



Exhibiting Expertise: A Nurse's Impact in High-Tech Modern Medicine

Dimitra Mammos^{1,3}, Natalie Palacios^{1,3}, Mario Deng², Federica Raia^{1,2,3}

¹GSE&IS, Department of Education and Information Studies, ²DGSOM, Department of Medicine, ³Relational Act Model Lab-PI Dr. Raia

Introduction

After a patient undergoes a heart transplantation, a series of endomyocardial heart biopsies (EMB) are performed to ensure that the patient's body is accepting the implanted heart. In teaching hospitals, an Attending physician assumes the role of a teacher and supervisor to the Fellow physician, as a step in the Fellow's medical training to specialize in a particular field. Through multimodal analysis³ of two video-recordings of an Advanced Heart Failure (AdHF) Fellow's first EMB, we examine each nurses' interactions with the doctors and with the patient, who vulnerably lies conscious on the operating table. Our focus is directed towards how each nurse's actions impact the room's atmosphere and all participants throughout the procedure.

Theoretical Framework

Dreyfus' model of expert performance⁴ claims that an expert notices what needs to be achieved and decides how to achieve the goal in an intuitive and immediate manner. Dr. Raia and Dr. Deng's Relational Act² identifies patient care as a medical professional's ability to appreciate the personhood of a patient in high-tech modern medicine. Our research is in alignment with Dreyfus' model of expert performance⁴, and The Relational Act² in order to determine how a nurse's expertise cares for patient personhood while facilitating a conducive teaching and learning environment.

Research Question

What does it mean to be an expert nurse, while an Advanced Heart Failure (AdHF) Fellow is performing an Endomyocardial Heart Biopsy (EMB)?

The Relational Act Model

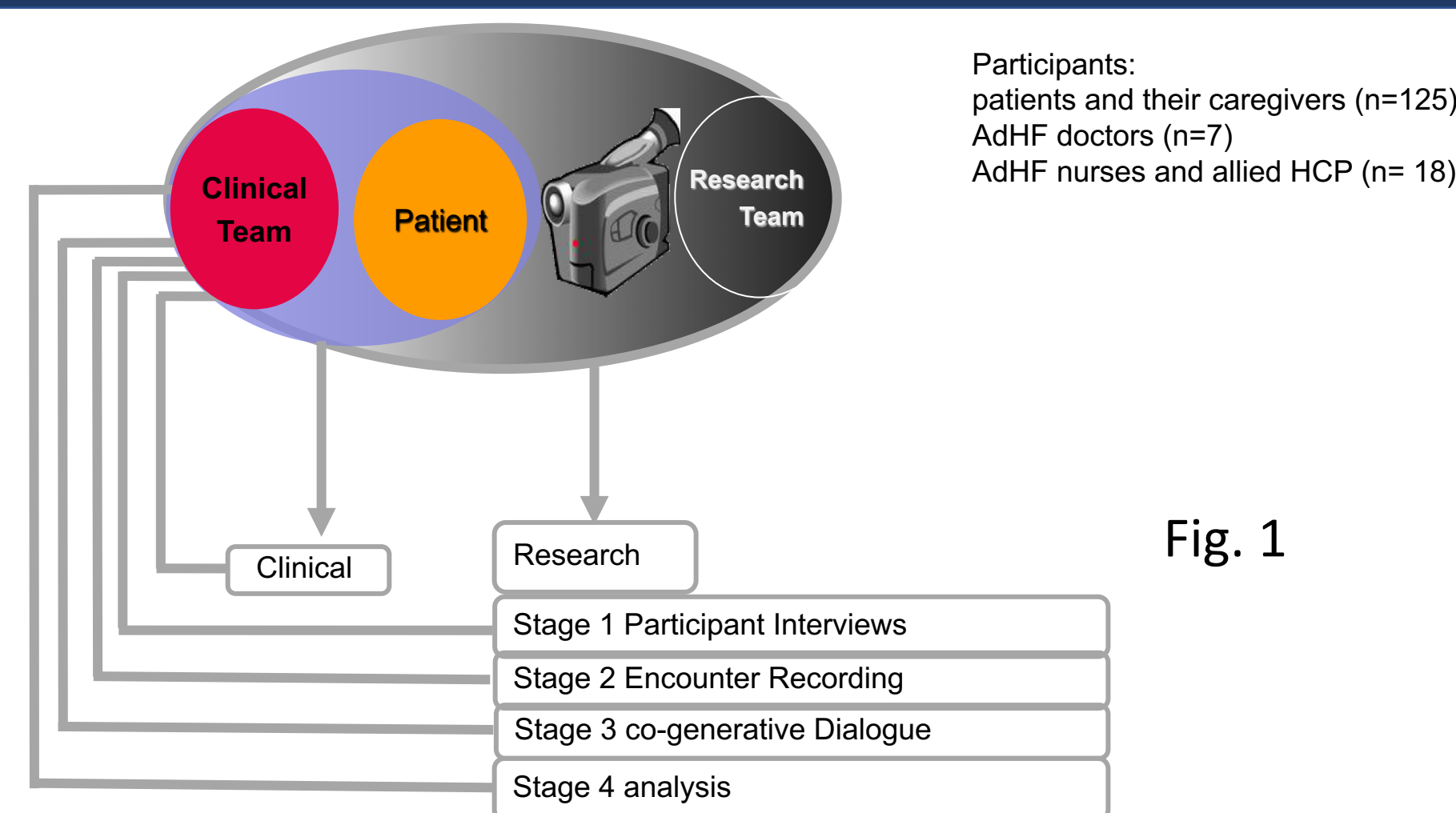


Fig. 1

Video/audio data analysis process is also iterative:

- 1) A first descriptive analysis of the data is used to identify specific time instances where interpersonal communication and themes emerge. These are discussed in co-generative dialoguing sessions (Fig. 1).
- 2) The selected data, is transcribed and a phenomenologically¹ informed multimodal analysis is conducted³

Results

Example 1 Tenting

Nurse A



- 1 Nurse: You're gonna take the first towel
- 2 and you make it into thirds, but longways
- 3 Fellow: Okay
- 4 Nurse: So take it longways and make it into thirds
- 5 Fellow: Alright
- 6 Nurse: Just thirds, yeah
- 7 Fellow: Okay
- 8 Nurse: And then, let me get my--
- 9 and then your gonna lay it across the top of his face
- 10 but like not his whole face
- 11 Fellow: Yeah, kinda like halfway
- 12 Nurse: Like watch, this is the key, the first one
- 13 Fellow: Alright

1A. In addition to physically showing the Fellow the correct placement of the sterile material, Nurse A uses definitive language when explaining the proper dimensions and the arrangement of the sterile material.

Nurse B

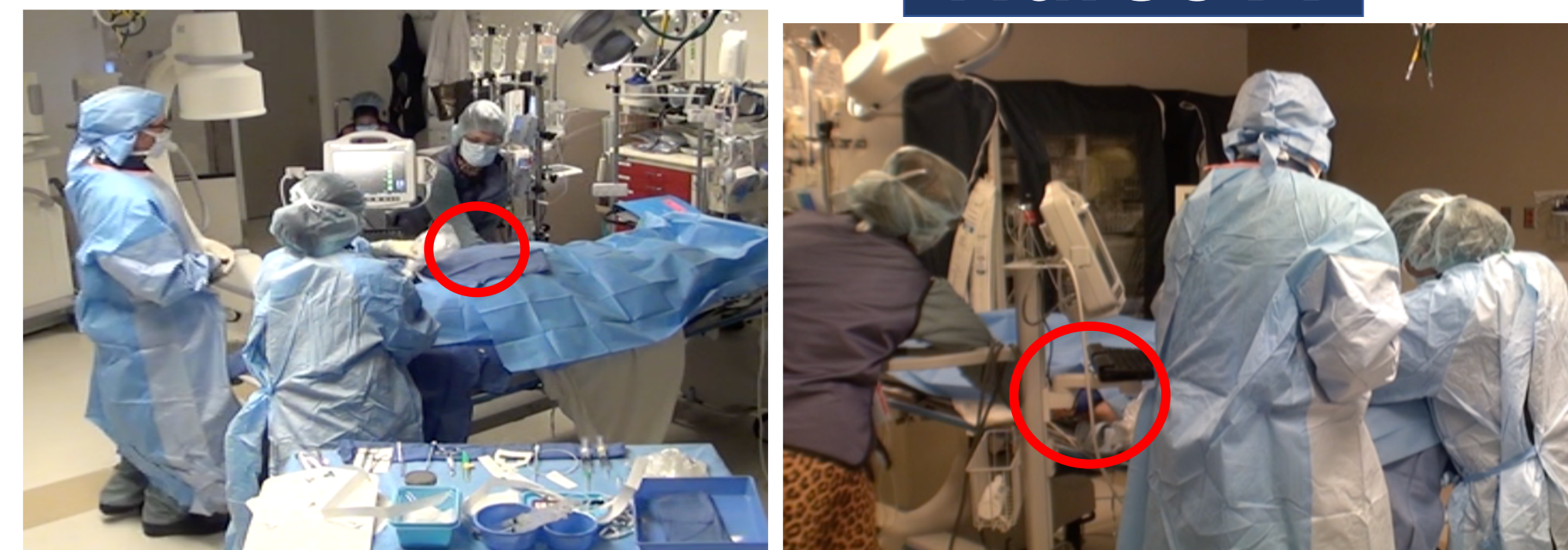
- 1 Fellow: How does this drape work?
- 2 Nurse: You took off both sides?
- 3 Fellow: Yeah I don't have to?
- 4 Nurse: Uh what you want to do is put this side on right
- 5 over that spot
- 6 Fellow: Ohh okay
- 7 Nurse: Actually I don't--
- 8 Fellow: Does it matter which side?
- 9 Nurse: It does matter which side, so this one
- 10 No,yeah
- 11 So unfold
-
- 21 Nurse: So go ahead and prop this up this side
- 22 Yep
- 23 I'm I'm sorry this is backwards
- 24 So we need a ---
- 25 Let's start over okay this is you see the head it goes up towards you



1B. Nurse B uses vague language when telling the Fellow how to place the sterile material over the patient.

Example 2 Touch

Nurse A

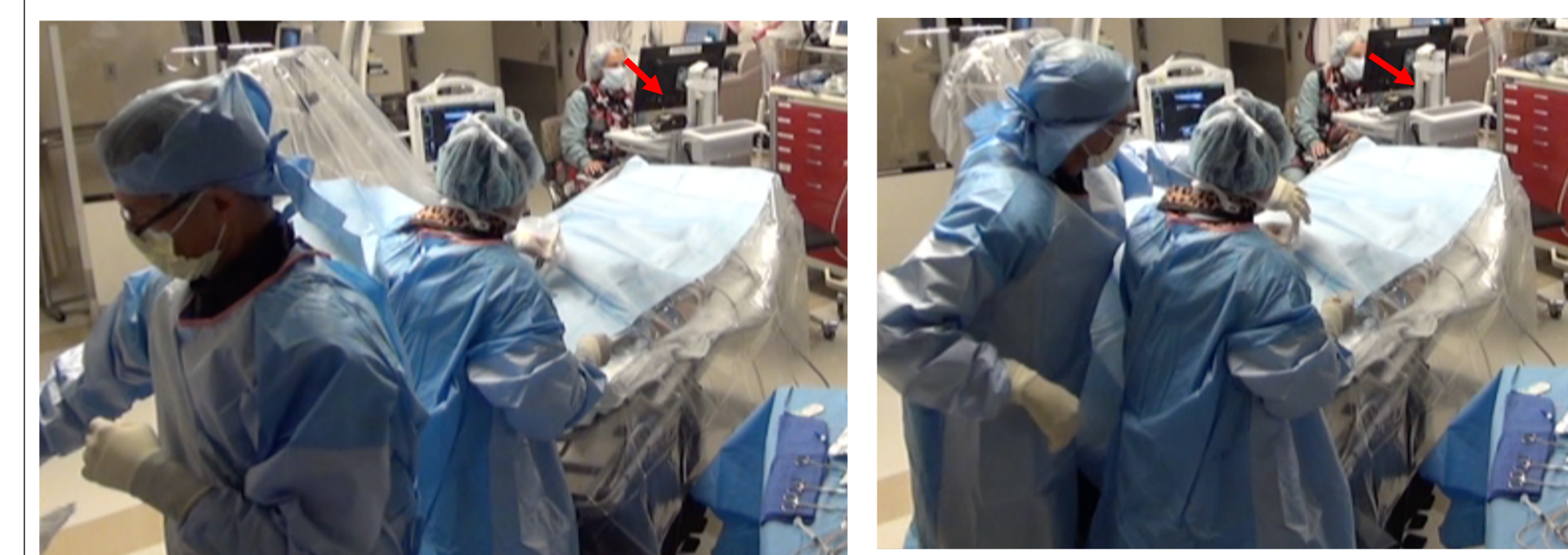


- 1 Nurse: This is that sting and burn part
- 2 Fellow: Okay, and it should be right about there
- 3 Attending: Yep, perfect
- 4 Fellow: Okay, so now we are going to give you that lidocaine
- 5 that's the numbing medicine okay
- 6 that's the pinch and the burn
- 7 Patient: Yes
- 8 Fellow: Alright, just try to stay real still for me okay
-
- 15 Nurse: She's going to go in slow
- 16 She's going to push it slow
- 17 This is the part where you can squeeze my hand if you
- 18 need to, just squeeze
- 19 You're doing good

2A. Nurse A accompanies the patient at the table during a physically uncomfortable stage in the procedure and forewarns the "sting and burn" sensation that the patient will experience.

Nurse B

- 1 Attending: Now comes the moment for the young (inaudible) to feel
- 2 a little stick
- 3 Fellow: So (patient's name) you will feel a little stick here, okay
- 4 Patient: Okay
- 5 Fellow: Little sting here coming your way,
- 6 Here you go
- 7 Attending: Sorry about that
- 8 Fellow: Little burn here
- 9 Attending: If I didn't have sterilized gloves on, I would hold your hand
- 10 Fellow: So now you've got that
- 11 Are you doing okay there so far?
- 12 Patient: Mhm

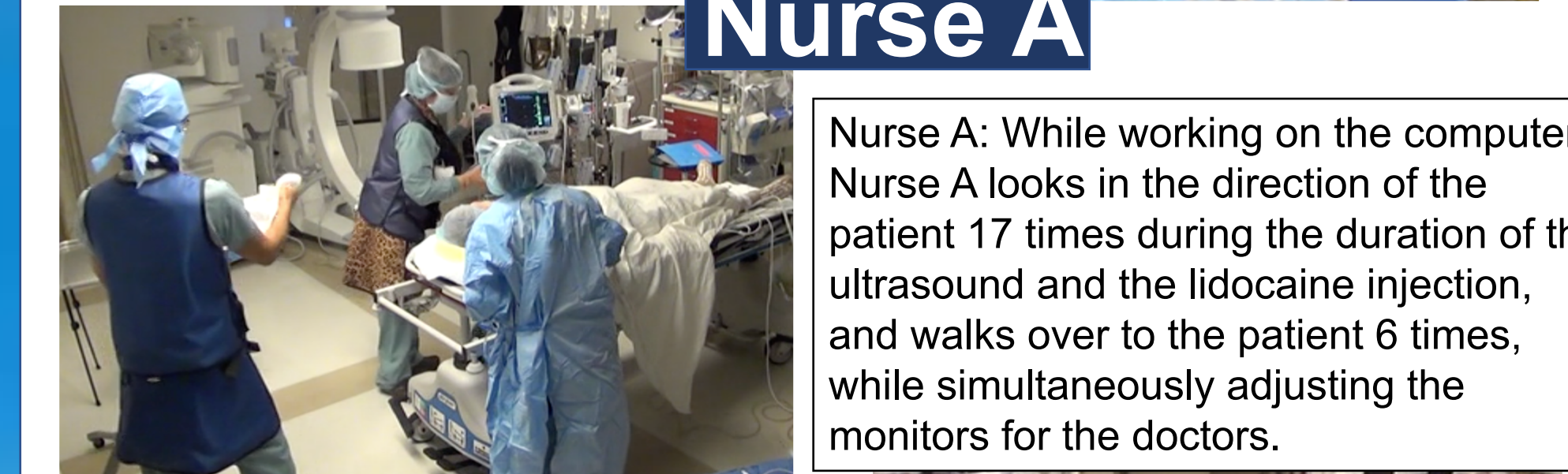


2B. Nurse B does not verbally acknowledge the discomfort that the patient is going to feel or physically walk over to him when the Fellow injects the numbing medicine. The Fellow advises the patient that he will feel a "little sting."

Example 3 Attentiveness



Nurse A



Nurse A: While working on the computer, Nurse A looks in the direction of the patient 17 times during the duration of the ultrasound and the lidocaine injection, and walks over to the patient 6 times, while simultaneously adjusting the monitors for the doctors.

Nurse B

- 1 Fellow: oh can you --
- 2 do you mind turning the monitor
- 3 towards me please, thank you

Nurse B: For the duration of the ultrasound, the nurse looks over to the patient a total of 4 times, and moves towards the patient 2 times; however, the nurse does not look or move towards the patient at all during the lidocaine injection.

Discussion/Conclusion

Nurse A's intuitive decision-making skills and ability to appreciate the patient's personhood directly and indirectly benefits all stakeholders in the room. In contrast, Nurse B does not notice and/or intuitively respond to different stimuli throughout the biopsy.

Nurse A:

- Teaching by example and precise language
- Concerned with the patient's emotional state
- Anticipating and intuitively responding to the needs of the patient and doctors

Nurse B:

- Vague gestures and imprecise language
- Not showing concern for the patient's comfort
- Responds to doctors only when called upon

Given this, Nurse A displays an extremely high level of expertise, whereas Nurse B has not quite reached the level of expertise; this directly correlates to and impacts the environment created within the room.

Exhibiting Expertise

Throughout a AdHF Fellow's first performance of an EMB, a nurse's level of expertise has a profound impact on the Fellow's learning environment and the patient's emotional state of being. An expert nurse is characterized by their intuitive decision-making skills and their ability to appreciate the patient's personhood, which directly and indirectly affects the stakeholders in the room.

References

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