ORIGINAL PAPER



TIMS: A Mixed Methods Evaluation of the Impact of a Novel Chaplain Facilitated Recorded Interview Placed in the Medical Chart for the Medical Staff in an ICU During the COVID-19 Pandemic

Elizabeth Tracey¹ • Jason Wilson¹ • Martha Abshire Saylor² • Pamela Donohue³ • Argirios Stakias⁴ • Brian Garibaldi³ • Dale Needham³

Accepted: 9 March 2023 / Published online: 4 April 2023 © The Author(s), under exclusive licence to Springer Science+Business Media, LLC, part of Springer Nature 2023

Abstract

The purpose of this study is to examine how a novel intervention known as TIMS, "This is My Story," impacted clinicians caring for patients during the COVID-19 pandemic in the medical intensive care unit (MICU) at the Johns Hopkins Hospital. An eight-question survey was administered to MICU staff on their experience with TIMS files for pre- and post-listening reflections. Qualitative interviews were conducted with 17 staff members who prospectively agreed to participate. A total of 97 pre-listening and 88 post-listening questionnaires were completed. Responses indicated that the audio recording was appropriate to discover more about the patient beyond the immediately observable and useful (98%), "considerably" increased staff empathy for the patient (74%), and thought it would "some" or "considerably" improve subsequent interactions with the patient's loved ones (99%). The qualitative analysis revealed that medical staff found the audio format easy to use and helpful in humanizing patients in their clinical practice. The study demonstrates that TIMS audio files are an important addition to the electronic medical record, enabling clinicians to practice with greater awareness of the patient's context and increased empathy for patients and families.

Keywords Chaplain · Empathy · Distress · Communication · Critical illness · ICU

Johns Hopkins Health System, Baltimore, MD, USA



Elizabeth Tracey etracey@jhmi.edu

Department of Spiritual Care and Chaplaincy, Johns Hopkins Health System, 901 S. Bond Street, Suite 550, Baltimore, MD 21231, USA

Johns Hopkins School of Nursing, Baltimore, MD, USA

³ Johns Hopkins School of Medicine, Baltimore, MD, USA

Introduction

Clinician burnout and moral distress were dramatically accelerated by the COVID-19 pandemic. As Li identifies (2021), depression, anxiety, and post-traumatic stress disorder (PTSD) appeared as significant features in over 65% of the surveyed (n = 595) medical providers. Similarly, Rushton et al., (2021) found there was an increased prevalence of depression, anxiety, and PTSD in medical providers (n = 97,333) during the COVID-19 pandemic. Factors contributing to the burnout and moral distress locally, at The Johns Hopkins Hospital, included strict no visitation policies imposed by hospital administrators, severe illness of COVID-19 patients, who were frequently ventilated, sedated, and prone, communications limitations resulting from PPE, patient volume on the unit, and mortality rate.

Moral distress was first conceptualized by Jameton, who described it as arising when one knows the right thing to do, stemming from one's moral values and beliefs, but institutional constraints make it nearly impossible to pursue the right course of action (Huffman & Rittenmeyer, 2006). The distress was evident in the diminished "integrity, moral capability, perception of basic goodness, and distress on a psychological, behavioral, social or spiritual level" (Rushton et al., 2021, p. 713) During the COVID-19 pandemic, visitor restrictions created an elevated level of social isolation that resulted in moral distress of staff working in the hospital ICUs. There was a pervading sense of the inadequacy of care and treatment as well as staffing limitations, resulting in a diminished sense of empathy for some staff members. Nurses, by nature of the caregiving predisposition, are compassionate individuals however, "compassion not only allows nurses to communicate therapeutically with the patient but also provides high-quality care" (Arkan et al., 2020, p. 139). In the absence of the patient's "story," the medical providers were not able to provide the greatest level of care that they had previously. In this context, the "greatest level of care" represents what chaplains refer to as "cura personalis," in other words caring for the entire person as found in Ignatian Spirituality (Otto, 2021). It is our experience that in the COVID-19 restrictions, part of the patient's humanity had not been captured with the absence of their family and friends present to tell their story when they were not able to do so.

To address this observed distress the unit chaplain developed an intervention, This is My Story (TIMS), a 2-min edited recording of a conversation between a chaplain and a legally authorized representative (LAR) of individual ICU patients, made available for staff to listen to during their clinical work to help them get to know the patients (Tracey et al., 2021). The purpose of this study was to examine the influence of the TIMS intervention on ICU staff experiencing moral distress and a diminished sense of empathy for patients. Additionally, there was an assessment for changes in perceived communication with the patient's LAR as well as to explore staff perspectives on feasibility, acceptability, and the potential effect of TIMS in clinical care.



The chaplain was able to intervene in this setting because "the potential of chaplaincy care to provide a spiritual balm for the patient's distress and/ or the caregivers' disquietude lies in the chaplain's willingness and ability to form a relationship with the care recipient, a task which involves both risk and vulnerability" (Cooper, 2018, p. 157). It is through the delicate balance of developing trust with the one telling the story and the hearer that there is a vulnerability and risk. Both sides are trusting that the story will be received and provide a foundation for further interactions. Chaplains are unique in this aspect to not only document what they have heard but to interpret it for the interdisciplinary team's benefit.

While in the previous explorations the focus was on the patient, about whom the interview was conducted, the care now was being focused on the medical staff providing care. In the chaplain's experience, it is the nurses that have the most frequent and longest history of patient interactions and are the individuals that received the questions or concerns of the patients or their families. As Arkan explains, "it is important for nurses to show sensitive and compassionate behaviors toward patients and their relatives when they provide diagnosis and treatment services" (Arkan et al., 2020, p.31). Facilitating the use of the recorded interview by the LAR of the hospitalized patient was the determined response needed to assist in promoting a "sensitive and compassionate" atmosphere in an environment that had been overwhelmed during the initial phase of the COVID-19 pandemic and allowing the providers to increase in empathy. Because those with the legal authority to make medical decisions about a patient are not always family, we referred to them as "loved ones."

Empathy, a cognitive and emotional dimension, may be difficult to assess in patient care but can be at the minimum understood through the observed effect of the provider's understanding of the inner world of the patient (cognitive) and appreciating the emotional coincidence (Allahyari Bouzanjani et al., 2021, p.136). Through the use of the TIMS intervention, the medical team can look at how their life and circumstances may parallel those of the patient's story they have just heard. As Bouzanjani explains, the clinician's empathy allows them an amount of psychological capital, "perceptual and attitudinal ability at their work" (Allahyari Bouzanjani et al., 2021, p.137), and gives them the resources to overcome new challenges and maintain a level of needed care.

Previous research conducted on this topic found feasibility and utility in this intervention (Wilson et al., 2022), without quantifying the effect it may have had on the providers. The added value of this study examines how TIMS impacts the ability of providers to connect with their patients in a meaningful way, producing greater empathy, in scenarios where they are not able to interact with the patient or loved ones to gain these details on their own.

The study was determined to be exempt human subject research (45 CFR 46.104(d) (2) (ii)) by the Institutional Review Board at Johns Hopkins (IRB #00,288,323). Patient EMR use was approved by a waiver of informed consent and HIPAA by the IRB.



Methods

Study Design

To evaluate the TIMS intervention, we used a pre-test/post-test single-group design with a pre-/post-survey and post-intervention qualitative staff interviews.

Eligibility and Recruitment

All unit staff was eligible to participate in this study if they provided care or services to a patient with a TIMS recording embedded in the electronic medical chart. This included physicians, doctors, fellows, nurses (traveling and institutional), residents, social workers, patient experience representatives, and care technicians. From those who completed the survey, a sub-sample of staff was asked to participate in a brief semi-structured interview, sampled to obtain perspectives from a range of staff including nurses, junior and experienced physicians, and other ancillary staff to be representative of the unit structure.

Medical Team Questionnaire Development and Administration

A priority of the study team was to minimize any additional burden placed on the staff. Therefore, novel, focused questions were developed to evaluate the staff experience before and after the intervention. Items were developed and piloted by content experts (ET and JW). The home page, located on the patient summary page, is linked to an interface with 3 weblinks: pre-survey, TIMS file, and post-survey; data were collected via Qualtrics. The time required to listen to the TIMS file and complete pre- and post-questionnaires was estimated to be about 3 min per patient. Responses to the surveys were collected anonymously, and the only identifiable information received was if the participant agreed to be contacted for the brief semi-structured interview and provided their preferred email.

Staff Interviews

The interviews were conducted in unit 1:1 with the chaplain, to seek additional details and context to the quantitative answers provided in the earlier portion of the study by the survey. The approach for the research was based upon an ethnographic method, in which the unit chaplain embedded into the MICU care team as an active participant, and recorded observations and discussions. Each interview lasted approximately 15 min (Table 1).

Questions for semi-structured interviews were developed by the study team to address questions related to the feasibility, acceptability, and staff-perceived benefit of TIMS (Bowen, et al., 2009). The interview guide is provided in Table 2.



Table 1 Post-intervention staff interview guide

- 1. Describe your experience with TIMS.
 - a. What did you learn about patients?
- b. How did this make you feel?
- 2. How did listening to the TIMS recording influence your care of the patient?
 - a. Were there any direct actions you took that resulted from listening?
- 3. How did TIMS influence interactions with the patient's family?
- 4. Tell me about how TIMS fit into your workflow.
 - a. When did you listen?
- b. Were there challenges to having time for TIMS?
- 5. How did the way TIMS was delivered (the technology part) work for you?
 - a. Can you think of a way that it could be more streamlined into the chart?
- 6. Are there other ways that you can think of for TIMS to be used in different healthcare settings?
 - a. Are there additional questions we should ask users about how TIMS worked for them?
- 7. Is there anything else you would like to share with us about TIMS?

Table 2 Staff characteristics

Please indicate your current role?		
Nurse	53 (55)	
Medical Doctor/Nurse Practitioner/Physician Assistant	29 (30), [attending = 2, resident = 20, NP = 3, PA = 4]	
Other	15 (16)	
How long (in months) have you worked for the Johns Hopkins Hospital in your current capacity?		
Median (range)	22 (0–180)	

Qualitative Analysis

Each interview was recorded and transcribed. Questions from the interview guide were used to develop the codebook (6). Coding of transcripts involved sorting the data into large-level categories according to the codebook and additional codes that emerged in the interviews. Thematic analysis was conducted using a deductive coding approach and a semantic (or low-inference) level of interpretation. Codes were grouped under broad categories based on the interview guide and topics that surfaced through the data. Peer debriefing, memos, and an audit trail were used to enhance study rigor. Findings were discussed with the study team and synthesized into general themes.

We used thematic analysis in which coding of transcripts involved sorting the data into large-level categories. Questions from the interview guide were used to develop the codebook a priori (available upon request). Exit interviews were coded using a deductive coding with a semantic level of interpretation;



no additional codes emerged in the interviews. Codes were grouped and themes were synthesized across groups of codes with the intent to minimally interpret the data.

Integration of Quantitative and Qualitative Data

Descriptive statistics were mapped with qualitative themes to generate the final themes.

Results

From March 30, 2021, through June 30, 2021, 57 loved ones of patients who met the inclusion criteria were contacted for recording a TIMS file. Forty-five recordings (79%) were recorded and made available to ICU staff. Two declined to participate (2/57 or 3.5%), eight patients were transferred out of the ICU before recording (8/57 or 14.0%), and 2 patients died before the file could be posted (2/57 or 3.5%).

Ninety-eight staff members participated in the TIMS study. Staff participants were nurses (55%), physicians, doctors, residents, fellows (30%), and other staff such as dieticians, clinical customer service representatives (CCSRs), and social workers (15%). Results of the pre- and post-listening surveys are seen in Table 3 and Table 4.

Integrating survey and semi-structured interview data resulted in 3 overarching themes: 1) moral distress as relative to the diminished knowledge of patients, 2) empathy and connection to the patient's humanity outside of their diagnosis, and 3) staff perspectives on feasibility and utility of TIMS (Table 5).

Theme 1: Moral Distress as Relative to the Diminished Knowledge of Patients

Prior to listening to the TIMS file, most staff (66%) reported minimal or no knowledge of the patient, while half of the staff (50%) reported some or extensive distress related to their knowledge of patients (Table 3). Nearly all staff (98%) found the TIMS recordings to provide insightful and useful information. Users reported learning important details about the patient through the voice of their loved ones. The experience of listening increased their knowledge of personal details omitted from typical medical problem-focused reporting.

This is a great, very short, condensed, but information-packed two minutes of story. And really, details that we are not able to get, or very difficult to get, especially for patients like the one that we listened to there. (Resident physician)

Half of the staff experienced some level of distress related to their knowledge of patients, prior to listening to the TIMS recordings.

Because one of the things I found really frustrating during COVID was attending (providing general medical care) the MICU was easier in some respects,



Table 3 Mapping the questions asked across the study

ומחוב אוומ	idule 3 mapping the questions asked across the study				
	PRE	I	POST		Interview questions
Knowledge	Knowledge Rate your depth of knowledge regarding this patient prior to listening to the TIMS file?		Did the audio recording contain appropriate and useful information?	useful	Describe your experience with TIMS
					What did you learn about patients?
	Extensive	7 (7) Yes	<i>l</i> es	(86)98	
	Some	26	No	1(1)	
	Minimal	(27)	Some	1 (1)	
	None	38			
		(36)			
		26			
		(27)			
Distress	Rate your level of distress relative to your knowledge of this patient prior to listening to the TIMS file?		Rate how much listening to the TIMS file influenced your level of distress relative to your knowledge of this patient?	nced ge of this	How did listening to the TIMS recording influence your care of the patient?
	Extensive	I (6) 6	Did not reduce	(1)	
	Some	40 F	Reduced minimally	(6) 8	
	Minimal	(41) F	Reduced some	28(32)	
	None	25 F	Reduced a lot	25 (28)	
	N/A	(26) I	I did not have stress	15 (17)	
		19 I	Increased	(2)	
		(20)			
		3 (3)			
		1 (1)			



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Pre-question	N=97 Qualitative quotes that explain/expand on responses n (%)	d on responses
Rate your depth of knowledge regarding this patient prior to listening to the TIMS file?		
Extensive	7 (7)	
Some	26 (27)	
Minimal	38 (39)	
None	26 (27)	
Rate your level of distress relative to your knowledge of this patient prior to listening to the TIMS file?	Rate how much listening to the TIMS file influenced	file influenced
Extensive	9 (9) your level of distress relative to your knowledge of	r knowledge of
Some	40 (41) this patient?	
Minimal	25 (26)	
None	19 (20)	
Not applicable (satisfactory knowledge of patient)	3 (3)	
Missing	1 (1)	
Please indicate your current role?		
Nurse	53 (55)	
MD/NP/PA (attending = 2, resident = 20, NP = 3, PA = 4)	29 (30)	
Other	15 (16)	
How long have you worked for the Johns Hopkins Hospital in your current capacity? (measured in months)		
Median (range)	22 (0–180) Miss- ing = 13	
Quartiles with median imputed for missing values	10.00	

Percentages may not add to 100% due to rounding



Table 5	MICU post-survey
results	

Question	Frequency (%)
	n = 88
Did the audio recording contain appropriate and useful information?	
Yes	86(98)
No	1(1)
Some	1(1)
Rate how much listening to the TIMS file influ- enced your level of distress relative to your knowl- edge of this patient?	
Did not reduce	6 (7)
Reduced minimally	8 (9)
Reduced some	28(32)
Reduced a lot	25 (28)
I did not have stress	15 (17)
Increased	6 (7)
Did listening to the TIMS file enable you to feel greater empathy for the patient?	
Minimally	1(1)
Some	21 (24)
Considerable	64 (73)
Not at all	1(1)
Missing	1(1)
Do you expect that this audio recording will improve subsequent interactions with the patient and patient's family members or visitors?	
Some	28 (32)
Considerable	59 (67)
Not at all	1(1)
Rate the change in time needed to gather the details outside (during patient care) of listening to the TIMS file?	
Minimally	20 (23)
Some	36 (41)
Considerable	28 (32)
Not at all	3 (3)
Rate the length of the recording?	
Too short	5 (6)
About right	80 (91)
Too long	3 (3)

but I realized that the main reason was I was spending less time in the MICU was because I was not spending any time with families. (Attending or senior physician 1)



After listening, 69% reported some reduction in distress (reduced minimally, reduced some, and reduced a lot) including 28% who reported significant distress reduction.

I just think we should do it almost on every patient, if they do have the extra care and support... This person is so loved and such a big part of their family. (Nurse 1)

One physician suggested that familiarity with the patient's social history and story can be an equalizing factor:

this project could be a leveling...there's some family members who are very good at that naturally. And there are some family members that either are not available to do that, or can't do that, or don't have the education or have a different relationship with healthcare where they are comfortable being an advocate or making that relationship. So, in some ways it could be like a leveling. (Resident physician)

It is important to note that a small proportion, 7%, reported increased distress after listening. This may have been explained by the following quote:

Bittersweet in the sense that we as intensivists, of course, we have a lot of empathy for our patients, but we don't want to get too involved emotionally because everybody's fighting for their life and if you get involved and too emotional with patients you would end up emotionally drained. When I hear this thing, it hurts. Not hurts, but it just makes them a little more vulnerable. In my opinion. (Physician 2)

Theme 2: Deepening Knowledge of the Lives of Patients Creates Greater Empathy and Connection to the Patient's Humanity Outside of Their Diagnosis

Almost all users reported greater empathy for patients after listening to TIMS recordings. TIMS made them recognize the unique individuals with lives outside of their illness and hospitalization.

I mean, I love learning like that her stuffed animal there was her own dog... Every patient is in a hospital gown appears sick, and it's really hard to know who they are as outside of the hospital (Nurse 2)

Users also indicated listening to TIMS files increased their empathy, compassion, and even respect for patients.

It made it personable... you get an idea about who this person was before the tragedy or whatever happened to the patient. It makes it more... compassionate. I feel for you more because I know exactly what you did or what you were doing before everything happened and it completely stopped. (CCSR)

Sixty-seven percent of users reported the recording would considerably enhance their subsequent interactions with patients and families who participated in TIMS. Staff learned important details such as a patient's preference for positioning of



blankets which helped nurses feel like they could tailor measures of comfort. Learning music preferences allowed nurses to create a therapeutic environment that they hoped helped the patient feel known. Some providers also reported the TIMS files also helped them talk to the patients (though the patients could not respond), using information from what they heard.

In addition, when users had the opportunity to connect with family members, having listened to the TIMS files, there was a sense of trust or connection created. The family knew the staff cared enough to listen to the recording and even act based on what they learned.

The TIMS file gave a lot of really, really valuable context for how I could talk to the family. And it was very apparent to them when I walked in that I knew their mother or spouse at a level that they did not expect me to know, given that they had never met me before. (Attending or Senior Physician 2))

Some specifically mentioned, how valuable it was to hear the family's voices:

Reading doesn't really put the voice or the emotions in the voice, and it touched me deeply listening to the heartbreak of the family and remembering how they were prior to getting sick. So, it was nice. (Nurse 3)

Theme 3: Staff Perspectives on the Feasibility and Utility of TIMS

Staff reported relative ease of use for the audio TIMS files. The files were accessed by simply copying/pasting from a secure server, which was not difficult for users, although a more clickable link was suggested. Users also found the duration of the files (approximately 2 min) to be the "sweet spot, short enough that there was no excuse not to listen and long enough to be packed with useful information."

Importantly, the role on the unit and personal preference influenced how users incorporated listening into their workflows. Some physicians listened with their teams during rounds, while nurses listened during the night shift downtime or after morning assessments and medications were administered.

When I was sitting down charting and reviewing through things in the chart. I always sit down and I have my routine for checking through things with the patient, make sure I'm double-checking things that I needed to, and just adding it into that workflow. (Nurse 4)

Because the TIMS program was developed in response to the COVID-19 pandemic, it was important to explore the perceived utility of TIMS files for the future. Minor improvements were suggested such as making the file link "clickable" and/ or embedded in the electronic medical record. Some thought that accompanying the file with a picture of when the patient was healthy may also be useful.

Some expressed concern that listening to the TIMS files could create feelings of concern for inequity. What would happen if a patient did not have someone to record a TIMS for them? The chaplain's scope of research on the MICU did not allow them to adequately address this while collecting data; however, it will be part of the future



endeavors to potentially conduct this interview before planned hospitalizations for it to be available, while a person is hospitalized.

Discussion

Almost all users of TIMS files found the content helped them gain insight into the whole person, with the majority indicating increased empathy for the patient, a decrease in their own stress due to not knowing anything about their patient, and facilitated communication with the patient's loved ones. TIMS was created specifically by a unit chaplain in response to moral distress among clinicians in the MICU as a result of conditions during the initial COVID-19 wave in March 2020, especially with no visitation policies, high mortality rates, and a dearth of knowledge about the patient.

Six members of the medical team (7% of respondents) reported increased distress after listening to TIMS; all reported that TIMS moderately (n=1) or considerably (n=5) increased their empathy. As discussed in the results section, the ability to provide more human-centered care leaves the physician more able to calculate the patient's full self in the equation. This was often seen in those with a supervisory role where they felt more weight on the overall outcome of patients on the unit. In these instances, the chaplain invited the participant to hold space for the newly gained knowledge and appreciate how it can inform their care, including it in the plan of care but being able to leave the weight of it at that moment and not carry it forward. In an upcoming study, we plan to examine the issue of potential harm and possible causes more closely.

We also had a very high rate of participation (79%) among the loved ones of patients on the unit in comparison with the utilization of TIMS among all intubated patients at Johns Hopkins Hospital and Johns Hopkins Bayview Medical Center. We believe this high rate of participation was likely due to the careful identification of suitable patients and loved ones by the medical team, especially charge nurses and an administrator on the unit known as a CCSR.

Strengths of our study include the novel questions asked in the survey, specifically designed to address aspects of TIMS, the climate of the unit due to the pandemic, and the breadth of potential benefits of the audio file.

Still, the benefits of TIMS seem clear for future use with patients who are unable to share their own stories as well as patients themselves, since by definition patients who are hospitalized are sick and cannot be expected to share their stories 24/7. The accessibility of the files means that all providers, regardless of shift or availability of family, have the opportunity to learn personal details about their patients which may lead to increased sensitivity to the patient's unique individuality, personhood, and dignity.

While it was in the small minority, some participants indicated that this recorded interview was not helpful or did not reduce their stress relative to their knowledge of the patient, nor did it increase their empathy. A few free text comments in the survey provide some context as to how they arrived at this conclusion. They centered around that the interview was too heavily focused on medical aspects of the person's



life and not cura personalis. Other feedback involved the person that was providing the interview speaking mostly about themselves and not about the patient.

Limitations

Limitations include the fact that interviews were conducted by the study's principal investigator, who may also have had selection bias that may have excluded negative perspectives on TIMS. Additionally, these interviews (original patient and staff) were conducted in an ICU where the staff workload, patient turnover, and severity of illness are not representative of the typical medical units found outside of academic medical centers located in a densely populated city. The lack of further exploration, via semi-structured interviews, with participants from the ancillary staff, not necessarily involved in direct patient care or treatment planning, is a limiting factor. While there was no definite rationale provided, it was the chaplain's experience that these individuals' workload extended beyond the MICU service and they were not able to participate.

Conclusions

TIMS audio files, featuring a loved one of a patient with communications limitations describing the patient as a person, are an important addition to the EMR, enabling clinicians to practice with greater awareness and empathy for patients and loved ones. TIMS files are accessible, and practical, and allow clinicians on all shifts to learn important details about their patients as people and influence their cognitive and emotional dimensions. The audio format is easy to integrate into the workflow on the unit and allows for an optimal amount of information about the patient to be conveyed.

Funding Funding for this study was provided by the John Conley Foundation for Ethics and Philosophy in Medicine.

Declarations

Conflicts of interest None of the authors has any conflicts of interest to disclose.

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