

Original Article

## PAY FOR PERFORMANCE (P4P): A MOTIVATION OF DRUG INFORMATION SERVICE WORK LOAD REPORT IN THUNGSONG HOSPITAL

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### ABSTRACT

**Objective:** The aim of this study was to observe the improvement of the report of DIS work load using Pay for Performance (P4P) in Department of Pharmacy of Thungsong Hospital in short term period (four months).

**Methods:** This study had 2 phases; problem identification (phase 1) and problem elimination and evaluation (phase 2). The number of questions for each health care vocation and category of question, reply duration of the question, and accuracy of the answers during January to August 2013 were collected. The causes of under report of DIS work load results were identified. After that, the motivation of the report of DIS work load by P4P was used. The different number of questions for each health care vocation and category of question during September to December 2013 were collected. The increasing of the number of questions was compared to the number of question before P4P used.

**Results:** The number of reports increased when compared to the previous P4P used; 3-5 questions per month in January to August 2013 compared to 11-14 questions per month in September to November 2013. The reply duration of the question within the questioner requirement and the accuracy of answers that rechecked by DIS pharmacist was 100%. However, in December the report was decreased.

**Conclusion:** The report of DIS work load was improved after using P4P as a motivation strategy. The P4P can activate the report of DIS work load in September to November but not for December. However, the sustainable of improvement must be further monitored.

**Keywords:** Pay for performance, P4P, Drug information service, Thungsong hospital.

### INTRODUCTION

Drug information service (DIS) is a field that the pharmacists specialize in providing medical information to healthcare professionals and public [1]. DIS has been used as instrumental in improving rational drug. The new powerful and specifically acting drugs need precise, updated, unbiased, and synthesized drug information that must be used appropriately [2]. The purposes of the questions are usually for better patient care and update knowledge [3]. In Thailand, DIS is usually provided by pharmacists in the university and hospitals via face-to-face communication, telephone, letter, fax and e-mail. The systematic and very popular drug information center (DIC) in Thailand is constructed by Faculty of Pharmaceutical Sciences, Prince of Songkla University. This DIS website has been opened access and answering questions about drug-related issue since 1999 [4].

Thungsong Hospital is a 234 beds secondary hospital located in the southern of Thailand at Thungsong district, Nakhon Si Thammarat province. Department of Pharmacy constructs the DIC in order to providing medical information to healthcare professionals and public as well as promotes the useful drug-related information for the better patient safety. However, the under report of DIS work load is still occur, the improvement of the report of DIS work load is necessary to improve the DIS management system.

Pay for Performance (P4P) is a payment model that rewards healthcare workers for gathering pre-established target for delivery of healthcare services by financial incentives. The healthcare workers receive either additional or reduced payment based on their performance [5]. There are systematic reviews that showed the P4P is a cost-effective method; however, data is available on a wide variety of effects, from negative to positive or very positive due to a limited quantity of studies with strong designs [6, 7]. Nowadays, the effectiveness of P4P is still controversial. Thailand is one of the countries that use P4P for improves the effectiveness and quality of healthcare service follow the guidance of Ministry of Public Health of

Thailand. The DIS is a one of many activities that can use for calculate P4P financial incentives [8]. Thus, the P4P is a one tool that can motivate the report of DIS work load of each pharmacist. The aim of this study was to observe the improvement of the report of DIS work load using P4P in Department of Pharmacy of Thungsong Hospital in short term period (four months).

### MATERIALS AND METHODS

This study had 2 phases: problem identification (phase 1) and problem elimination and evaluation (phase 2). Phase 1 and phase 2 were period before and after improve the DIS system with P4P, respectively.

#### Phase 1 (problem identification)

The number of questions for each health care vocation (doctors, nurses, pharmacists, and other) and category of question (identification, dosage administration, drug interaction, therapeutic use/drug of choice/pharmacology/efficacy, adverse drug reaction, stability/compatibility, pregnancy/lactation, poisoning/toxicity, herbal drugs, and other) during January to August 2013 were collected. In addition, reply duration of the question was monitored. The answers were rechecked by DIS pharmacist to evaluate the accuracy of the answers. The causes of under report of DIS work load were identified.

#### Phase 2 (problem elimination and evaluation)

The Department of Pharmacy had strategy to motivate the report of DIS work load using P4P score; more report of DIS work load, more P4P score of each pharmacist. In addition, the report of DIS was improved; pharmacists can retrospective fill the DIS reporting form but within 24 hours, the real time fill can be adopted if possible. The number of questions for each health care vocation and category of question during September to December 2013 were collected. Furthermore, reply duration of the question was monitored. The answers were rechecked by DIS pharmacist. The increasing of the

number of questions that reported was compared with the number of question before P4P was used.

**RESULTS AND DISCUSSION**

DIS is providing useful information to health care worker and that the information is being practical to individual patient problems [9]. The number of questions for each month during January to August

2013 was under report. The under report of DIS results made a few data to analyses for improve the DIS management system. The number of questions for each health care vocation was 38.89, 41.67, 16.67, and 2.78% for doctors, nurses, pharmacists, and other, respectively (Table 1). The most frequency questions were dosage administration, stability/compatibility, and identification; 44.44, 30.56, and 11.10%, respectively (Table 2).

**Table 1: Number of questions for each health care vocation (January-December 2013)**

Questioner	Number of questions												Total
	Jan. 2013	Feb. 2013	Mar. 2013	Apr. 2013	May 2013	Jun. 2013	Jul. 2013	Aug. 2013	Sep. 2013	Oct. 2013	Nov. 2013	Dec. 2013	
Doctors	3	1	2	1	1	-	3	3	1	5	2	1	23
Nurses	-	3	2	4	2	2	2	-	6	6	9	3	39
Pharmacists	-	-	1	-	2	3	-	-	4	3	-	-	13
Other	-	-	-	-	-	-	-	1	-	-	-	-	1
Total	3	4	5	5	5	5	5	4	11	14	11	4	76

The causes of this problem were various workloads with limited number of pharmacists [10], less realized the importance of DIS, lack of motivation strategies, and the complication of data collection. The pharmacist team concluded the method to solving this problem by using the P4P that scored every month and the report process of DIS was improved; pharmacists could retrospective fill the DIS reporting form but not more than 24 hours, the real time fill could be adopted if possible.

After the improved system, the number of reported questions or number of reports were increased; 11, 14, 11 questions in September, October, and November, respectively. The number of reports increased when compared to the previous P4P used. However, in December, the number of reports decreased to 4

questions as same as before the improvement. The number of questions for each health care vocation was 22.50, 60.00, and 17.50% for doctors, nurses, and pharmacists, respectively (Table 1).

The most frequency questions in 2013 were dosage administration, stability/compatibility, and drug identification: 47.37, 21.05, and 10.53%, respectively (Table 2). The reply duration of the question within the questioner requirement was 100 %.

The accuracy of answers that rechecked by DIS pharmacist was 100% (data not shown). The frequency of question categories was different for each health care unit depends on the contexts of each hospital [11]. However, the purpose of the question was for better patient care [12].

**Table 2: Number of questions for each category of question (January-December 2013)**

Category of question	Number of questions												Total
	Jan. 2013	Feb. 2013	Mar. 2013	Apr. 2013	May 2013	Jun. 2013	Jul. 2013	Aug. 2013	Sep. 2013	Oct. 2013	Nov. 2013	Dec. 2013	
Identification	-	-	-	1	1	-	2	-	-	2	2	-	8
Dosage administration	-	2	3	4	1	2	2	2	6	8	3	3	36
Drug interaction	-	-	-	-	-	-	-	-	1	-	-	-	1
Therapeutic use/drug of choice	-	-	-	-	2	-	-	-	1	2	1	-	6
Adverse drug reaction	-	-	-	-	-	-	-	-	1	1	3	-	5
Stability/compatibility	2	2	2	-	1	2	1	1	1	1	2	1	16
Pregnancy/lactation	1	-	-	-	-	1	-	1	1	-	-	-	4
Total	3	4	5	5	5	5	5	4	11	14	11	4	76

The more reports of DIS work load could guide the direction of DIS work. The DIS manual was produced and the frequency questions were collected for rapid answers. The frequency of question categories were used for prepare the hospital manual such as the manual of dosage administration, stability/compatibility, pregnancy/lactation, etc. Furthermore, the pharmacy letter was produced every month and distributed to all associate departments. The reliable references for DIS were provided including textbooks, handbooks, guidelines, etc. However, assessment for the quality of the service, for example, straightforwardness and reliability of references used should be evaluated [4]. In addition, the DIS system still needs improvement for better supply of quality service [13].

The worldwide research is necessary on the pro and con of P4P and P4P programs should be focused on both quality improvement and achievement [6], as well as on the long-term influence on patient health and budgets [7]. This study revealed that the P4P can improve the report of DIS work load in this hospital but the sustainable of the improvement should be further monitored. In addition, the P4P should be also adapted to the other work of Department of Pharmacy of this hospital.

**CONCLUSION**

The most frequency questions in 2013 were dosage administration, stability/compatibility, and drug identification approximately 50, 20, and 10%, respectively. The report of DIS work load was improved after using P4P as a motivation. The number of reports increased when compared to the previous P4P used, except in December. This study showed that the P4P could activate the report of DIS work load in this hospital. Nevertheless, the sustainable of improvement must be further monitored.

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