TRƯỜNG ĐẠI HỌC Y TẾ CÔNG CỘNG
HANOI UNIVERSITY OF PUBLIC HEALTH

KNOWLEDGE, PRACTICE AND ASSOCIATED FACTORS TOWARDS PREVENTION OF SURGICAL SITE INFECTION AMONG HEALTH WORKERS WORKING IN THE 19.8 HOSPITAL, HANOI, VIETNAM, 2017

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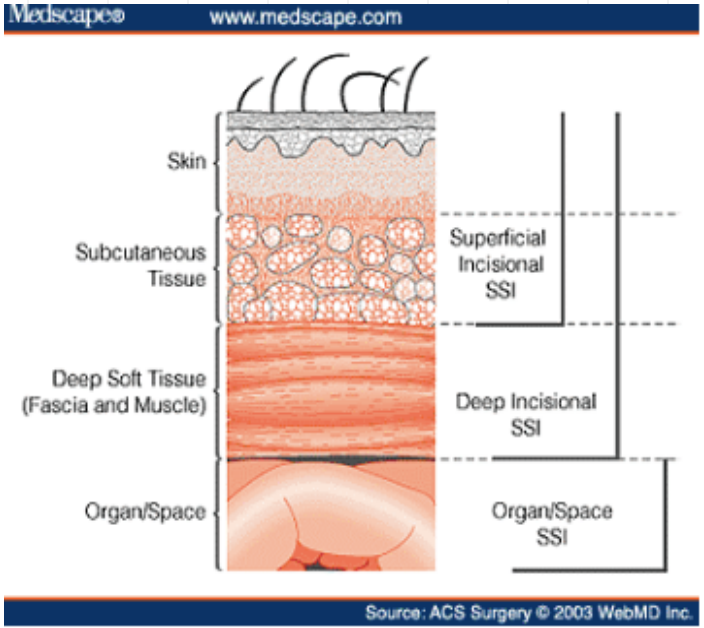
CONTENTS

1 BACKGROUND

BACKGROUND

Definition of SSI

SSI refers to an infection that occurs within 30 days of the operation, if no implant is left in place or within one year of operation, if an implant is left in place and the infection appears to be related to the operation in general surgery.



BACKGROUND

- SSIs are one of the most common and costly of all hospital acquired infection (HAIs), accounting for 20- 30% cases of HAIs
- At least 5% of patients undergoing a surgical procedure develop a SSI

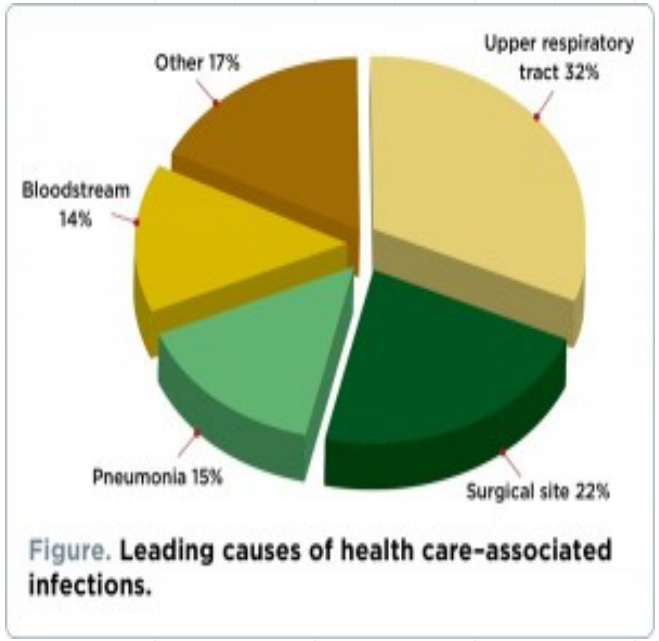


Figure. **Leading causes of health care-associated infections.**

BACKGROUND

High-income countries:

- In Europe, SSIs affect more than 500,000 people per year

Low-and middle-income countries:

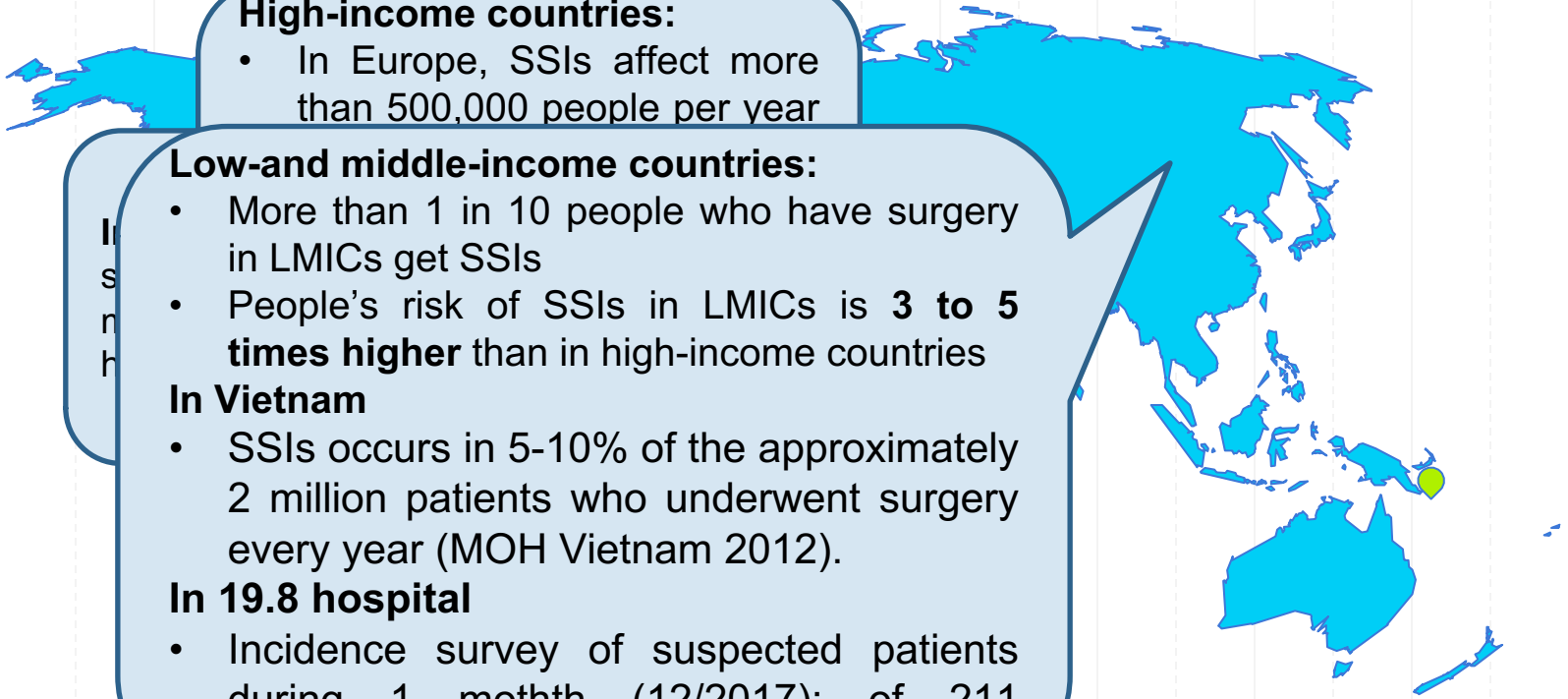
- More than 1 in 10 people who have surgery in LMICs get SSIs
- People's risk of SSIs in LMICs is **3 to 5 times higher** than in high-income countries

In Vietnam

- SSIs occurs in 5-10% of the approximately 2 million patients who underwent surgery every year (MOH Vietnam 2012).

In 19.8 hospital

- Incidence survey of suspected patients during 1 mothth (12/2017): of 211 operated patients ☞22 SSIs (10.4%)



STATEMENT OF PROBLEM

❖ **Literature review indicates that:**

- Most health workers lacked the required knowledge about prev
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- A study of 62 hospitals in the North indicated that more than 50% health workers did not have good knowledge about hand hygiene

To do the research:

"Knowledge, practice and associated factors toward prevention of surgical site infection among health workers working in the 19.8 Hospital, Hanoi, Vietnam, 2017"

2 OBJECTIVES

OBJECTIVES

1. To assess the level of health workers' knowledge regarding prevention of SSIs in 19.8 hospital, 2017
2. To assess the level of health workers' practice regarding prevention of SSIs in 19.8 hospital, 2017
3. To analyze factors associated with knowledge and practice of health workers regarding prevention of SSIs in 19.8 hospital, 2017

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RESEARCH METHODOLOGY

HANOI MEDICAL UNIVERSITY

RESEARCH METHODS

Research participants: 197 medical doctors and nurses in 10 surgery departments

Study time: 11/2017-05/2018

Study location: 10 surgery departments at the 19.8 hospital

Study design: Cross sectional study

Measurement and evaluation criteria

- ***Assess the level of knowledge of health workers:***

No.	Level of knowledge (cut-off point: 50%)	Knowledge score (Maximum: 27 points)
1	Above Moderate level (>=50%)	>=13
2	Low level (<50%)	<13

- ***Assess the level of practice of health workers:***

No.	Level of Practice (cut-off point: 80%)	Practice score (Maximum: 24 points)
1	Good (>=80%)	>=19
2	Not good (<80%)	<19

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RESULTS AND DISCUSSION

RESULTS AND DISCUSSION

Participants' Demographic characteristics (N=197)

Characteristics		n	%
Age group	<30 yrs	55	27.8
	30-40 yrs	**116**	**58.9**
	>40 yrs	26	13.2
Gender	Male	371	36.4
	Female	**124**	**62.6**
Marital status	**Married**	**165**	**83.8**
	Others	32	16.2

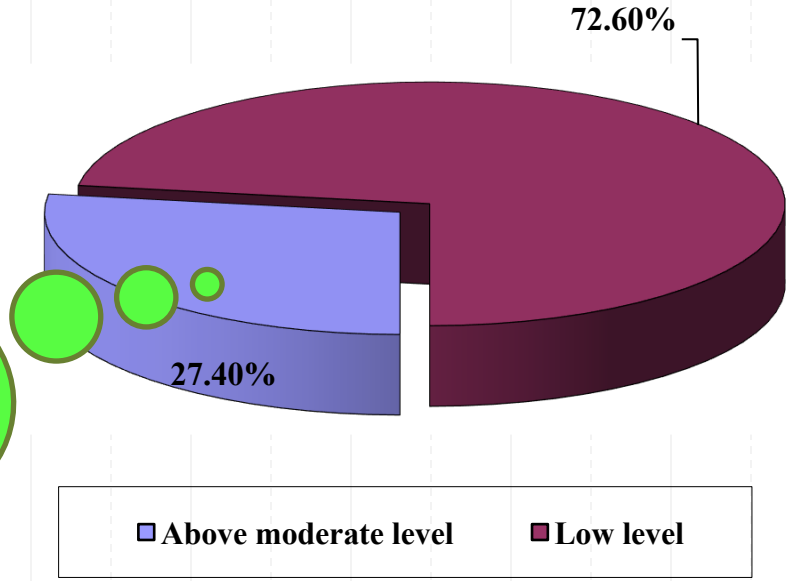
RESULTS AND DISCUSSION

Participants' Demographic characteristics (N=197)

Characteristics		n	%
Role of health workers	Doctors	73	37.1
	Nurses	**124**	**62.9**
Working experience in this surgical ward	1-5 years	75	38.1
	6-10 years	**79**	**40.1**
	>10 years	43	21.8
Attending infection control training program	**Never**	**113**	**57.4**
	<3 times	70	36.5
	3+ times	14	7.1

RESULTS AND DISCUSSION

Level of knowledge regarding SSI prevention



The percentage of health workers having above moderate level of knowledge in this study is much lower than many studies such as Nigerian 2017 (40%), Bangladesh 2010 (50%)

RESULTS AND DISCUSSION

Level of total knowledge and Sub Dimensions of Pre-and Post-operative knowledge regarding SSI prevention

Variable	Min-max	Mean	SD	Level of knowledge
Total knowledge	5-22	12	2.59	Low (72.6%)
Pre-operative knowledge	4-13	7.6	1.65	Above moderate (52.8%)
Post-operative knowledge	1-10	4.4	1.75	**Low (90.4%)**

***Four items having the lowest percentage of correct answer**: Pre-operative hair removal methods (1%), The appropriate time to shower or bathe with an uncovered incision after surgery (6.1%), The time to assess SSI diagnosis (4.6%), SSI classification (9.1%).*

RESULTS AND DISCUSSION

Correct knowledge about pre-operative hair removal

Content	Professional role		Total
		Nurses (N=124)	
	%	2 1.61%	2 1.02%
The best time for pre-operative hair removal	32	45	77

This finding was in agreement with a Bangladesh study in that 0% of the participants had correct knowledge

As WHO recommendation, there is a clear benefit to not removing hair, or if absolutely necessary, to just clipping it instead of shaving

RESULTS AND DISCUSSION

Correct knowledge about characteristics of SSI

This finding was in agreement with a Belgium study (2010) with 2% of nurses having correct knowledge

	onal role		Total
	=73)	Nurses (N=124)	
The time to assess SSI diagnosis	7 9.6%	2 1.6%	**9** **4.6%**
		14 1.3%	**18** **9.1%**

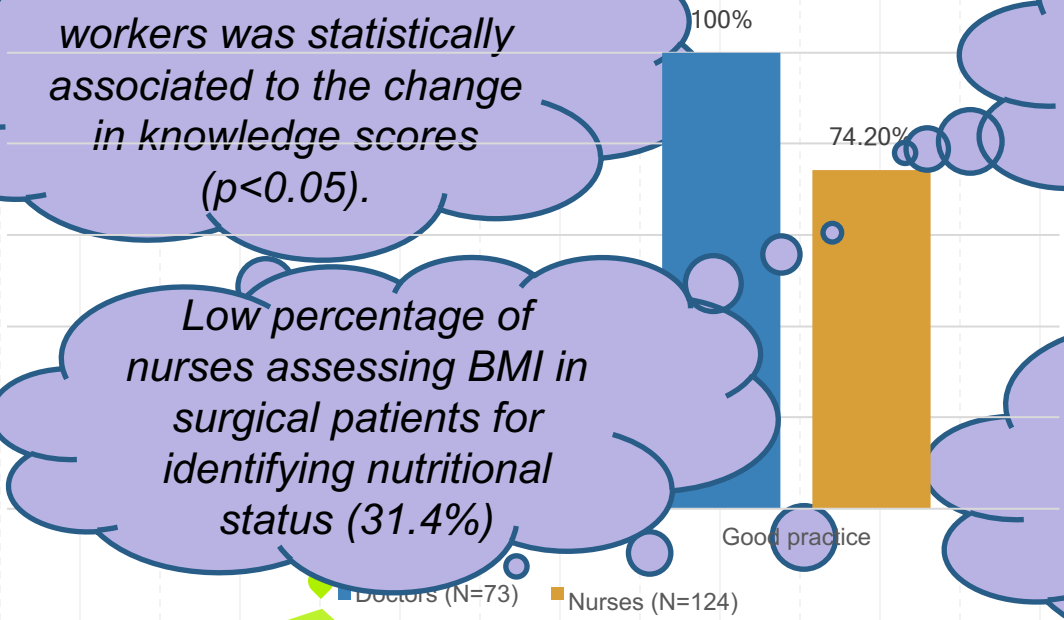
This result was higher than the percentage of nurses in Belgium study, in which the correct classification was only checked by 7%.

RESULTS AND DISCUSSION

Level of knowledge and practice within qualification groups

The role of health workers was statistically associated to the change in knowledge scores ($p<0.05$).

This result was lower than the result from a study done in a Bangladesh hospital where 100% of the nurses had good practice



Low percentage of nurses assessing BMI in surgical patients for identifying nutritional status (31.4%)

This finding was in line with the study of La Thi Quynh Lien et al (2017) in which nurses had lower knowledge score compared to physicians

RESULTS AND DISCUSSION

Some factors affecting level of knowledge among health workers:

- Service experience (*11-15yrs vs <5yrs*) OR=2.7, p=0.03
- Role of health workers (*doctors vs nurses*): OR=1.53, p>0.05
- Attending infection control training program (*3+ times vs never*): OR=5.2, p<0.05

Some factors affecting level of practice among nurses:

- Level of knowledge (OR=1.5, p>0.05)
- Attending infection control training program (OR=0.3, p<0.05)

RESULTS AND DISCUSSION

Multivariate linear regression model of factors related to the difference in knowledge scores among health workers *(N=197, F=5.98, R-squared=0.085, R=0.29, Adj R-squared=0.07, p= 0.006)*

Items				r regression	
					P
Role				6	0.007
Working experience	years			0.28;1.51	0.18
Ever taking training program	>= 3 times/ <3 times	1.55	0.72	0.12;2.98	0.033

This finding was in line with findings from Ethiopia study (2015) in which these factors were positively associated with knowledge regarding SSI prevention.

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CONCLUSION AND RECOMENDATIONS

CONCLUSION

- Knowledge and self-reported practice of health workers in 19.8 hospital yet not completely satisfactory (low level of knowledge and high level of practice)
- Health workers particularly lacked knowledge and practice regarding SSI prevention in some areas.
- Role of health workers, working experience, and ever taking training on infection prevention program, were found to be associated with the level of knowledge and practice regarding SSI prevention

RECOMMENDATIONS

- More up-to-date in-service training should be organized to enhance health workers' competency regarding prevention of SSI and eliminate knowledge deficit.
- Hospital administrator should provide effective prevention of SSI policy as an institutional goal by developing standard guidelines for prevention of SSI for staffs in surgical units.
- A replication of this study using observation method is recommended to examine the level of health workers' practice for prevention of SSI.

Thank you for your listening!