Roles of Infection Control Nurses in Provincial Hospitals

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Objective: *To study the roles of infection control nurses (ICNs) in provincial hospitals.*
Material and Method: *Interview using a semi-structured interview form.*
Results: *Nine hospitals were enrolled by stratified sampling and 11 ICNs were included. Interview was done by the researcher during April and May 2002. All ICNs were female and in middle-aged group. Their mean experience in IC was 6.4 $\pm$ 4.5 years. All ICNs could perform their duties according the roles set by the Department of Nursing in surveillance, personnel health, education, consultation, administration and quality improvement. Only about one half had experience in outbreak investigation and research. The commonest problems were excessive workload, lack of co-operation of medical personnel and lack of budget for immunization.*
Conclusion: *All sampled ICNs in provincial hospitals performed their roles except only one half were involved in outbreak investigation and research.*

Keywords: *Roles, Infection control nurses, Provincial hospitals*

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A quality development program was introduced into provincial hospitals in Thailand in 1997. Up to 2002, 1 hospitals had been accredited and 21 hospitals had applied for accreditation. Nosocomial infection control is one important criterion for quality assessment of a hospital. Infection is common and is associated with significant morbidity, mortality and economic loss[1,2]. Control of NI requires a good policy, practice and involvement of all personnel in a hospital. Rates of NI reflect the quality of service in hospitals[3]. With good practices, the rates of NI could be reduced by one-third[4,5].

Infection control nurses (ICNs) are directly responsible in routine practices in IC. The Department of Nursing, Ministry of Public Health in Thailand has set the standard assignments for ICNs. These included surveillance, outbreak investigation, personnel health, education, consultation, administration, quality improvement and research. These assigned roles have yet to be studied for their implementation. Only one quarter of ICNs were full-time personnel. The shortage of ICNs led to the recruitment of ward nurses to help survey NI, under the name of infection control ward nurses (ICWNs). These ICWNs are usually untrained and have very limited time for surveillance of NI.

Infection control nurses should continuously assess their practices and have them modified over time for the betterment of IC[6]. For quality improvement, ICNs should be evaluated regarding their performance, problems, in practice and their needs for support. The present study was aimed to address the above issues.

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Material and Method

A semi-structured interview form was drafted by the researchers and later validated by 5 experts. Hospitals enrolled included : 1 hospital already accredited and 8 hospitals applying for accreditation. The

latter were randomly included to represent 4 regions of the country and in each region, 1 was chosen for 150-300 and another for 300-500 bed capacity hospitals. Infection control nurses (ICNs) in these hospital were all included. Demographic data, information on their roles, problems in practice were collected and analyzed using descriptive statistics (number and percentage, mean±SD .

Results

During April-May 2002, 11 ICNs in 9 provincial hospitals in Thailand were enrolled. The demographic information of the ICNs as shown in Table 1. Their mean age was 40.1±6.3 years and experience in IC was 6.4±4.5 years. Four ICNs had a master degree, two in infection control. Seven ICNs graduated with a bachelor degree. Six were full-time ICNs and 5 were part-time. All were members of the infection control committee of their hospitals and 9 also held secretary posts of the committee and 2 deputy secretary. Nine ICNs had training in IC and 2 had not.

The roles of ICNs set by the Department of Nursing, Ministry of Public health were implement and the extent of performance is shown in Table 2. Surveillance of NI was done mainly by ICWNs and the ICNs acted as a manager. Investigation of epidemic NI was done only by 54.5% of ICNs and the remainder mentioned that there were no outbreaks in their hospitals.

Regarding personnel health, ICNs were mainly involved in education and consultation related to healthcare related infections. All ICNs gave advice and answered questions in IC. In administration, ICNs were more involved in drafting practice guidelines and communication. To a lesser extent, they took part in policy drafting and setting indicators in IC. Quality improvement processes in IC was also organized by the ICNs. They did not have sufficient time to set up programs and to follow up the results of the ongoing processes. Application of available data to improve IC practices was done in 72.7% of ICNs. Fifty-four point five percent ever took part in research in IC.

The problems in practice are shown in Table 3. Work load, co-operation, and funding were among the common problems.

Discussion

The provincial hospitals give secondary medical care to the general public. At the time of the present study, there were 67 provincial hospitals in the country. Due to limited resources in the health care system, infection control has not been fully implemented. The current study enrolled 9 hospitals as the representative of the group. The data collected would be valuable for the improvement of IC practices. As shown in Table 1, all the subjects were female ICNs and most were in their thirties and forties. Four ICNs had graduated with master degrees and two of which were in infection control. About one half were full-time ICNs. Two of the 11

Table 1. Demographic data of 11 ICNs

Demography	%
Sex-Female	100
Age (yr.)	
31-35	18.2
36-40	45.5
41-45	9.1
46-50	27.3
Mean ± SD	40.1 ± 6.3
Education	
Bachelor degree	63.4
Master degree	36.3
: in infection control	18.2
Experience in IC. (yr.)	
1-3	18.2
4-6	45.5
7-9	9.1
9 and over	27.3
Mean ± SD	6.4 ± 4.5

Table 2. Roles performed by 11 ICNs

Roles	%
Surveillance	100.0
Investigation of epidemic NI	54.5
Personnel health	100.0
Education	100.0
Consultation	100.0
Administration	100.0
Quality improvement	100.0
Research	54.5

Table 3. Problems in IC practice (N=11)

Problems	%
Excessive workload	72.7
Lack of co-operation	72.7
Lack of budget for immunization	72.7
Lack of budget for research	63.6
Lack of knowledge in quality process	45.5
Lack of standard practice guidelines	45.5

ICNs interviewed had not attended a course in IC. The majority of the group had 4-6 years experience in IC. Due to the lack of ICN positions in most provincial hospitals, many ICNs leave IC to other units for higher promotion.

The roles of ICNs set by the Department of Nursing are according to standards in developed countries.[7] The ICNs studied performed their duties in all roles except investigation of outbreak and research. The quality of their performance needs evaluation. Surveillance, the most important role of ICNs, done by unexperienced personnel is one of the examples that the quality of IC is worth questioning. The surveillance data have yet to be validated before they were applied for the development of policy and quality of healthcare[7,8]. The ICNs should spend more time in the surveillance of NI[9-10]. The possible defects in surveillance were reflected by the report in the present study that about one half of the ICNs had not been involved in outbreak investigation because there was no epidemic NI. Whether there were no epidemics or they were not detected has yet to be verified. Research in IC also needs improvement. Only one half of the ICNs took part in some studies but none was the principle investigator. Encouragement and support to ICNs in research are essential for the improvement of ICN roles[11]. Further studies into their performance in each roles, problem, obstacles, and support are clearly needed before declaring the standards.

Problems in practice are given in Table 3. Excessive workload was the most common one. The number of ICNs did not match the bed number of hospitals. The lack of facilities in computerized information, information technology, and the lack of awareness and co-operation of medical personnel contribute to an excessive work load. Lack of budget for immunization for high risk healthcare workers is a major concern of ICNs. Research grants for ICNs were scarce. Knowledge in quality process was also needed to be improved. Standard practice guidelines were also required.

The study was done in a few provincial hospitals. The findings reflect the information of IC in a sector of healthcare system in the country. More detailed and larger scale studies are needed.

Conclusion

The present study indicated that ICNs in provincial hospitals performed all roles designated for them. The quality of their performance in various aspects was questioned, especially in surveillance, outbreak investigation and research.

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บทบาทของพยาบาลควบคุมโรคติดเชื้อในโรงพยาบาลทั่วไป

รัชฎาพร ลีลา, จิตตาภรณ์ จิตรีเชื้อ, วันชัย มุ้งตุ้ย, วันชัย บุพพันเหรัญ, สมหวัง ด่านชัยวิจิตร

วัตถุประสงค์ : *ศึกษาบทบาทของพยาบาลควบคุมโรคติดเชื้อในโรงพยาบาลทั่วไป*
วัสดุและวิธีการ : *สัมภาษณ์พยาบาลควบคุมโรคติดเชื้อโดยใช้แบบสัมภาษณ์ที่สร้างขึ้น*
ผลการศึกษา : *ศึกษาในโรงพยาบาลทั่วไป 9 แห่งทั้ง 4 ภาค และครอบคลุมโรงพยาบาลทั่วไปที่มีขนาดเตียงที่ต่างกัน สัมภาษณ์พยาบาลควบคุมโรคติดเชื้อ 11 คนในช่วงเดือนเมษายน-พฤษภาคม พ.ศ. 2545 พยาบาลควบคุมโรคติดเชื้อทุกคนเป็นหญิง และส่วนใหญ่อยู่ในวัยกลางคน. ประสบการณ์การควบคุมโรคติดเชื้อเฉลี่ย 6.4 $\pm$ 4.5 ปี. พยาบาลทุกคนปฏิบัติหน้าที่ตามบทบาทที่กำหนดได้แก่ การเฝ้าระวังโรค, สุขภาพบุคลากร, การศึกษา, การให้คำปรึกษา, บริหารและพัฒนาคุณภาพ ประมาณครึ่งหนึ่งเคยสอบสวนการระบาดของโรคติดเชื้อในโรงพยาบาล เคยทำวิจัย ปัญหาที่สำคัญคือภาระงานมาก การขาดความร่วมมือของบุคลากร และขาดงบประมาณให้ภูมิคุ้มกัน*
สรุป : *พยาบาลควบคุมโรคติดเชื้อในโรงพยาบาลทั่วไปปฏิบัติงานได้ตามบทบาทที่กำหนด ยกเว้นประมาณเพียงครึ่งหนึ่งเท่านั้นที่เคยสอบสวนการระบาดของโรคติดเชื้อและทำวิจัย*