in place in 41 hospital emergency departments (EDs) in Ontario at the time of this survey (May to August 2005). Each of these 41 hospitals works with its own internal administrative model. The primary objective of this paper was to document the administrative models used in these Ontario EDs. The secondary objective was to inform current and future AFA EDs of the potential models.

Methods: Telephone surveys were conducted with a member of each of the 41 AFA workload model hospitals.

**Results:** All hospitals provided at least 1 emergency physician to answer the questionnaire. Although most AFA hospitals divide the AFA fund pool on an hourly basis, there is impressive variation on premium values awarded for day, evening, weekend and night shifts. Other variations included holdback of funds for bonuses, distribution of non-OHIP (Ontario Health Insurance Plan) dollars, on-call allowances, and different pay scales for the general practitioners and locums working in some departments.

**Conclusions:** Allowing flexibility in distribution of AFA dollars to physicians in each group has helped make this program more acceptable. Many issues unrelated to funding remain to be resolved in order to stabilize ED recruitment and retention as well as improve work satisfaction. Further research on these latter topics is required to develop a fair and equitable funding arrangement that supports and enhances physician coverage in EDs across Canada.

Key words: AFA; Alternative Funding Agreements; premiums; non-OHIP dollars, fast-track

#### RÉSUMÉ

**Objectifs** : Les Alternative Funding Agreements (AFAs) (modes optionnels de rémunération) sont maintenant en place dans 41 services d'urgence d'hôpitaux ontariens au moment de ce sondage (de mai à août 2005). Chaque hôpital travaille à partir de son propre modèle administratif à l'interne. L'objectif principal du présent article était de documenter les modèles administratifs utilisés dans ces services d'urgence ontariens. L'objectif secondaire était d'informer les services d'urgence ayant adopté les AFA ou comptant les adopter à l'avenir au sujet des modèles possibles.

Méthodes : Des sondages téléphoniques furent menés auprès d'un membre de chacun des 41 hôpitaux fonctionnant selon le modèle des AFA.

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**Résultats** : Au moins un médecin d'urgence pour chacun des hôpitaux a répondu au questionnaire. Alors que la plupart des hôpitaux utilisant les AFA partagent les fonds communs des AFA selon une base horaire, il existe des variations impressionnantes par rapport aux primes accordées pour les gardes de jour, en soirée, de fin de semaine et de nuit. D'autres variations incluaient la retenue de fonds pour les bonis, la distribution de l'argent reçu des clients non couverts par le régime d'assurance-maladie de l'Ontario, les allocations pour les gardes sur appel et différentes échelles salariales pour les omnipraticiens et les suppléants travaillant dans certains départements. **Conclusion** : Le fait de permettre une certaine flexibilité dans la distribution de l'argent des AFA aux médecins de chaque groupe a rendu ce programme plus acceptable. De nombreuses questions non liées au financement doivent encore être résolues afin de stabiliser le recrutement du personnel au services des urgences ainsi que sa rétention et afin d'améliorer le taux de satisfaction au travail. Des recherches plus poussées sur ces deux derniers sujets sont nécessaires afin de mettre sur pied un modèle de financement équitable qui appuie et met en valeur le travail des médecins dans les services d'urgence partout au Canada.

# Introduction

Many jurisdictions in Canada are facing decisions regarding alternative funding programs, alternative reimbursement programs, or salaries for emergency physicians. There is a variety of reasons for this trend, including emergency department (ED) overcrowding, greater patient complexity, inadequate human resources and, in some cases, diminished patient volumes. The coalescence of these factors has created staffing shortages and forced closures of some EDs. Ontario's ED Alternative Funding Agreement (AFA) was introduced in 2000 to address significant problems in physician staffing in EDs across Ontario.

A variety of models to distribute the funds has been developed. Hospitals contemplating alternative funding programs in the future will wish to understand the reasons for successes and failures of these existing models. A large number of EDs are on a workload model, in which the department receives global funding for all work done in the ED by emergency physicians on patients with valid Ontario Health Insurance Plan (OHIP) numbers. Workload model EDs have funding for more than single coverage for all or part of the day. There are also 71 24-hour-model EDs in Ontario that are funded for only single coverage; they tend to be in small rural hospitals. At the time of the survey (May to August 2005), there were 41 EDs on the AFA workload model in Ontario. Since that time, this number has increased to 47.

Payments within these EDs takes into account not only daily volume but also acuity of patients seen, as based on the *Canadian Emergency Department Triage and Acuity Scale* (CTAS).<sup>1-5</sup> Although AFAs have helped to stabilize small volume EDs (i.e., 24-hour workload EDs), many larger EDs on the workload model continue to struggle to attract and retain physicians. With this study we hoped to determine the models that hospitals have developed for the distribution of funds, and the characteristics of these EDs for those considering alternative funding programs.

# Methods

#### Setting

One hundred and fourteen (76%) of the 150 active EDs in Ontario enlisted in the AFA in 2000. Of these, 73 are remunerated on a 24-hour model that is used for ED volumes of <26 000 visits per annum. The remaining 41 EDs are on a workload model in which the department receives global funding for all OHIP-related work performed in the ED by emergency physicians. Billing from workers' compensation and out-of-province and out-of-country patients is reimbursed separately. AFA dollars are paid on a monthly basis to each ED group and may be distributed in a fashion that is under the control of the individual group, as long as the criteria within the agreement are met.

#### Questionnaire

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Using telephone interviews, surveys were conducted with a member of each of the 41 AFA workload model hospitals. Questions asked pertaining to each AFA group were consistent and included the following issues.

- 1. Is remuneration to physicians on an hourly basis, shift basis or other?
- 2. Are premiums paid for the time of day or season one works?
- 3. Does your emergency department use family doctors or locums paid at different rates?
- 4. Do you have an on-call, back-up system?
- 5. How are non-OHIP payments dispersed (i.e., DND, WSIB, Quebec, RCMP, etc...)?
- 6. Is part of the AFA pool held back and paid out in bonuses? If so, how are bonuses calculated?

#### Site data

Data on total ED visits, CTAS scoring, and admissions (absolute and percentages) were provided by the Ontario Ministry of Health.

# Statistical analyses

Data were entered into SPSS. All results are reported as proportions or medians/means (with interquartile ranges [IQRs]/standard deviations [SDs]). When possible, proportions are reported using 95% confidence intervals (CIs). Comparisons between groups were completed using 2-tailed *t* tests of continuous data or  $\chi^2$  tests for proportions. *P* values were considered significant at *p* < 0.05.

# Results

### Site data

Overall, the 41 EDs saw a median of 41 572 (IQR 36 631, 58 201) patients annually. The mean percent of patients based on CTAS levels were as follows: CTAS Level I, 0.5%; Level II, 13.4%; Level III, 43.6%; Level IV, 37.4%; Level V, 4.9%. Overall, the median admission rate was 13.1% (IQR 9.3, 16.1).

#### **Contact**

Data were obtained from all 41 (100%) workload model hospitals listed by the government (Table 1) at that time. Contact with a member of each ED was made, and each respondent was able to provide appropriate answers to the 6 survey questions.

#### Remuneration type

Overall, 28 (68.3%) of EDs report paying an hourly wage to ED physicians for work performed, although a minimum patient volume per hour was not tied to this payment. The second most common approach was based on payment per shift worked (i.e., 11 [26.8%] with premiums provided to shifts based upon the time of day and day of the week). Two EDs (4.9%) used an alternative approach. The remuneration type was not related to the volume of the ED (mean difference -1057; 95% CI -12 587 to 10 473), the proportion of CTAS Level III cases per site (5.8%; 95% CI -0.41 to 11.9), or admission rate (mean difference 1.4%; 95% CI -1.7 to 4.5).

# Premiums

All but 8 (19.5%) AFAs paid premiums for different shifts worked. The majority paid weekdays the least, followed by evenings, weekends and night shifts. Some other departments simply paid premiums for nights. One hospital var-

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ied the premiums on a seasonal basis due to large seasonal fluctuations in volume. Many hospitals paid specific premiums for Christmas, New Years and Boxing Day, and a few did this for long weekends and other holidays. Finally, 8 hospital groups paid premiums per hour or per shift, based on the number of shifts (hours) covered by the individual doctor (i.e., Loyalty Premiums: the more you work the more you make per hour or shift).

# Staffing

Local general practitioners (GPs) or locums were reportedly used regularly to supplement the emergency staff in 10 (24%) EDs. In community-based non-teaching EDs, GPs were often used to cover the "fast track" side. Most ED groups reported that they paid these physicians at a lower hourly or shift rate. Not only did this increase the ED coverage, it also permitted stabilization of the rates paid to the full-time emergency physicians. EDs using local GPs also felt this system added to physician cohesiveness and general overall care of patients. Some larger EDs used locums on a regular basis to help cover shifts. In most cases the locums were paid on an hourly rate either on par or below the permanent AFA members.

# On call

On-call/callback systems varied greatly among the surveyed EDs. Only 1 of the EDs surveyed had a scheduled on-call system. Many others were essentially voluntary, with phone calls made when there was a significant need. Some hospitals stated that there were never any callbacks and that doctors on duty would cope. This was more common in hospitals with double or triple coverage already in

> Table 1. Payment systems in the 41 Ontario hospital emergency departments that had an Alternative Funding Agreement in place at the time of the survey

| Factors   | No. (and %) of hospitals |
|---|--------------------------|
| Remuneration method   |                          |
| Hourly  | 28 (68.3)                |
| Shift   | 11 (26.8)                |
| Other   | 2 (4.9)                  |
| Shift premiums*   | 33 (80.4)                |
| Non-OHIP billings pooled                                      | 20 (48.8)                |
| GPs or locums used regularly to<br>supplement emergency staff | 10 (24.0)                |
| On-call/Callback system                                       | 11 (26.8)                |
| Bonus system  | 25 (61.0)                |

OHIP= Ontario Health Insurance Plan; GP = general practitioner \*Based upon the time of day and day of the week. place. Payment for callbacks varied as well. Some ED AFAs paid \$100–\$300 or 1–2 hours out of AFA-funded dollars for callbacks, in addition to the hourly payments, and other EDs only paid normal hourly rates. Some ED AFAs paid for extra hours worked at the end of a shift if there was a need; most others did not.

#### **Payments**

Twenty (48.7%) of the ED AFAs placed their non-OHIP payments into the AFA pool; the others permitted individual physicians to receive/collect these payments directly. Approximately two-thirds of the ED AFAs had some bonus payment system. The amount of money held back to be paid in bonuses ranged from a nominal amount (i.e., 2%-5% of the AFA pool), up to 20%-50% of the AFA pool in 9 departments. Systems for calculations of bonuses varied as well. For those ED AFAs paying bonuses, onehalf paid based on the number of hours or shifts an individual doctor worked. About one-quarter of ED AFAs used the number of patients seen to pay bonuses. Of the remaining ED AFAs, 1 used a system based on volume and acuity (CTAS per patient/no. of patients seen) and 4 used individual fee-for-service (FFS) billings to calculate bonuses. Three of the groups paid 50% of the AFA pool based on FFS billing, and the rest paid via hourly premiums. Seven of the ED AFAs used money held back to pay for doctor call-ins.

#### Unique systems

Two ED groups developed individualized systems for remuneration. In 1 group, full-time EPs worked a balanced schedule and received annual salaries. The AFA pool also covered medical dues, conferences and holiday pay. In addition, outside GPs/locums were employed and paid an hourly premium. In the other group, all physicians shadow billed and collected 100% of FFS shadow billings (billings adjudicated by group members). A minimum amount was paid per shift even if AFA billings did not reach this level (i.e., a "top-up" amount). Remaining AFA dollars were paid out in bonuses based on the number of shifts worked that were not topped up.

# Discussion

This telephone survey of Ontario's 41 AFA hospital EDs revealed that the majority of ED groups pay some form of shift or hourly wage for the ED work performed. The annual salary approach is not favoured, and alternatives to the above approaches were uncommon among workload model hospitals. Although there is substantial variation among ED AFAs, each group appears to have found a way to meet the needs of their group, suggesting a top-down imposed model would not be well received. In picking a system, each group must decide on the relative merits of each component of the model and how they best fit their group and the needs of their community.

Although most of Ontario's EDs have chosen the AFA system over the FFS system, dissatisfaction with ED working conditions has increased,<sup>6-9</sup> largely driven by increasing wait times,<sup>10-13</sup> ED overcrowding<sup>14-17</sup> and issues regarding ED funding.<sup>18</sup> Unfortunately, the AFA seems to have been unable to solve the current problems facing Ontario EDs. Although potentially encouraging more physicians to work in EDs, increased funding of physicians does not correct multiple system deficiencies — deficiencies most feel will only worsen in the coming years. A number of physicians expressed hope that the recent Predictors of Workload in the Emergency Room (POWER) Study will support better funding encouraging increased physician coverage in EDs across Ontario.<sup>19</sup>

How do these results compare with elsewhere in Canada? A comprehensive search using the following terms in Ovid, MEDLINE, and EMBASE revealed no relevant articles: Emergency medicine (Medical subject heading [MeSH]), Reimbursement mechanisms (MeSH) or Alternative payment plans (text), AND Canada (MeSH). By examining national and international ED Web sites and communicating with several national experts, we were unable to identify any published reports or publications that have addressed the issue of physician remuneration in emergency medicine in Canada. Hand searching in CJEM did, however, uncover 3 additional references that were partially relevant.<sup>20-22</sup> In the first, the authors explored workforce differences between the workload hospitals before and after the introduction of the AFAs. AFAs were not associated with substantial changes in the overall physician workforce in EDs.20 The second was an editorial that discussed the pros and cons of FFS models.<sup>21</sup> Finally, the third was a letter to the editor suggesting that replacing FFS with AFAs would not singularly resolve all of the problems associated with ED work life.22 This limited literature base may not be surprising to some, considering that alternative ED payments schemes are relatively new in the context of the Canadian health care system. As other jurisdictions contemplate AFAs, alternative reimbursement programs, and other non-FFS models, it is important to describe the options and the factors associated with these selections.

#### Limitations

The potential limitations in this study arise largely from its

design. First, as in many surveys, time did not permit a comprehensive evaluation of the dynamics of each ED group. Consequently, we are unclear about the rationale for the decisions on funding and which model may be best suited to stabilizing the ED, improving retention and increasing satisfaction within the members of the department. Second, data were not collected on the satisfaction of individual physicians with respect to the funding arrangement. Since site physicians were not contacted about their opinions, the effectiveness of these remunerative arrangements is largely unknown. Third, although responses were obtained from each group, the respondents varied among sites. Finally, only 1 province's experience is described, and this experience may be unique to this setting. The bias associated with this may limit the generalizability of the results.

# Conclusion

Allowing flexibility in distribution of AFA dollars to physicians in each group has helped to make this program more widely acceptable. Despite this apparent success, many issues remain to be resolved in order to stabilize ED recruitment and retention as well as improve work satisfaction. Further research is required on the satisfaction of individual physicians with the funding formulas and on manpower studies, such as the POWER Study, to develop a fair and equitable funding arrangement that supports and enhances physician coverage in EDs across Canada.

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#### References

- Jiménez JG, Murray MJ, Beveridge R, et al. Implementation of the *Canadian Emergency Department Triage and Acuity Scale* (CTAS) in the Principality of Andorra: Can triage parameters serve as emergency department quality indicators? Can J Emerg Med 2003;5(5):315-22.
- Beveridge R, Clarke B, Janes L, et al. Canadian Emergency Department Triage and Acuity Scale: implementation guidelines. Can J Emerg Med 1999;1(3 suppl). Online version available at: www.caep.ca (accessed 20 Nov 2006).
- 3. Warren D, Jarvis A, Leblanc L; and the National Triage Task Force members. Canadian Paediatric Triage and Acuity Scale:

https://doi.org/10.1017/S148180350001469X Published online by Cambridge University Press

implementation guidelines for emergency departments. Can J Emerg Med 2001;3 (4 suppl):S1-27.

- 4. Wuerz RC, Milne LW, Eitel DR, et al. Reliability and validity of a new five-level triage instrument. Acad Emerg Med 2000;7: 236-42.
- 5. Murray M, Bullard M, Grafstein E; for the CTAS and CEDIS National Working Groups. Revisions to the *Canadian Emergency Department Triage and Acuity Scale Implementation Guidelines*. Can J Emerg Med 2004;6(6):421-7.
- Fernandes CMB, Christenson JM. Use of continuous quality improvement to facilitate patient flow through the triage and fast-track areas of an emergency department. J Emerg Med 1995;13: 847-55.
- 7. Fernandes CMB, Christenson JM, Price A. Continuous quality improvement reduce length of stay for fast-track patients in an emergency department. Acad Emerg Med 1996;3:258-63.
- Murray MJ, Levis G. Does triage level (Canadian Triage and Acuity Scale) correlate with resource utilization for emergency department visits [abstract]. Can J Emerg Med 2004;6(3):180.
- 9. Trzeciak S, Rivers EP. Emergency department overcrowding in the United States: an emerging threat to patient safety and public health. Emerg Med J 2003;20:402-5.
- Baker DW, Stevens CD, Brook RH. Patients who leave a public hospital emergency department without being seen by a physician. JAMA 1991;266:1085-90.
- 11. Hobbs D, Kunzman SC, Tandberg D, et al. Hospital factors associated with emergency center patients leaving without being seen. Am J Emerg Med 2000;18:767-72.
- 12. Fernandes CM, Daya MR, Barry S, et al. Emergency department patients who leave without seing a physician: the Toronto Hospital experience. Ann Emerg Med 1994;24:1092-6.
- Dunn R. Reduced access block causes shorter emergency department waiting times: An historical control observational study. Emerg Med 2003;15:232-8.
- Canadian Association of Emergency Physicians and National Emergency Nurses Affiliation. Joint Position Statement on emergency department overcrowding [policy]. Can J Emerg Med 2001;3(2):82-4.
- Canadian Association of Emergency Physicians and the National Emergency Nurses Affiliation. Access to acute care in the setting of emergency department overcrowding [policy]. Can J Emerg Med 2003;5(2):81-6.
- 16. Derlet R, Richards J, Kravitz R. Frequent overcrowding in U.S. emergency departments. Acad Emerg Med 2001;8:151-5.
- Espinosa G, Miro O, Sanchez M. Effects of external and internal factors on emergency department overcrowding. Ann Emerg Med 2002;39:693-5.
- 18. Thompson JM, Dodd G. Ruralizing the Canadian Triage and Acuity Scale. Can J Emerg Med 2000;2(4):267-9.
- 19. Dryer JF, Zaric GS, McLeod SL, et al. Emergency physician time by activity and hospital type [abstract]. Acad Emerg Med 2006;5(suppl 1):S92-3.
- Schull MJ, Vermeulen M. Ontario's alternate funding arrangements for emergency departments: the impact on the emergency physician workforce. Can J Emerg Med 2005;7(2):100-6.
- 21. Innes G. Eat what you kill [editorial]. Can J Emerg Med 2000;2(4):228.
- 22. Campbell SG, Watson ML. Fee-for-service remuneration [letter]. Can J Emerg Med 2001;3(1):6-7.

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