

**KNOWLEDGE AND PRACTICE REGARDING  
PREVENTION OF SURGICAL SITE INFECTION  
AMONG NURSING STUDENTS AT SCHOOL OF  
HEALTH SCIENCES, UNIVERSITI SAINS  
MALAYSIA (USM)**

**By**

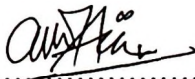
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**Dissertation submitted in partial fulfilment of the  
requirements for the degree of  
Bachelor of Health Sciences (Nursing)**

**June 2013**

## DECLARATION

I certify that this thesis does not incorporate without acknowledgement any material previously submitted for a degree or diploma in any university, and that to the best of my knowledge and belief it does not contain any material previously published or written by another person except where due references is made in the text.



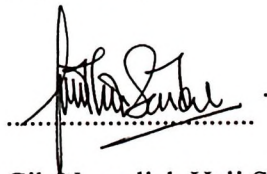
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## CERTIFICATE

This is to certify that the dissertation entitled “Knowledge and practice regarding prevention of surgical site infection among nursing students at School of Health Sciences, Universiti Sains Malaysia (USM)” is the bona fide record of research work done by Noor ‘Ain Binti Che Aziz, Matric Number: 105132 during the period of November 2012 to April 2013 under my supervision. This dissertation submitted in partial fulfillment for the degree of Bachelor of Health Science (Nursing). Research work and collection of data belong to Universiti Sains Malaysia.

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## LIST OF ABBREVIATIONS

AMP	: Antimicrobial prophylaxis
BMI	: Body mass index
CABG	: Coronary artery bypasses graft
CDC	: Centers for Disease Control
CHG	: Chlorohexidine gluconate
HAIs	: Health care-associated infections
HIV	: Human immunodeficiency virus
ICU	: Intensive care unit
MOH	: Ministry of Health
MRSA	: Methicillin-resistant <i>Staphylococcus Aureus</i>
NICE	: National Institute for Health and Clinical Excellence
PA	: Prophylaxis antibiotic
SLE	: Systemic lupus erythematosus
SPSS	: Statistical Package for Social Science
SSI	: Surgical site infection
WBCs	: White blood cells
WHO	: World Health Organization

**KNOWLEDGE AND PRACTICE REGARDING PREVENTION OF SURGICAL  
SITE INFECTIONS AMONG NURSING STUDENTS AT SCHOOL OF  
HEALTH SCIENCES, UNIVERSITI SAINS MALAYSIA**

**ABSTRACT**

Surgical site infection (SSI) is a significant clinical problem leading to morbidity and mortality for hospitalized surgical patients. The goal of this descriptive cross-sectional study was to determine the level of knowledge and practice, examined the difference between knowledge and practice and also their relationship regarding prevention of SSI among final year Diploma nursing and Bachelor degree nursing at School of Health Sciences, Universiti Sains Malaysia (USM). Seventy two final year nursing students were recruited in this study using systematic randomized sampling. Data were collected from February to March 2013 using self-report questionnaires and analyzed using SPSS version 20. Ethical approval was obtained from Research Ethics Committee (Human), USM. The results revealed overall level of knowledge regarding prevention of SSI were at low level for Diploma nursing ( $M=63.00$ ,  $SD=9.81$ ) and Bachelor degree nursing ( $M= 65.22$ ,  $SD= 12.67$ ). Meanwhile, overall level of practices were at high level for Diploma nursing ( $M= 86.51$ ,  $SD= 7.78$ ) and also Bachelor degree nursing ( $M= 81.77$ ,  $SD= 11.48$ ). There were no significant difference of knowledge regarding prevention of SSI ( $p = 0.408$ ) but significant difference of practice regarding prevention of SSI between final year Diploma and Bachelor degree nursing students ( $p = 0.045$ ). The study also found there was a weak relationship between knowledge and practice regarding prevention of SSI for Diploma nursing ( $r = -0.050$ ,  $p = 0.773$ ) and Bachelor degree nursing ( $r = 0.088$ ,  $p = 0.612$ ). Based on findings, it was recommended

that the syllabus in Nursing Curriculum should be reviewed and added comprehensive program regarding prevention of SSI. Extensive clinical posting should be considered for nursing students to improve their specific skills on prevention of SSI.

**Key words:** Knowledge, practice, surgical site infection

**PENGETAHUAN DAN AMALAN MENGENAI PENCEGAHAN JANGKITAN  
KAWASAN PEMBEDAHAN DALAM KALANGAN PELAJAR  
KEJURURAWATAN DI PUSAT PENGAJIAN SAINS KESIHATAN,  
UNIVERSITI SAINS MALAYSIA**

**ABSTRAK**

Jangkitan kawasan pembedahan adalah masalah klinikal yang boleh membawa kepada morbiditi dan kematian kepada hospitalisasi pesakiturgeri . Matlamat kajian deskriptif ini adalah untuk menentukan tahap pengetahuan dan amalan, perbezaan antara pengetahuan dan amalan serta perhubungannya mengenai pencegahan jangkitan kawasan pembedahan dalam kalangan pelajar Diploma kejururawatan dan pelajar Ijazah Sarjana Muda kejururawatan tahun akhir di Pusat Pengajian Sains Kesihatan, Universiti Sains Malaysia (USM). Tujuh puluh dua orang pelajar kejururawatan tahun akhir telah dipilih untuk kajian ini menggunakan kaedah persampelan rawak sistematik. Data dikumpul dari bulan Februari hingga Mac 2013 dengan menggunakan soal selidik laporan sendiri dan dianalisis menggunakan SPSS versi 20.0. Kelulusan etika telah diperolehi daripada Jawatankuasa Etika Penyelidikan (Manusia), USM. Kajian menunjukkan keseluruhan skor purata pengetahuan mengenai pencegahan jangkitan kawasan pembedahan berada pada tahap yang rendah bagi pelajar Diploma kejururawatan ( $M = 63.00$ ,  $SD = 9.81$ ) dan pelajar Ijazah Sarjana Muda kejururawatan ( $M = 65.22$ ,  $SD = 12.67$ ). Secara keseluruhannya, tahap amalan bagi pelajar Diploma kejururawatan ( $M = 86.51$ ,  $SD = 7.78$ ) dan pelajar Ijazah Sarjana Muda kejururawatan ( $M = 81.77$ ,  $SD = 11.48$ ) berada pada tahap yang tinggi. Tiada perbezaan yang signifikan bagi pengetahuan mengenai pencegahan jangkitan kawasan pembedahan ( $p =$

0.408) tetapi terdapat perbezaan signifikan bagi amalan mengenai pencegahan jangkitan kawasan pembedahan antara pelajar Diploma dan pelajar Ijazah Sarjana Muda kejururawatan ( $p = 0.045$ ) tahun akhir. Kajian ini juga mendapati terdapat hubungan yang lemah antara pengetahuan dan amalan mengenai pencegahan jangkitan kawasan pembedahan bagi Diploma kejururawatan ( $r = -0,050$ ,  $p = 0.773$ ) dan Ijazah Sarjana Muda kejururawatan ( $r = 0.088$ ,  $p = 0.612$ ). Berdasarkan penemuan ini, disyorkan bahawa sukatan pelajaran dalam Kurikulum Kejururawatan perlu dikaji semula dan penambahan program yang komprehensif mengenai pencegahan jangkitan kawasan pembedahan. Sesi klinikal perlu dipertimbangkan untuk pelajar kejururawatan bagi meningkatkan kemahiran khusus mereka mengenai jangkitan kawasan pembedahan.

**Kata kunci :** Pengetahuan, amalan, jangkitan kawasan pembedahan