Problems and Obstacles in Implementation of Nosocomial Infection Control in Thailand

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Objectives : *To study the problems in implementation of nosocomial infection (NI) control in Thailand and strategies to overcome the obstacles.*
Material and Method : *Interviewing administrators, chair-persons of infection control committee and doctors.*
Results : *During June 2002 and August 2003, 255 persons were interviewed by infection control nurses using a set of questionnaires. Administrators, chair-persons of infection control committee, doctors in 32 hospitals across the country were enrolled by stratified random sampling. Policy on NI control was known to 95.3% and implementation to 81.2% of subjects. The main obstacles of NI control was the lack of incentive (66.7%) and support from administrators (30.2%). Hospital administrators set NI control at high priority, in only 40.9%, they could be motivated by regular presentation of NI data. Infection control nurses (ICN) should ideally work full-time (88.6%) but in reality, only 20.8% did so. The main problem for NI control was the shortage of ICN posts in most hospitals. This resulted in no career ladder and incentive for ICN. To overcome these problems, support from administrators, more education programs in NI control and provision of posts for ICN, are needed.*
Conclusion : *The main problems and obstacles an implementation of NI control were the lack of support from administrators and the lack of the ICN post.*

Keywords : *Problems, Obstacles, Nosocomial infection, Control*

J Med Assoc Thai 2005; 88 (Suppl 10): S70-4
Full text. e-Journal: *http://www.medassocthai.org/journal*

Nosocomial infection (NI) is an important health problem in all countries. The infection results in significant morbidity, mortality and economic burden. The prevalence of NI in Thailand in 1988 was 11.7%[1], and decreased to 7.3% in 1992[2]. Even though NI cannot be totally eradicated, proper NI control can reduce its prevalence by one-third[3,4]. In Thailand, NI began in 1971[5] but the progress has been slow due to the shortage of human resources and budget. Methods of implementation of NI control in developed countries have to be modified in Thailand[6,7].

The success in NI control requires support from administrators of all levels, a good policy, competent NI control practitioners, and adequate budget[8]. Accreditation of hospitals requires a good NI control practice[9]. This cannot be achieved if problems and obstacles in NI control have not been identified and overcome.

The purpose of the present study was to identify the problems and obstacles that hinder the progress of NI control in Thailand. The results would be valuable for policy makers to improve the current NI control practices.

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Material and Method

A set of questionnaires on NI control regarding: policy, organization, administrative support, NI control practitioners, budget and evaluation, were formulated by the researchers. The questionnaires were used to interview 257 persons responsible for NI control enrolled by stratified random sampling by 35 infection control nurses (ICNs) during June 2002 and August 2003. Content analysis by descriptive statistics was done in Siriraj Hospital.

Results

The hospitals enrolled in the present study were of varied categories and in different regions of the country (Table 1). Private hospitals were included because their role in healthcare has been increasing. As shown in Table 2, the interviewees were administrators of hospitals (deans, directors) in 14.1%. Chairpersons of clinical departments contributed the largest group (39.6%). Chairpersons of the infection control committee (ICC) were also interviewed. Doctors in various specialty shared 27.1% of all interviewees.

Of the persons who gave their opinions, 95.3% knew that there was a written policy on NI control in their hospitals (Table 3). Only 81.2% were aware that NI control programs were implemented. It is no-

Table 1. Hospitals enrolled in the study

Categories	No	%
University hospitals	4	12.5
Regional hospitals	10	31.3
Provincial hospitals	9	28.1
District hospitals	5	15.6
Private hospitals	4	12.5
Total	32	100.0

Table 2. Interviewees by posts and hospitals (%) N=255

Interviewees	Categories of Hospitals*					Total
	U	R	P	D	Pri	
Administrators	17.3	9.0	11.6	50.0	20.8	14.1
Heads of department	42.3	39.0	30.4	50.0	58.3	39.6
Chairpersons of ICC**	13.5	18.0	29.0	-	16.7	19.2
Doctors	26.9	34.0	29.0	-	4.2	27.1

* U = University R = regional p = pronvicial D = district Pri = private
**ICC = Infection Control Committee

Table 3. Presence of policy and implementation of NI control by categories of hospitals (%)

Policy/ Implementation	Categories of Hospitals					Total
	U	R	P	D	Pri	
Policy	96.2	99.0	88.4	100.0	95.8	95.3
Implementation	82.7	89.0	60.9	100.0	95.8	81.2

Table 4. Levels of support to NI control of administrator (%)

Levels of support	Categories of Hospitals					Total
	U	R	P	D	Pri	
High	41.2	48.4	16.1	70.0	63.6	40.9
Moderate	52.9	44.0	66.1	10.0	36.4	49.8
Low	5.9	7.7	17.1	10.0	-	9.4
Nil	1.9	2.0	2.9	10.0	-	2.4

table that the proportion of interviewees in provincial hospitals who knew about NI control policy and implementation was the smallest. Support from administrators, deans and directors, was the key factor for the success in NI control. As shown in Table 4, only 40.9% of interviewees thought that their administrators gave a high level of support to NI control. In a very small number, they felt that their administrators did not give any support. The important problems in implementation of NI control are illustrated in Table 5. Lack of incentive and lack of awareness were the most conceived causes. Lack of information in NI, and lack of support from administrators were also the leading problems.

Infection control nurses are responsible for most regular functions of NI control. Even though there were ICN in every hospital, only 20.8% worked full time (Table 6). The majority of persons interviewed expressed their preference of full-time ICN. (88.6%). Lack of an official post of ICN was the main factor (58.4%) hindering the enrollment of ICN (Table 7). The lack of the post led to the lack of career ladder and promotion in 39.2%.

The supply of essential equipment for NI control was not adequate in many hospitals. Interviewees in district hospitals did not feel that there was any shortage of equipment while those in other hospitals 12.5% to 37.7% felt that the supply was not adequate (Table 8).

Table 5. Problems in implementation of NI control (%)

Problems	Categories of Hospitals					Total
	U	R	P	D	Pri	
Lack of awarness	57.7	70.0	75.4	60.0	41.7	65.9
Lack of incentive	51.9	67.0	72.5	30.0	95.8	66.7
Lack of information	34.6	50.0	52.2	50.0	29.2	45.2
Lack of administrative support	23.1	29.0	47.8	10.0	8.3	30.2

Table 6. Full-time ICNs by categories of hospitals (%)

Situations	Categories of Hospitals					Total
	U	R	P	D	Pri	
Current	50.0	13.0	13.0	-	20.8	20.8
Preferred	80.8	80.8	94.0	88.4	50.0	88.6

Table 7. Problems in ICNs by categories of hospitals

Problems	Categories of Hospitals					Total
	U	R	P	D	Pri	
Lack of post	19.2	76.0	75.4	90.0	8.3	58.4
Lack of career ladder	9.6	55.0	47.8	10.0	25.0	39.2

Table 8. Supply of equipment for NI control (%)

Supply of Equipment	Categories of Hospitals					Total
	U	R	P	D	Pri	
Adequate	48.1	62.0	50.7	90.0	50.0	50.0
Inadequate	29.4	28.8	31.0	37.7	0.0	12.5

Discussion

The problems and obstacles in implementation of NI control are present in all hospitals with different magnitudes, especially in resource limited countries[7]. The present study by interviewing by ICNs was aimed to collect the ideas of people responsible for NI control. Hospitals of which personnel were to be interviewed were enrolled by stratified random sampling. They were hospitals varying in sizes, facilities, location and organization whether governmental or private (Table 1). Of 255 interviewees, 14.1% were administrators, (deans of university hospitals or directors of others), about 40% were heads of clinical departments (Table 2). Their ideas would be mainly related to administration. Chairpersons of ICC and doctors were more engaged in practice, sharing 19.2% and 27.1% of the total. The information from interviewees in different groups and in different hospitals would best represent the situation in Thailand. Implementation of NI control was less than its policy (Table 2). Only 81.2% of interviewees felt that NI control was actually implemented (Table 3). This could be due to the "suboptimal" implementation or due to the lack of awareness of medical personnel not directly involved in NI control process. It is interesting that only 60.9% of interviewees in provincial hospital knew that an NI control program was implemented in their hospitals. Support from administrators, a key factor to success was not impressive. As shown in Table 4, only 40.9% felt that administrators gave impressive support to NI control. In 9.4%, the support was low and in 2.4%, administrators did not support at all. Infection control is the responsibility of every member and is led by the director of the hospital. If a director does not support it, it is unlikely that NI control will succeed[6,8]. Infection control has been an extra assignment in most hospitals in Thailand, those who are appointed usually work unwillingly until the end of the term. The lack of incentive to work in NI control was a major problem (Table 5). The co-operation from healthcare personnel was limited due to the lack of awareness of medical personnel and of information about NI. These drawbacks, combined with the lack of support from administrators, resulted in poor quality of NI control.

Infection control nurses are the key persons in carrying out NI control activities. As shown in Table 6, only 20.8% of ICNs worked full-time. These ICN had work overload and assigned important functions, for example, surveillance of NI to the least experienced personnel[10]. This practice risked under diagnosing NI and producing inaccurate data. Even though most healthcare personnel deemed to have more full-time ICNs, the present shortage of human resources and budget in healthcare service precludes the employment of more ICNs.

Most ICNs worked part-time. This was due to the lack of a post for ICN and thus lack of career ladder. An experienced, competent ICN has to move into an established specialty for future promotion, a brain drain. As a result, NI control has been carried out by ICN in "training".

Conclusion

Problems and obstacles in implementation of NI control in Thailand were mainly due to the lack of support from hospital administrators and the lack of ICN posts. The results of the present study could be applied in policy making to improve NI control in Thailand.

Acknowledgements

The authors wish to thank all interviewees in the study and Mahidol University for funding.

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ปัญหาและอุปสรรคในการดำเนินการป้องกันและควบคุมโรคติดเชื้อในโรงพยาบาล

สมหวัง ด่านชัยวิจิตร, มนทกานติ ตระกูลดิษฐ์, ศรีเบ็ญจา ไวทยพิเชษฐ, สมพร สันติประสิทธิ์กุล

วัตถุประสงค์ : *ศึกษาปัญหาและอุปสรรคต่อการดำเนินการป้องกันและควบคุมโรคติดเชื้อในโรงพยาบาล*
วัสดุและวิธีการ : *สัมภาษณ์ผู้บริหาร ประธานคณะกรรมการควบคุมโรคติดเชื้อในโรงพยาบาล และแพทย์ 255 คน*
ผลการศึกษา : *ระหว่างเดือนมิถุนายน พ.ศ. 2545 ถึงสิงหาคม พ.ศ. 2546, พยาบาลควบคุมโรคติดเชื้อได้สัมภาษณ์ผู้บริหารของโรงพยาบาล ประธานคณะกรรมการควบคุมโรคติดเชื้อในโรงพยาบาลและแพทย์จากโรงพยาบาลต่าง ๆ ที่สุ่มศึกษา รวม 255 คน โดยใช้คำถามที่ได้ตั้งไว้ ผลการศึกษาพบว่า 95.3% มีนโยบายการป้องกันและควบคุมโรคติดเชื้อในโรงพยาบาล แต่มีการดำเนินการเพียง 81.2%. ปัญหาและอุปสรรคที่สำคัญของการควบคุมโรคติดเชื้อในโรงพยาบาลคือ การขาดแรงจูงใจ (66.7%) และขาดการสนับสนุนจากผู้บริหาร (30.2%) ผู้บริหารที่ให้ความสำคัญมากต่อการควบคุมโรคติดเชื้อในโรงพยาบาลเพียง 40.9% สมควรกระตุ้นความสนใจของผู้บริหาร โดยการเสนอข้อมูลโรคติดเชื้ออย่างสม่ำเสมอ ร้อยละ 88.6 เห็นว่าพยาบาลควบคุมโรคติดเชื้อควรทำงานเต็มเวลา แต่ความจริงมีเพียง 20.8% ปัญหาและอุปสรรคที่สำคัญคือการขาดแคลนอัตราพยาบาลควบคุมโรคติดเชื้อในโรงพยาบาลส่วนใหญ่ทำให้ไม่มีความก้าวหน้าทางวิชาชีพและทำให้ขาดแรงจูงใจ การแก้ปัญหาเหล่านี้กระทำได้ โดยการเพิ่มการสนับสนุนจากผู้บริหาร การให้การศึกษาแก่บุคลากรและการจัดสรรตำแหน่งพยาบาลควบคุมโรคติดเชื้อ*
สรุป : *ปัญหาและอุปสรรคต่อการดำเนินการป้องกันและควบคุมโรคติดเชื้อในโรงพยาบาลที่สำคัญคือการขาดการสนับสนุนจากผู้บริหารและการขาดอัตราพยาบาลควบคุมโรคติดเชื้อในโรงพยาบาล*