# Introduction to Engineering Design

Find problems that may arise in NPU for patient with mental illness

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## What is the NPU?

NPU : Negative-Pressure-Unit

A special isolation ward that artificially lowers the air pressure inside the hospital to prevent the pathogen from spreading outside.



# How to elicit the opinion

Characteristics of sound pressure rooms.

Necessary for mentally ill patients

### The effect of NPU on patients.

# Bad Effect for Patient

The patient feels isolated.



The patient feels left out.



The patient feels anxious.

## **Opening Opening <b>Opening Opening <b>Opening Opening Opening <b>Opening Opening Opening <b>Opening Opening <b>Opening Opening Opening Opening <b>Opening Opening Opening**

# Therapy Restricted Therapy Restricted

There is a setback in treatment.



Play therapy is restricted.

## 13 It can be dangerous when the patient is alone.

#### It can be dangerous



The patient needs a nurse.

#### It can be dangerous



Protection suits and disinfection procedures are required.

## 1 Hard to get in and out to NPU

#### Additional cost incurred



Additional costs related to protective clothing can be incurred.

#### Additional cost incurred



It's impossible to recycle.

## **Evaluating Priorities**

1. The effect of NPU on patients.

강현빈: 2 > 1 > 3 >4

2. Group therapy and activities are restricted.

강희영:3>1>2>4

3. It can be dangerous when the patient is alone.

박민준: 2 > 3 > 1 > 4

4. Hard to get in and out to NPU

장준혁:1>3>4>2

# **Evaluating Priorities**

Win	1	2	3	4	Win
1		1+1	1+1	1+1+1+1	8
2	1+1		1+1	1+1+1	7
3	1+1	1+1		1+1+1+1	8
4	х	1	х		1
Lose	4	5	4	11	

Result: 1 = 3 > 2 > 4

## **Questions for 10/29**

1. How can family member visit NPU patients?

2. Are negative pressure masks used in Korea?

-Group 2-

# Thank you