The Evaluation of Primary Care Unit of Mahasarakham Hospital

Paibool Asavatanabodee MD*

** Department of Community Medicine, Mahasarakham Hospital, Mahasarakham, Thailand*

Objective: *To evaluate the one-year performance outcome of Community Medical Care Unit (CMU) in Mahasarakham Hospital.*

Material and Method: *This cross-sectional descriptive study used the CIPP model. The target population was divided into two groups. The first group consisted of the executive committee of Mahasarakham Hospital including one director, five Vice-directors, and 16 CMU paramedical personnel and public health administrators. The second group consisted of 281 randomized people in the service area of CMU, Mahasarakham Hospital.*

Results: *The overall outcome evaluation of both groups was high with mean of 3.53 and 3.86, respectively. The evaluation of context, input, and output was ranked high in both groups while the process ranking was moderate in the first group and high in the other group. The present study proposed that project guidelines be explicit policies, improvement in behavioral service, appropriate workload, adequate parking lot, and network sharing of hospital data bank.*

Conclusion: *The quality and efficiency of CMU project are dependent upon explicit policy, well-planned structure of organization, efficient-informative systems, good development plan, and adequate manpower. The personnel should plan the project process and continuously improve the system. CMU project would be neither successful nor beneficial for the development of public health care system if it lacked the participation of the people in the community and associated networks. The results of the present study might be the useful data for improving and developing the pattern of community healthcare service in urban area.*

Keywords: *Evaluation, Primary care unit, Mahasarakham Hospital*

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Primary care unit (PCU) is defined as the first holistic healthcare service unit. It is providing health promotion, prevention, treatment, and rehabilitation to the family and community. The PCU is serviced by skilled professionals, and registered paramedical. Owing to the easily accessible location, the PCU is the first place the people choose for their medical care. The healthcare service in PCU includes home care service corroborating with network service organizations, and effective referral to higher facility hospital. The purpose is to provide the good healthcare, high quality service, and participate in the health community program. It also teaches and encourages people about self-care.

Correspondence to: Asavatanabodee P, Department of Community Medicine, Mahasarakham Hospital, Mahasarakham 44000, Thailand.

In the past, some PCUs were responsible for a considerable number of people and some units were hardly accessible for the people. The urban area, which was the central area of economy and transportation, was overpopulated and lacked PCUs. That is why the Nation Health Security Office and Ministry of Public Health developed PCU for primary care with a variety of appropriate services based on the size of the service area. It then established "Community Medical Unit" (CMU) to become the most efficiently integrated healthcare service. These CMUs are 24-hour clinics with active and passive service by physicians to improve the quality and increase healthcare access under the holistic and integrated principle of collaborative participation of people and local administrators.

In 2006, Mahasarakham Hospital had selected CMU in Mahasarakham province under the name of

"CMU Mahasarakham Hospital". The service system had been modified to be holistic, integrated, and harmonious, with the principle of present health service system revolution, and able to connect with the central hospital. This CMU provided management, health promotion, and disease prevention. The service accentuated high professional standard and most people benefits. Furthermore, this primary healthcare service was close and took care of individuals, family, and community under the customer focus and ownership concept. The CMU Mahasarakham Hospital had been responsible for seven communities and 2,252 households.

This study is to evaluate context, input, process, and output of the CMU Mahasarakham Hospital after one year operation by using a CIPP[1] model (Fig. 1).

Material and Method

This cross-sectional descriptive study is using the Daniel L Stufflebeam's CIPP model. The target populations were divided into two groups. The first group (Executive) consisted of the executive committee of Mahasarakham hospital, one director, five Vice-directors, and 16 CMU paramedical personnel and public health administrators. The second group (People) consisted of 281 randomized people in the service area of CMU, Mahasarakham Hospital.

Calculating sample size in accordance with Arun Jeerawatanakul formula (2000)[2] as follows:

$$n = \frac{NZ^2_{a/2}\,Q^2}{e^2\,(N-1) + Z^2_{a/2}\,Q^2}$$

where n = Sample size

N = Populations (10,696)

$Z^2_{0.025}$ = Determining Probability 95% = 1.96

Q = Standard deviation was equal to 0.78 and it was the highest devaluation of variables, deriving from pre-observation.

e = Determined error was equal to 0.09 by a researcher.

$$\text{Stand for } n = \frac{10{,}696 \times (1.96)^2 \times (0.78)^2}{(0.09)^2 \times (10{,}696-1) + (1.96)^2 \times (0.78)^2}$$

$$= 280.99 \text{ people}$$

The random sampling was done with populations who were more than 13 years old, according to the calculated number, by simple random sampling (Table 1).

Research instruments

A researcher had developed the research instruments from documents, researches, and textbooks, which were two questionnaire sets.

- Set 1 was a questionnaire for management and officials; it was divided into six parts.

- Set 2 was a questionnaire for people; it was divided into six parts.

Opinions to operation activities in context, input, process, and output of the CMU Mahasarakham Hospital used a Likert's scale measure method. The rating scales were divided into five levels, strongly disagree = 5, agree = 4, neither agree nor disagree = 3, disagree = 2, and strongly disagree = 1. There were 40 questions for management and officials and 30 questions for people. All questions had been translated individually. Answers were considered by means of midpoint of score interval scale (Prakong Kannasut, 1981)[3].

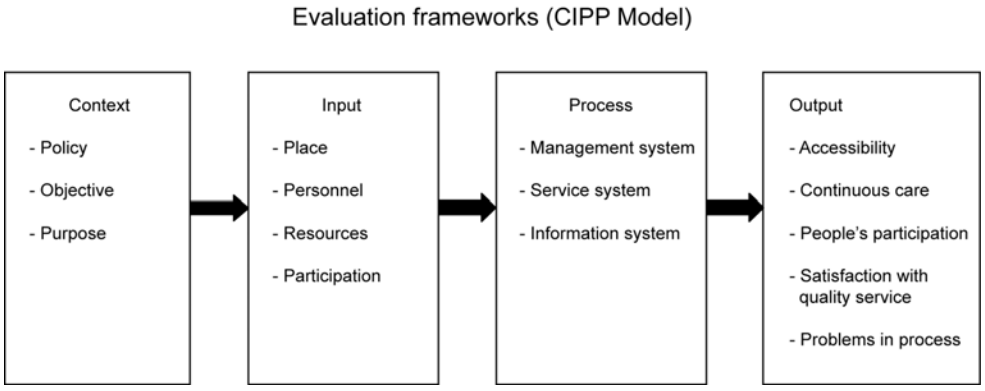

Fig. 1 CIPP model

Table 1.

Community	A number of populations who are more than 13 year old	A number of randomized populations
Thanyawat 1	1,558	41
Thanyawat 2	1,354	36
Samakkee 1	1,626	43
Samakkee 2	1,875	49
Phosee 1	1,894	50
Phosee 2	1,264	33
Mahachai	1,125	29
Total	10,696	281

Mean score 4.50-5.00 = Best performance.
Mean score 3.50-4.49 = High performance.
Mean score 2.50-3.49 = Medium performance.
Mean score 1.50-2.49 = Low performance.
Mean score 1.00-1.49 = Worst performance

Checking instruments

The validity of the instruments was checked by experts, and reliability was checked through 30 questionnaires given to the management and medical center officials of Sila community, Sila sub-district, Muang Khon Kane, and people in care of Sila medical center. The reliability was assessed by means of Chronbach's Alpha Coefficient. The executive's questionnaire reliability was equal to 0.97 and the people's questionnaire was equal to 0.84.

Results

Evaluation of the global outcome assessed by the executive committee and paramedical personnel of Mahasarakham Hospital (n = 22) (Table 2)

Overall outcome evaluation of CMU was high (mean = 3.53 out of 5 scores).

Obstacles and proposed recommendation

In the policy issue, because of the inefficient development plan, the project policy should be explicit and the existing guideline should be performable. In the paramedical personnel subject, the workload and complicated task resulted in high intensity of stress among the personnel. Increasing the number of medical personnel should be considered. It would reduce inappropriate workload and improve behavioral service. In the working environment domain, limited workspace and parking lot made the service inconvenient and ineffective. Expanding the service area and parking lot would improve the working environment. Moreover, sharing the database over the hospital network should be improved. This would advance the hospital-community communication and help in completing the project within a specified period.

Evaluation of the overall outcome, assessed by randomized people (n = 281) (Table 3)

Overall outcome evaluation of CMU was high ranking (mean = 3.86 out of 5 scores).

Obstacles and proposed recommendation

In the service issue, good doctor-patient relationship is fundamental. The physicians and paramedical personnel should have a service-minded attitude and "tender and care" manner. Manpower should follow the workload. More convenient and comfortable service to patients should be considered. The waiting time during registration, medical service, appointment, investigation, and dispensing should be reduced to improve patient satisfaction. Health information and patient education should be provided regularly, and at all time in the service area. For the health care providers, working area should be adequate and parking lot should be sufficient. Medical devices such as electrocardiograph should be modern and available. Public health information should be sufficient for the people to understand the CMU

Table 2.

Assessment	$\bar{x}$	SD	Level of evaluation
Context	3.59	0.39	High
Input	3.53	0.29	High
Process	3.41	0.44	Moderate
Output	3.66	0.49	High
Total	3.5	0.29	High

Table 3.

Assessment	$\bar{x}$	SD	Level of evaluation
Context	4.03	0.53	High
Input	3.59	0.62	High
Process	3.88	0.55	High
Output	3.98	0.60	High
Total	3.86	0.50	High

roles. Finally, more access to community healthcare services should be provided.

Discussion and Conclusion

Context

Both, the executive and the people groups agreed that the CMU is beneficial for providing people with a healthcare service that is more accessible. It may be due to being a nearby clinic and having the explicit policy of access. This CMU also had consistent service and standard management guidelines[4], which are harmonious with the patient lifestyles and community culture.

Input

The executive group agreed that the CMU workplace is restricted and inappropriate for service. A clean and conveniently-designed workplace, along with an adequate medical device supply influenced the patient satisfaction[5]. Both groups still agreed that the paramedical personnel in the service area are overworked. Likewise, the complicated structure of the in-bound clinic had put extra-stress on the work among the paramedical personnel and resulted in emotional instability and impatience[6]. The shortage of manpower impeded the service in achieving the goals within the specified period. The proposed recommendation is to increase the number of paramedical personnel appropriately based on the service workload.

In the perspective of materials, medical devices, medications, and pharmaceutical products, the executive group agreed that the availability of adequate and appropriate materials and medical devices would improve the service. Meanwhile, the people's group commented that drug dispensing errors in hospital pharmacy should be eliminated. Furthermore, a CMU drug list should be developed to be more appropriate to the chronic diseases. Both groups agreed that the CMU service under network communication has motivated the patients on participation in community healthcare service.

Process

Both groups agreed to improve the convenience of the service in the CMU and to promote the health advices provided by the health care and CMU volunteers. Meanwhile both groups evaluated that the administrative arrangement such as project plan, organization structure, manpower, data information system, and data management system were in the moderate rank. They commented that adjustment of plan and policy to be more appropriate and harmonious to projects would provide more efficiency of the system. They also mentioned that the informative data should be arranged to be complete, reliable, and practical for the developmental plan, in both CMU and community. The data is essential for planning the structure of the organization. Additionally, the information system must be united and connected with the CMU and central hospital.

Output

The executive group agreed that CMU could provide continuous care service for patients with chronic disease. That is consistent with the people comment that the CMU has provided a useful, convenient, accessible, and active "close to house-close to heart" medical service for people in the community. They were satisfied and insisted on the CMU service.

CMU is the one of projects of public health administration of Mahasarakham Hospital. The quality and efficiency of the project are dependent upon the explicit policy, well-planned structure of organization, efficient information system, good developmental plan, and adequate manpower. The personnel should always plan project work and have continuous improvement of the system. However, the accomplishment of the CMU project would be impossible if it lacked the participation of the people in the community and associated networks.

Recommendation

1. Mahasakham Hospital should arrange the explicit policy, structure, project plan, and information communication unit.

2. The executive committee should emphasize the workload, allotting the budget, manpower, and medical appliances for supporting the CMU work.

3. The personnel should participate in planning and processing the activity in CMU.

4. The people in the community should be encouraged to participate in the different levels of work in urban health service for the long-term success.

5. The workplace and parking lot should be expanded to be appropriate for the number of patients and cars.

6. To increase patient satisfaction, the response of the service system should be rapid, proper, and equally accessible. This includes coverage

of pharmaceutical administration and one-stop service for general diseases and chronic illnesses.

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The results of the present study might be valuable data for improving and developing the pattern of health community service of Mahasarakham Hospital in the future.

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การประเมินผลการดำเนินงานคลินิกชุมชนโรงพยาบาลมหาสารคาม

ไพบูลย์ อัศวธนบดี

วัตถุประสงค์*: เพื่อประเมินผลการดำเนินงาน ของคลินิกชุมชนโรงพยาบาลมหาสารคามที่ได้ดำเนินการมาแล้วนานหนึ่งปี ซึ่งอาจจะเป็นข้อมูลที่เป็นประโยชน์ในการพัฒนา และปรับปรุงการดำเนินงานด้านบริการสุขภาพในเขตเมืองต่อไป*

วัสดุและวิธีการ*: การศึกษาเชิงพรรณนาแบบภาคตัดขวางโดยใช้รูปแบบประเมินผล CIPP เพื่อประเมินผลการดำเนินงานของคลินิกชุมชนโรงพยาบาลมหาสารคาม กลุ่มประชากรที่นำมาศึกษามี 2 กลุ่ม คือ กลุ่มที่ 1 ได้แก่ กลุ่มผู้บริหาร ประกอบด้วยผู้อำนวยการ รองผู้อำนวยการ 5 คน และเจ้าหน้าที่สาธารณสุขที่เกี่ยวข้องในโรงพยาบาล กลุ่มที่ 2 ได้แก่กลุ่มประชากรที่สุ่มตัวอย่างจากประชากรในเขตรับผิดชอบ จำนวน 281 คน ระยะเวลาที่ศึกษาตั้งแต่ 1 กรกฎาคม พ.ศ. 2550 ถึง 30 กันยายน พ.ศ. 2550*

ผลการศึกษา*: การศึกษาพบว่าทั้งสองกลุ่มมีความเห็นตรงกันในภาพรวมว่า การดำเนินงานของคลินิกชุมชนอยู่ในระดับดีมาก โดยมีค่าเฉลี่ยเท่ากับ 3.53 และ 3.86 ตามลำดับ โดยมีบริบทด้านปัจจัยนำเข้าและด้านผลผลิตอยู่ในระดับดีมาก ส่วนด้านกระบวนการมีความคิดเห็นในระดับดีปานกลางในกลุ่มแรกและดีมากในกลุ่มหลัง ข้อเสนอแนะในด้านนโยบาย คือ ควรมีนโยบายในการพัฒนาระบบต่าง ๆ ที่ชัดเจน ส่วนในด้านพฤติกรรมบริการควรมีการเพิ่มจำนวนบุคลากรให้เหมาะสมกับภาระงาน สำหรับในด้านสถานที่บริการควรปรับปรุงแก้ไขสถานที่ซึ่งคับแคบและมีพื้นที่จอดรถซึ่งไม่เพียงพอต่อความต้องการ ตลอดจนควรดำเนินโครงการเชื่อมโยงเครือข่ายข้อมูลของโรงพยาบาลและคลินิกชุมชนเพื่อให้สามารถใช้ข้อมูลร่วมกันได้อย่างมีประสิทธิภาพ*

สรุป*: ประสิทธิภาพและคุณภาพของโครงการคลินิกชุมชนโรงพยาบาลมหาสารคาม ขึ้นกับการมีนโยบายที่ชัดเจน มีการวางแผนด้านโครงสร้างขององค์กร มีระบบข้อมูลที่มีประสิทธิภาพ รวมทั้งมีแผนการพัฒนาการจัดสรรอัตรากำลังของบุคลากร ควรมีการวางแผนโครงการและพัฒนาระบบรองรับอย่างสม่ำเสมอ การดำเนินงานของคลินิกชุมชนจะไม่สามารถประสบความสำเร็จและเกิดประโยชน์ต่อระบบสุขภาพได้เลย หากขาดการมีส่วนร่วมของประชาชนและเครือข่ายบริการ*