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# Cost considerations for implementing dignity therapy in palliative care: Insights and implications

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## Original Article

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## Abstract

**Objectives.** Despite the clinical use of dignity therapy (DT) to enhance end-of-life experiences and promote an increased sense of meaning and purpose, little is known about the cost in practice settings. The aim is to examine the costs of implementing DT, including transcriptions, editing of legacy document, and dignity-therapists' time for interviews/patient's validation.
**Methods.** Analysis of a prior six-site, randomized controlled trial with a stepped-wedge design and chaplains or nurses delivering the DT.
**Results.** The mean cost per transcript was $84.30 (SD = 24.0), and the mean time required for transcription was 52.3 minutes (SD = 14.7). Chaplain interviews were more expensive and longer than nurse interviews. The mean cost and time required for transcription varied across the study sites. The typical total cost for each DT protocol was $331–$356.
**Significance of results.** DT implementation costs varied by provider type and study site. The study's findings will be useful for translating DT in clinical practice and future research.

## Introduction

Dignity therapy (DT) is a brief psychotherapeutic intervention that aims to help seriously ill patients maintain their sense of integrity, establish continuity of self through a legacy story, find meaning in their life-threatening illness, and provide a legacy document to their family while also providing spiritual comfort to the patient (Chochinov 2012). Despite the need for more research on the effect of DT on physical and emotional symptoms, there is ample evidence supporting its clinical use for patients approaching death to enhance their end-of-life experience and promote an increased sense of meaning and purpose (Chochinov et al. 2011; Fitchett et al. 2015). Cancer patients who express unmet spiritual needs struggle with meaning and purpose and have increased end-of-life costs, particularly those who rely on religious coping methods (Balboni et al. 2011). Spiritual concerns are present in as many as 86% of patients with advanced *cancer* (Winkelman et al. 2011), indicating a large population that could benefit from DT. However, little is known about the costs of delivering DT in practice settings. This article examines the cost of DT within a multisite, randomized clinical trial (RCT).

Literature review reveals 2 studies with DT costs (Kelly et al. 2023; Montross et al. 2011) and 3 other studies with time data as a proxy for cost estimates (Bentley et al. 2020; Bentley et al. 2012; Hall et al. 2012). There was substantial variation in how costs were estimated and reported in mostly small studies, with reported costs ranging from an average of $55 ($n = 27$) (Montross et al. 2011) for transcription to $600 ($n = 7$) (Kelly et al. 2023) for all DT processes that required about 6 to 15 hours (Bentley et al. 2020; Bentley et al. 2012; Hall et al. 2012; Kelly et al. 2023; Montross et al. 2011). To add clarity about the costs of DT, we examined costs of an implementation model, including costs of interviewing patients, transcribing the interview, editing the legacy document, and validating the final legacy document with the patient. This information will be valuable to translate DT within clinical practice settings and for future research.

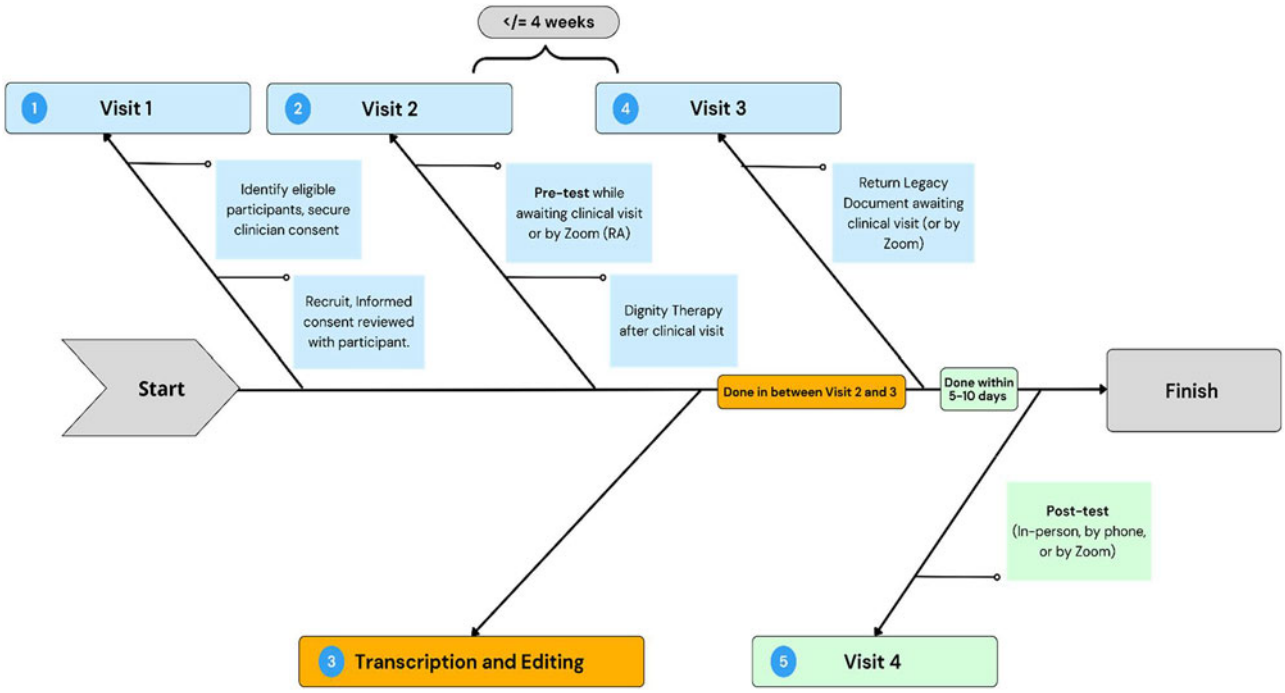


**Figure 1.** Overall flow of the patient through the study visits and procedures.

## Methods

With institutional review board's approval at all sites, we utilized a pre-/post-test randomized controlled trial with a 4-step stepped-wedge design over approximately 12 months per step as previously reported (Kittelson et al. 2019). Eligible cancer patients aged 55 years and older were referred by the palliative care team during their routine clinic visit (Fig. 1). A DT trained chaplain or nurse implemented the DT (Fig. 2) (Chochinov 2012). The DT interview was audio recorded and transcribed with accuracy verification by a single professional, Health Insurance Portability and Accountability Act (HIPAA)-certified transcription service. Trained editors edited the transcripts to produce the legacy document but did not track their time since they were paid a flat fee per document to organize the flow of information, remove extraneous information, and identify information deemed potentially emotionally harmful to the recipient or their loved ones. The therapist reviewed the edited document with the patient before providing the final document, which was emailed or mailed to the patient in a binder (Fig. 2). All study procedures were conducted in person for steps 1–3 and virtually via telephone or Zoom for step 4 to ensure safety during the COVID-19 pandemic.

Cost data were obtained from the transcription service invoice for each patient that included the time required and the cost per minute, which was higher for the occasional expedited service required given the patient's condition. Analysis focused on cost and transcription time by site and by therapist discipline. Independent *t*-test and analysis of variance were used for comparisons of time since the actual cost included extra services such as rapid processing requests or more than 2 speakers, which occurred for only 6 participants.

## Results

The intervention group included 317 patients who were randomized and completed baseline questionnaires; 249 completed a recorded DT interview. Of these, we have invoices for the transcription of 242 interviews. The demographic and clinical characteristics of these 242 patients are presented in Table 1. Participants were mostly identified as female and non-Hispanic/Latino White with a mean age of 66.0 (SD = 7.4) years. Most participants were married, had some college experience, reported a family annual income of $50,000 or more, had stage 4 cancer, and had a palliative performance score ≥70 (Weng et al. 2009).

### *Transcription costs*

Table 2 displays the average costs and time necessary for transcribing the 242 DT interviews. The mean cost per transcript was $84.3 (SD = 23.8, minimum = 11.1, and maximum = 157.4). The cost of transcribing an interview was proportional to time, with the exception of 6 transcriptions that were expedited to meet a deadline. The mean time needed for transcription was 52.6 minutes (SD = 14.6, minimum = 7, and maximum = 99). The vast majority (89%) of the transcription times were between 31 and 79 minutes; 17 transcription times were shorter than 30 minutes and 10 longer than 80 minutes. Time varied by provider type, with chaplain interviews on average about 5.5 minutes longer ($p = 0.004$) than nurse interviews.

Additionally, we observed differences in cost and time based on study site. Site 4 had the highest mean cost per transcript ($105.1, SD = 22.1) and time required to transcribe a transcript (65.7 minutes, SD = 14.1), whereas Site 3 had the lowest mean cost per transcript ($60.3, SD = 19.9) and time required to transcribe a transcript (37.9 minutes, SD = 12.5). The time differences by site were statistically significant ($p < 0.001$).

### *Other fixed costs*

The study involved paying contracted editors $87–$112 for each transcript, with the higher costs occurring when a two-phased

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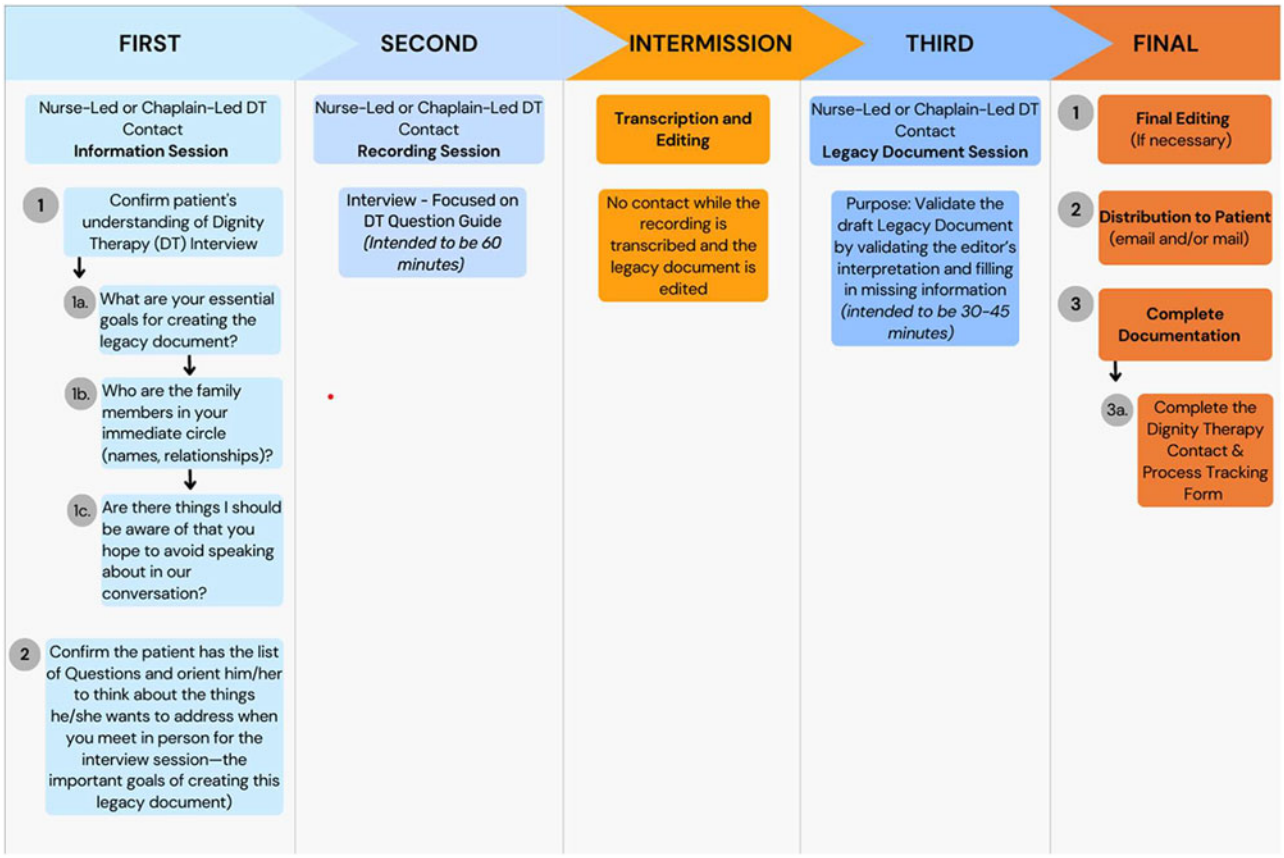


**Figure 2.** Summary of the dignity therapy protocol.

editing process was implemented to complete the high volume of transcripts in the final step when all sites were delivering the DT intervention. Editors' anecdotal reports indicated that the editing time was variable but typically 3 hours per transcript. DT therapists were paid $50 per hour for 3 hours of work per patient. This payment covered scheduling the patient for the framing interview, conducting the interview, validating the legacy document with the patient, and completing the documentation. Additionally, the cost of each binder was $8, and its mailing cost was $2. Summing transcription and fixed costs, the typical amount for each DT protocol was $331–$356.

## Discussion and conclusion

We are the first to provide a comprehensive analysis of the costs associated with the DT intervention in a large sample. Included were costs for intervention delivery and transcription and editing of the legacy document. Transcription time was longer for chaplains than nurses. There was considerable variability by site in the transcription times despite the intervention being protocolized. Our DT protocol implementation model took around 7 hours per patient.

Differences in the reported DT cost-related data make it difficult to compare our findings with those of previous studies. Transcription costs from a decade ago averaged nearly $56 (Montross et al. 2011), which is lower than our average cost of $84. The time required to complete the entire protocol was also similar to one prior study (Bentley et al. 2020) and less than 3 others (Bentley et al. 2012; Hall et al. 2012; Kelly et al. 2023). A survey of staff who implemented DT previously concluded that DT's time cost is worthwhile and has a positive impact on palliative care patients (Montross et al. 2013). As reported elsewhere regarding our RCT, the DT intervention led by either chaplains or nurses significantly improved dignity impact compared to the usual care control (Wilkie et al. Submitted/unpublished 2023).

Our study suggests that the benefits of providing spiritual support at end of life with DT outweigh the expenses. As highlighted by Balboni et al., patients who do not receive adequate support for their religious and spiritual needs at end of life are more likely to die in an intensive care unit and less likely to spend the last week of life in hospice care, resulting in increased costs ($4947 vs. $2833). This effect is even more pronounced among racial minorities ($6533 vs. $2276) and those who highly prioritize their religious beliefs ($6344 vs. $2431) (Balboni et al. 2011). Therefore, our study underscores the importance of interventions like DT that address patients' spiritual needs and have the potential to reduce end-of-life costs.

Aoun et al. suggested that smaller organizations may find DT implementation impractical due to resource and cost constraints, while larger services can consider offering DT, making it more feasible in terms of costs and resource allocation (Aoun et al. 2015). A recent study explored new DT delivery methods, like therapist-supported web-based delivery, to reduce time and cost (Bentley et al. 2020). Therapist time, including interviews, editing, and support, ranged from 3.5 to 13 hours with a mean of 8.5 hours per participant ($n = 6$), saving time on travel and waiting (Bentley et al. 2020). Finally, future research may consider the use of a

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**Table 1.** Demographic characteristics ($N = 242$)

| Variable | Category | Statistics |
|---|---|---|
| Age | Mean ± SD | 66.0 ± 7.4 |
| Gender | Female | 63% |
| | Male | 37% |
| Race | Other | 17% |
| | White | 83% |
| Ethnicity | Hispanic or Latino | 8% |
| | Not Hispanic or Latino | 92% |
| Marital status | Married/Partnered | 59% |
| | Single | 41% |
| Education level | High school or less | 13% |
| | Some college | 34% |
| | College | 25% |
| | Advanced degree | 29% |
| Family annual income | Less than $10,000 | 7% |
| | $10,000–$19,999 | 12% |
| | $20,000–$29,999 | 9% |
| | $30,000–$39,999 | 9% |
| | $40,000–$49,999 | 8% |
| | $50,000 or more | 56% |
| Christian | No | 27% |
| | Yes | 73% |
| Have a religion | No | 14% |
| | Yes | 86% |
| Cancer stage | 1 | 13% |
| | 2 | 7% |
| | 3 | 20% |
| | 4 | 60% |
| Time since diagnosis (years) | Mean ± SD | 3.4 ± 3.9 |
| Metastasized | Yes | 54% |
| Palliative performance score | 60 | 18% |
| | 70 | 31% |
| | 80 | 33% |
| | 90 | 15% |
| | 100 | 3% |

clinician who can bill for their clinical service as a form of therapy, such as psychology or licensed clinical social workers, to offset the expense.

A limitation of our study was the contracted costs for delivery of the DT and editing the transcripts into legacy documents and the resultant lack of precision in the amount of time required for these tasks. Also, the cost of training DT therapists and the research coordinators' time to recruit, schedule, and facilitate the study were not included in this analysis.

**Table 2.** Average costs and time required to transcribe all dignity therapy interviews and by interview provider type and study site

| Groups | Category | Number of transcripts | Cost mean (SD) | Time mean (SD) | $p^*$ |
|---|---|---|---|---|---|
| All | | 242 | 84.3 (23.8) | 52.6 (14.6) | |
| Interview provider type | Chaplain | 136 | 88.0 (22.8) | 55.0 (14.1) | 0.004 |
| | Nurse | 106 | 79.4 (24.2) | 49.5 (14.6) | |
| Study site | Site 1-N | 49 | 94.6 (15.0) | 58.6 (8.1) | <0.001** |
| | Site 2-N | 25 | 74.2 (25.0) | 46.6 (15.7) | |
| | Site 3-N | 32 | 60.3 (19.9) | 37.9 (12.5) | |
| | Site 4-C | 24 | 105.1 (22.1) | 65.7 (14.1) | |
| | Site 5-C | 45 | 88.1 (25.1) | 55.0 (15.6) | |
| | Site 6-C | 67 | 81.9 (18.1) | 51.1 (10.9) | |

*$p$ value is for comparison of time since cost includes extra service such as rapid processing request or more than 2 speakers; *Independent $t$-test; **Analysis of variance; N = nurse site, C = chaplain site; transcription rate $1.59/minute regular rate; $1.89, $2.09, $2.59/minute for expedited ($n = 6$).

In conclusion, our study sheds light on the practical aspects and expenses involved in implementing DT in palliative care older adults with cancer. The results of our research demonstrate that DT is a relatively low-cost intervention. Future work can explore different modes of DT delivery, dictation methods, student or volunteer involvement, artificial intelligence, and even consider using online international workers to enhance efficiency of DT delivery.

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