

# Roles of Infection Control Nurses in Regional Hospitals

Thamolwan Kananitaya MNS\*,  
Wilawan Senarat MSc\*\*, Wanchai Moongtui PhD\*\*,  
Warapot Tantisiriwat MD\*\*\*, Somwang Danchaivijitr MD\*\*\*\*

\*Phen Hospital, Udon Thani, \*\*Faculty of Nursing, Chiang Mai University, Chiang Mai,  
\*\*\*Department of Medicine, Faculty of Medicine, Vachira Hospital, Srinagarindviroj University, Bangkok,  
\*\*\*\*Department of Medicine, Faculty of Medicine Siriraj Hospital, Mahidol University, Bangkok

---

**Objectives:** To evaluate the roles of infection control nurses (ICNs) in regional hospitals and to detect problems, obstacles in practice and needs for support.

**Material and Method:** A descriptive study by interview and questionnaire survey of 16 ICNs from regional hospitals applying for HA.

**Results:** From February to April 2002, a study by interview and questionnaires was done in 16 ICNs from 10 regional hospitals applying for HA. Most of the ICNs practised IC roles according to HA criteria except for hospital employee health, NI surveillance and research. The major problems and obstacles included the lack of IC positions, inadequate ICNs, lack of support from hospital administrative personnel, too heavy work load, lack of IC experts, budget for IC, equipment, IC research data and education material.

**Conclusion:** The present study suggested that roles of ICNs in hospital employee health, NI surveillance and research were inadequate because of the lack of full time ICNs, too heavy a work load, lack of IC consultants supply and administrative support.

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

*J Med Assoc Thai* 2005; 88 (Suppl 10): S107-9

Full text. e-Journal: <http://www.medassocthai.org/journal>

---

Nosocomial infection (NI) is an important risk factor to patients. It causes increased morbidity, mortality, hospital stay and hospital cost<sup>(1)</sup>. Regional hospitals have more problems associated with NI and bacterial resistance<sup>(2)</sup>. An effective hospital infection control (IC) program is essential to reduce NI in regional hospitals. An effective IC program in a regional hospital needs adequate full time IC nurses (ICNs) to run the IC system in the hospital<sup>(3)</sup>. An ICN has direct involvement in hospital IC policy, management and evaluation.

The objective of the present study was to descriptively evaluate the roles of ICNs in hospital IC described in the criteria for HA, problems, obstacles during work and supportive needs of ICNs in regional hospitals.

---

Correspondence to : Danchaivijitr S, Department of Medicine, Faculty of Medicine Siriraj Hospital, Mahidol University, Bangkok 10700, Thailand. E-mail: [sisd@mahidol.ac.th](mailto:sisd@mahidol.ac.th)

## Material and Method

From February to April 2002, questionnaires and semi-structured interview forms were used to collect data from 16 ICNs from 10 regional hospitals applying for the hospital accreditation (HA) program.

Fifteen questions on general information of hospitals and ICNs and a semi-structured interview form adapted from IC standard of HA program were used in data collection. Eight ICN roles according to the HA program included: administration, NI surveillance, education, hospital employee health, epidemic investigation, counseling, quality development and research.

The questionnaires and semi-structured interview form were tested for content validity by 5 IC experts (with content validity index of 1.00). They were subsequently tested in one of the ICN who was not enrolled in the study.

## Results

In the administrative role, all samples were

responsible for IC policy dissemination, coordinating IC work, evaluating health personnel practice, evaluating work plan and developing IC guidelines. They also participated in IC policy planning, IC goal development, IC master work plan and IC committee organization. They presented IC information and made suggestions in IC committee meetings.

In NI surveillance role, the ICNs were directly involved in the development of IC indicators, analysis and dissemination of IC data. They also participated in NI definition development with the IC committee. Most ICNs assigned infection control ward nurses (ICWNs) to collect surveillance data.

The ICNs developed IC practice guidelines, set training courses, taught hospital personnel and evaluated the teaching courses.

In hospital employee health, most of the ICNs were responsible for immunization of health personnel, routine health check up, pre-employment screening, monitoring employee health in risk groups and doing needlestick surveillance.

The ICNs were involved in outbreak investigation and presentation of data.

The ICNs gave consultation regarding hospital environment, waste management, sterilization/ disinfection, linen management, hospital employee health, IC guideline compliance, NI surveillance and IC guideline development.

In quality development, all ICNs regularly reviewed surveillance process, outbreak investigation and general practice to control NI.

The ICNs co-operated with others in research in their hospitals mostly by answering questionnaires and giving IC data. Research data were adopted to improve practices.

Problems and obstacles in practice were adopted identified as follows.

The lack of IC position in hospital capacity limited future development of IC. Inadequate number of ICNs, lack of support from hospital administrators, irregular IC committee meetings, lack of IC doctors and statisticians and IC office were also common problems.

Practice in IC was hampered by too heavy a work load, no time for IC surveillance, lack of research knowledge, inadequate doctor participation, lack of IC expert and lack of knowledge for epidemic investigation. Budgets for IC protective equipment, immunization and health personnel training and research were not adequate.

The ICNs needed support from administrators in provision of adequate number and full time ICNs,

work office, IC doctors, statisticians and training opportunity. Budgets and supply of equipments should be increased.

## Discussion

The present study has shown that the roles of ICNs according to HA program, were lacking in many aspects. These included hospital employee health, NI surveillance and research roles.

A study on hospital employee health issues in 151 hospitals showed that only 51% had a routine employee health check up and screening program before work and 38.4% received immunization. The main reasons were the lack of budget and responsible unit<sup>(4)</sup>. The data was similar to the present results. Some hospital employee health issues were successfully managed through other channels<sup>(5)</sup>.

In surveillance, many ICNs assigned surveillance duty to less experienced personnel. Improper data collection in IC survey has been associated with under reporting of infection rates<sup>(6)</sup>. As shown in the present study, ICNs were assigned to do many functions albeit working part-time and inadequate number. This would be a cause of stress and emotional instability in ICNs leading to resignation<sup>(7)</sup>.

Research is an important issue in a hospital IC program. It was shown that 42.2% of ICNs from regional hospitals and general hospitals were involved in research<sup>(7)</sup>. Most ICNs in the present study had involvement in research at some levels, only a few did research on their own. A limited number used research data to improve their practice<sup>(8)</sup>.

Support from administrators is crucial for IC. Significant improvement of a hospital IC program by regular support from hospital administrative office was demonstrated<sup>(9)</sup>. Budget restraint also caused stress and resignation<sup>(10)</sup>. Adequate budget is essential for the success of IC program. Support from experts could resolve problems as well as improve the IC program.

## Conclusion

The roles of ICNs in regional hospitals according to the standard set by the Department of Nursing, Ministry of Public Health were not be able to follow up employee health, surveillance and research. The main obstacles were the absence of ICN post leading to inadequate number of ICNs and the lack of administrative support.

## Acknowledgement

The study was funded by Mahidol University.

## References

1. Ging TN, Suzanne EP, Ronda LS, Denise OG, William RJ. Status of infection control surveillance and control programs in the United States 1992-1996. AJIC 2000; 28: 392-400.
2. Erbaydar S, Akgun A, Eksik A, Erbaydar T, Bilge O, Bulut A. Estimation of increased hospital stay due to nosocomial infections in surgical patients: comparison of matched groups. J Hosp Infect 1995; 30: 149-54.
3. Haley RW, Culver DH, White JW, Morgan WM, Emori TG, Munn VP, et al. The efficacy of infection surveillance and control programs in preventing nosocomial infections in US hospitals. Am J Epidemiol 1985; 121: 182-205.
4. Kumdee P. Hospital employee health in northern ministry of public health hospitals. Thesis for Master Degree in infection control, Chiang Mai University, 2002.
5. Lin ML, Praticia YC, Hong WS. Employee Health Program. A handbook for infection control for the Asian health care worker. Hong Kong: Excerpta Medica, 1999: 83-130.
6. Reangroj M, Techapirot K, Kraisiwatana J, Supunya A. Knowledge and attitude in IC nurses at Udonthani hospital. Bull Nosocomial Infect Control Gr Thai 1998; 7: 18-9.
7. Siriwat T. Work responsibility of infection control nurses in referral-center hospitals and general hospitals of Ministry of Public Health. Thesis for Master Degree in infection control. Chiang Mai University, 1998.
8. Prieto J. The specialist role of the ICN. Nursing Times 1994; 21: 63-4.
9. Prompunya S. Factors involved in lowering Nan hospital nurses compliance to universal precaution. Thesis for Master Degree in infection control, Chiang Mai University, 1994.
10. Jackson MM, Soule BM, Tweeten SS. APIC strategic planning member surgery. AJIC 1997; 26: 113-25.
11. Horan-Murphy E, Barnard B, Chenoweth C, Friedman C, Hazuka B, Russell B, et al. APIC/CHICA-Canada infection control and epidemiology: Professional and Practice Standards. Association for Professionals in Infection Control and Epidemiology, Inc, and the Community and Hospital Infection Control Association-Canada. AJIC 1999; 27: 47-51.

---

## บทบาทของพยาบาลควบคุมโรคติดเชื้อในโรงพยาบาลศูนย์

ธมลวรรณ คณานิตย์, วิลาวัลย์ เสนารัตน์, วันชัย มั่งคั่ง, วรพจน์ ตันตศิริวัฒน์, สมหวัง ต่านชัยวิจิตร

**วัตถุประสงค์ :** ศึกษาบทบาทของพยาบาลควบคุมโรคติดเชื้อในโรงพยาบาลศูนย์ ปัญหาและอุปสรรคในการทำงาน และความช่วยเหลือที่ต้องการ

**วัสดุและวิธีการ :** ใช้แบบสอบถามและสัมภาษณ์พยาบาลควบคุมโรคติดเชื้อ 16 คน ในโรงพยาบาลศูนย์ที่แสดงความจำนงการตรวจรับรองคุณภาพ

**ผลการศึกษา :** ระหว่างเดือนกุมภาพันธ์-เมษายน พ.ศ. 2545 พยาบาลควบคุมโรคติดเชื้อในโรงพยาบาล 16 คนจากโรงพยาบาลศูนย์ 10 แห่งได้ตอบแบบสอบถามและให้สัมภาษณ์ พยาบาลควบคุมโรคติดเชื้อส่วนใหญ่สามารถปฏิบัติงานตามบทบาทที่กองการพยาบาลกำหนด ยกเว้นบทบาทเกี่ยวกับสุขภาพของบุคลากร การเฝ้าระวังโรคและวิจัย ปัญหาและอุปสรรคที่สำคัญคือไม่มีตำแหน่งพยาบาลควบคุมโรคติดเชื้อ ขาดอัตรากำลัง ขาดการสนับสนุนจากผู้บริหาร ภาระงานมากเกินไป ขาดผู้เชี่ยวชาญขาดงบประมาณ ขาดวัสดุอุปกรณ์การศึกษาและป้องกันโรคและไม่มีข้อมูลทางการวิจัยเพียงพอ

**สรุป :** บทบาทของพยาบาลควบคุมโรคติดเชื้อในโรงพยาบาลที่ปฏิบัติได้น้อยคือ สุขภาพของบุคลากร การเฝ้าระวังโรคและวิจัย ปัญหาและอุปสรรคที่สำคัญคือ การขาดอัตรากำลังและการสนับสนุนจากผู้บริหาร