

# Nursing Diagnosis and Collaborative Problem among Hospitalized Patients in University of Sumatera Utara Hospital, Medan

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**Abstract – Background:** The research regarding nursing diagnosis and collaboration problems were not very often conducted in Indonesia. Therefore, it is need to establish researches in standardized nursing language.

**Aims.** The aim of this research was identified the nursing diagnosis and problem collaborations among hospitalized patients in University of Sumatera Utara Hospital, Indonesia.

**Method.** This study is a quantitative research with cross-sectional approach. The data collection conducted through the nursing assessment with six steps of diagnostic reasoning method. The sampling technique was total sampling which involved hospitalized patients from March until May 2016; consisting 72 patients in inpatients unit which 19 pediatric patients, 36 adult patients, six maternity patients and 11 intensive care unit patients. The data analysis was frequency distribution from nursing diagnosis and problem collaborations. **Result.** The result revealed that there were 38 nursing diagnosis and collaborative problems found among pediatric patients, 56 nursing diagnosis and collaborative problems found among adult patients, 47 nursing diagnosis and collaborative problems found among intensive care patients and only eight nursing diagnosis found among maternity patients. The risk for infection was the most common nursing diagnosis among pediatric and maternity patients with thrombocytopenia as the most common collaborative problem found among pediatric patients. Acute pain was the first rank of nursing diagnosis found among adult patients. And, bleeding was the main problem collaboration. The risk for disuse syndrome was the most nursing diagnosis established among patients in intensive care unit, with pneumothorax as the common collaborative problem. **Conclusion:** It was found that the most common nursing diagnosis found among hospitalized patients was the risk for infection with various collaborative problems. Therefore, it is needs to establish infection precaution in every unit in the future. In fact, the nursing intervention regarding the infection control should be done in every unit.

**Keywords;** (NANDA Nursing Diagnosis, Problem Collaboration, Hospitalized Patients)

## I. INTRODUCTION

The needs for health services are increasing every year as indicated by the increasing number of hospitalized patients [1]. One of the hospitals which provide health provision in

Sumatera Utara is University of Sumatera Utara Hospital/USU Hospital. This Hospital is a new hospital in Medan which operated in March 2016. It has two major services, which are inpatient units and outpatients units. In a case of inpatient units, the hospital has already arranged the health services for pediatric, maternity, intensive care and adult patients [2].

The general rule states that any health care institution must have standardized protocols for the patients [4]. For instance, the standards for patients' admission, treatment process, and the discharge planning procedure in the hospital. The nurses are the health professionals who are responsible for providing nursing care [3].

The nursing process is a process in delivering the nursing services, which consists of assessment, diagnosis, outcome, intervention, implementation and the nursing evaluation [6]. One of the important activities in this process is nursing assessment [7]. This process is important since the nurse will be able to analyze the nursing problems and the collaborative problems (potential complications) experienced by the patients [10]. Also, a proper assessment assures that the improvement of the patients' outcome is easier to achieve [8].

However, the incident revealed that nurses had difficulty in nursing diagnosis establishment. It might occur since the nursing assessment is not structured well. According to Nurjannah [11], the data collection conducted by the nurses did not have a good structure associated with nursing diagnoses identification. Obviously, it is occurred when nurses had specific data but lose track in determining nursing diagnoses. Or, the nurses have predicted patient with a particular diagnosis but do not know what data need to be assessed to support the diagnosis. In fact, many nurses thought that the accuracy of the nursing diagnosis formulation is not a significant issue in the area of nursing practice [9]. Also, there are more evidence showed that the standardized nursing language is rarely found in nursing documentation.

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Moreover, there are very few hospitals that provide patients with standardized nursing care. There is no standardized nursing care established in Indonesia yet. According to Evers [17], the professionalism of a profession is determined by how the professionals set formats for the provision of the services delivered. The nurses as professionals with specific scientific are needed to establish a professional care which is suits in all hospitals in Indonesia. Thus, the standard should be understood by all nurses with standard nursing language.

Consequently, the consistency of standard nursing language in communicating nursing care will give some benefits [18]. Firstly, it will contribute to enhancing the patients' safety. Secondly, it gives control and autonomy in nursing practice. Thirdly, it provides clinical data for nurse administrators to fulfill the work demands. Fourth, it will contribute to managing the electronic health record in the future [19].

Therefore, it is urged to conduct research regarding the nursing diagnosis and problem collaboration in practice. In this case, this study will be held through assessment and patients' documentation in USU hospital. Hence, it will be applied to be the standard of nursing care in every ward. Therefore, the standardized nursing care will establish in the future, and the research result will become one of the suggestions in USU hospital for standardized nursing care.

## II. METHODOLOGY

### A. Design

This research was a descriptive quantitative with cross sectional approach. All the respondents involved were hospitalized patients in University of Sumatera Utara Hospital from August till September 2016. The aim of this study was to identify the nursing diagnoses and problem collaborations experienced by hospitalized patients in USU Hospital based on NANDA-I 2012-2014 taxonomy [12], and collaborative problems by Carpenito [10]. The study is conducted with six steps of the nursing diagnostic process through patients' assessment. The study is approved by the Research Ethic Board Faculty of Nursing, University of Sumatera Utara, Indonesia. All participants are provided informed consent to sign.

### B. Sample

The population of this study was all the hospitalized patients from March till May 2016. The sampling technique used was a total sampling technique of hospitalized patients which were 74 patients. However, two patients are withdrawn from the sample since the data were incomplete. So, the sample involved in the study was 72 patients.

### C. Instrument

The research tool was Intan's Screening Diagnoses Assessment (ISDA). ISDA is the primary tool in six steps of the nursing diagnostic reasoning that helps the nurses in patients' assessment. ISDA is an assessment tool to facilitate

the researchers in nursing diagnoses and problem collaboration identification [13].

### D. Data Collection

The data collection is conducted through assessments which consisted of interview, physical examination and documentation study. The researchers used six steps of a nursing diagnostic process in formulating the nursing diagnosis establishment. The procedures are as follows [11]:

1. The data identification is using ISDA as an assessment tool in determining possible nursing diagnoses and diagnosis collaborations
2. Activate possible nursing diagnoses and collaborative problems
3. Read/learn from appropriate references about those possible nursing diagnoses and collaborative problems and determine:
  - A. If the diagnoses are confirmed
  - B. If the diagnoses are omitted
  - C. Re-assessment for more information related to the nursing diagnoses and problem collaboration.
4. Apply the poster of *The Map of Nursing Diagnoses* to categorize the nursing diagnoses with "A" category
5. Re-assessment for further identification for nursing diagnoses with A and C category. This step also for etiology or other defining factors recognition
6. Title the nursing problem and collaboration

### E. Data Analysis

Frequencies and percentages were calculated to present the research result.

## III. RESULT

The result of nursing diagnosis and collaboration problems identification found among pediatric patients, adult patients, maternity patients and intensive care patients in USU Hospital. The research result including the patient's demographic data was as follows.

### A. Patients Demographic

Based on the results of the study, the number of the total of the research samples was 72 respondents consisting of 19 pediatric patients, 36 adult patients, six maternity patients and 11 intensive care patients.

**Table 1. Patients Demographics (N=72)**

No	Demographic Data	Patients			
		Pediatric	Adult	Maternity	Intensive Care
1	Gender	n=19	n=36	n=6	n=11

	Male	10	19	-	7
	Female	9	17	6	4
<b>2</b>	<b>Age</b>				
	0-20	19	7	-	3
	21-40	-	6	6	2
	41-60	-	11	-	5
	61-80	-	10	-	1
	81-100	-	2	-	-
<b>3</b>	<b>Marital Status</b>				
	Married	-	18	6	6
	Single	19	11	-	4
	Widow/widower	-	7	-	1
<b>4</b>	<b>Education Level</b>				
	Uneducated	13	4	-	2
	Primary school	5	1	-	1
	Junior high school	1	4	1	3
	Senior high school	-	16	2	3
	Diploma degree	-	2	1	-
	Bachelor degree	-	8	2	2
	Master degree	-	1	-	-
<b>5</b>	<b>Occupation</b>				
	Retired/Not working	17	5	-	3
	Student	2	12	-	1
	Teacher	-	1	-	-
	Civil Servant	-	3	-	1
	Enterpriser	-	6	2	4
	Nurse	-	-	2	-
	Housewife	-	9	2	2

According to the data above showed that the ratio between male and female patients was impartial, female patients were 36 and male patients were 36. On the average, all patients were spread in all age range with various backgrounds in education level and occupation.

### B. Adults Patients

There were 37 nursing diagnoses and 19 collaborative problems found among adult patients. The data were as follows:

**Table 2. Frequency Distribution of the Most Common of Nursing Diagnoses among Adult Patients, University of Sumatera Utara Hospital**

No	Nursing Diagnosis	f	%
1	Acute Pain	15	20.5
2	Risk for infection	15	20.5
3	Risk for injury	9	12.3
4	Risk for fall	9	12.3
5	Nausea	8	10.9
6	Activity intolerance	5	6.8
7	Ineffective airway clearance	5	6.8
8	Risk for unstable blood glucose level	5	6.8
9	Disturbed sleep pattern	3	4.1
10	Noncompliance	3	4.1

**Table 3. Frequency Distribution of the Most Common of Collaborative Problems among Adult Patients, University of Sumatera Utara Hospital**

No	Collaborative Problems	f	%
1	RC Bleeding	4	5.5
2	RC Acidosis Metabolic	4	5.5

3	RC Hyperglycemia	4	5.5
4	RC Hepatic Dysfunction	4	5.5
5	RC Decreased Cardiac Output	3	4.1
6	RC Renal Insufficiency	2	2.7
	RC	2	2.7
7	Metabolic/Immune/Hematopoietic		
8	RC Allergic reaction	2	2.7
9	RC Renal Urinary Dysfunction	2	2.7
10	RC GI Bleeding	1	1.4

### C. Pediatric Patients

There were 22 nursing diagnoses and 13 collaborative problems found among pediatric patients. The data were as follows:

**Table 4. Frequency Distribution of the Most Common of Nursing Diagnoses among Pediatric Patients, University of Sumatera Utara Hospital**

No	Nursing Diagnosis	f	%
1	Risk for infection	10	13.7
2	Risk for disproportionate growth	5	6.8
3	Risk for injury	4	5.8
4	Acute pain	3	4.1
5	Hyperthermia	3	4.1
6	Ineffective airway clearance	3	4.1
7	Risk for delayed development	3	4.1
8	Constipation	3	4.1
	Risk for decreased cardiac tissue perfusion	2	2.7
9		2	2.7
10	Risk for fall	2	2.7

**Table 5. Frequency Distribution of the Most Common of Collaborative Problems among Pediatric Patients, University of Sumatera Utara Hospital**

No	Collaborative Problems	f	%
1	RC Thrombocytopenia	3	4.1
2	RC Cardiac/Vascular	3	4.1
3	RC Hepatic Dysfunction	3	4.1
4	RC Compartmental Syndrome	2	2.7
5	RC Acidosis metabolic	2	2.7
	RC	2	2.7
6	Metabolic/Immune/Hematopoietic		
7	RC Allergic reaction	1	1.3
8	RC Pulmonary Edema	1	1.3
9	RC Decreased Cardiac Output	1	1.3
10	RC Pulmonary edema	1	1.3

### D. Maternity Patients

There were 8 nursing diagnoses and no collaborative problems found among maternity patients. The data were as follows:

**Table 6. Frequency Distribution of the Most Common of Nursing Diagnoses among Maternity Patients, University of Sumatera Utara Hospital**

No	Nursing Diagnosis	f	%
1	Risk for infection	2	2.7
2	Impaired skin integrity	2	2.7
3	Acute pain	2	2.7
4	Nausea	2	2.7
5	Deficient knowledge	1	1.7

6	Fear	1	1.7
7	Risk for electrolyte imbalance	1	1.7
8	Risk for injury	1	1.7

**E. Intensive Care Patients**

There were 30 nursing diagnoses and 17 collaborative problems found among intensive care patients. The data were as follows:

**Table 7. Frequency Distribution of the Most Common of Nursing Diagnoses among Intensive Care Patients, University of Sumatera Utara Hospital**

No	Nursing Diagnosis	f	%
1	Risk for disuse syndrome	10	13.7
2	Risk for infection	9	12.3
3	Risk for aspiration	8	11
4	Risk for injury	6	8.2
5	Ineffective airway clearance	4	5.5
6	Risk for decreased cardiac tissue perfusion	3	4.1
7	Impaired skin integrity	2	2.7
8	Risk for impaired skin integrity	2	2.7
9	Risk for acute confusion	2	2.7
10	Risk for unstable blood glucose level	1	1.3

**Table 8. Frequency Distribution of the Most Common of Collaborative Problems among Intensive Care Patients, University of Sumatera Utara Hospital**

No	Collaborative Problems	f	%
1	RC Pneumothorax	5	6.8
2	RC Metabolic/Immune/Hematopoietic	3	4.1
3	RC Seizures	3	4.1
4	RC Respiratory Alkalosis	3	4.1
5	RC Hyponatremia	2	2.7
6	RC Renal insufficiency	2	2.7
7	RC Increased intracranial pressure	2	2.7
8	RC GI Bleeding	2	2.7
9	RC Metabolic Acidosis	2	2.7
10	RC Pulmonary embolism	2	2.7

**IV. DISCUSSION**

The research in nursing diagnoses establishment is getting developed nowadays. Many researchers analyzed nursing diagnosis related to specific medical conditions [14; 21; 24,] and some researchers established nursing diagnosis related to the specific area of nursing care [20; 22; 23].

The research result in this study showed that some of the nursing diagnoses establish in every ward almost similar. One of them was the risk for infection. This diagnosis is one of the most common nursing diagnoses in all units. The risk for infection defined as the condition in which the patients were vulnerable to invasion of a pathogenic organism [12]. The risk factors found in this study were the chronic illness, suppression of immune system and invasive procedures [10]. Moreover, a study found that invasive procedure was one of the risk factors related to infection [16]. In this study, catheterization and infusion are the most common interventions implemented for hospitalized patients in USU Hospital.

Another most common nursing diagnoses found in all hospitalized patients was acute pain. Acute pain is defined as

uncomfortable stimuli related to actual or potential tissue damage with a short period of onset [12]. The data major determined is the pain report from the patients regarding the pain quality and its' intensity [10]. In this study, acute pain found among pediatric, maternity and adult patients. However, this diagnosis was not found among intensive care patients. It could happen since all the patients were unconscious and there is no verbal cue related to pain. However, de Fatima Lucena and de Barros [23] found that chronic pain was one of the nursing diagnosis experienced among intensive care patients along with self-care deficit syndrome. But, there was no nursing diagnosis related to self-care deficit in this study.

Also, a research conducted by Kim [15] revealed that most frequent nursing diagnoses used among hospitalized patients were anxiety, disturbed sleep pattern, activity intolerance, nausea, ineffective airway clearance and chronic pain. However, there was no risk for infection and no problem collaboration found in Kim study.

Even though some of the established nursing diagnoses were similar among most of the hospitalized patients, but there was also the variety of nursing diagnosis found in certain patients. For instance, the nursing diagnosis related to growth and development revealed among pediatric patients. Two nursing diagnoses such as, the risk for disproportionate growth and the risk for delayed development mostly found among pediatric patients. The hospitalized children in this study showed the imbalance weight compared to normal children. Also, this situation due to the nutrition issue and congenital diseases such heart and lung disease [25]

Moreover, the nursing diagnosis related to consciousness level found among intensive care patients. The risk for disuse syndrome was the most common nursing diagnoses found among the patients. This diagnoses established for unconsciousness patients which were coma or stupor. This condition may alter the patients' health status since the alteration of immune system induced risk for disuse syndrome [12]

However, the studies regarding collaboration problems among hospitalized patients are rarely found. Collaboration problem is one of the areas of collaboration where nurses implement interventions in collaboration with other health professionals. It refers to the collaboration problem bifocal clinical practice model that identifies two situations in clinical practice [10]. In the first area, the nurses work independently. In the second area, the nurses collaborate with other health professionals in the implementation of particular interventions. This model not only helps to regulate the area of nursing practice, but also helps distinguish between nursing knowledge and other health care professionals. Thus, it is concluded that the issue of collaboration is a problem that requires medical intervention and nursing role in patient management.

## V. CONCLUSION

According to this research result, there were some points can be concluded. Firstly, the most nursing diagnosis in most units was the risk for infection. It's associated with the invasive procedures provided by the health care professional. Secondly, the number of nursing diagnoses and collaboration found in large number was in high dependency unit. Thirdly, the most common nursing diagnoses in the pediatric unit related to growth and development. It relates to the child weight, height and the age of the child which were not proportional. This condition associated with the congenital diseases and inadequate nutrition. Fourthly, the number of nursing diagnoses established in the maternity unit is very far from the expected. It might related to a few numbers of patients with the short period of stay in the maternity unit. However, the number of hospitalized patients in USU hospital is increased from day to day. So, it recommends to USU hospital to go deeper into the assessment performed to the patient, so that the nursing diagnosis and collaboration problem identification could be more accurate.

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