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Accounting for Compassion: Creating Human-Centered Cost Models in Palliative Care Leadership

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ABSTRACT: The palliative care administration is increasingly becoming compulsory in order to achieve the right balance between the ethical requirement of caring and patient-focused services of care and the financial requirements of health care sustainability. However, the traditional forms of healthcare costing systems such as Fee-for-Service (FFS) and per diem reimbursement plans are often in a stand to save the economic value of compassionate and relationship based care practices, such as emotional support, communication and spiritual care. This limitation provides systemic incentives, which compromise key aspects of the provision of palliative care. The article of interest in this paper is the article by Accounting to Compassion: Creating Human-Centered Cost Models in Palliative Care that proposes a conceptualized costing model known as Time-Driven Activity-Based Compassion Costing (TDABCC) based on the idea of Time-Driven Activity-Based Costing (TDABC) to quantify the use of resources in compassionate care processes in a pall The framework calculates the cost of compassionate care using the formula TDABCC Cost= Capacity Cost Rate x Time Observed x Patient Complexity Factor that incorporates the reality of the cost of delivering interdisciplinary care. The model uses patient-reported compassion outcomes measured using the Sinclair Compassion Questionnaire (SCQ) that enables the calculation of an indicator of efficiency of values known as SCQ Score / TDABCC Cost. The TDABCC framework provides healthcare leaders with a framework on how they should take the assessment process of financial efficiency and patient-centered care quality using the relationship of outcomes of compassionate care with economic resources allocation. The proposed model will be the continuation of the future of the value-based healthcare as it will offer the anthropocentric costing model that will take into consideration compassion as the financially viable and measurable aspect of providing palliative care. The framework has pragmatic implications on healthcare administrators, policymakers and clinicians to simplify the utilization of resources that will improve high-quality compassionate care.

KEYWORDS: Palliative care, Time-Driven Activity-Based Costing, Compassion measurement, Sinclair Compassion Questionnaire, Value-based healthcare, Healthcare cost models

1. INTRODUCTION

The reason why palliative care has become a significant component of healthcare systems in every corner of the globe is the fact that the ageing population with ever-growing number of chronic and life-limiting illnesses has ensured that palliative care has become an essential element of healthcare systems. The overall aim of palliative care is to improve lives of individuals and their families by meeting the multidimensional needs of sufferers associated with the terminal illness i.e. physical, emotional, social and spiritual (Parkinson et al., 2017). Palliative care is not the same as the conventional medical practices where the focus is on medical elimination of a disease but this does not limit the focus but provides comfort, dignity and supportive care throughout a disease.

Compassionate care is one of the main values of palliative medicine and this is because the patients are in pain and they require to take care of them, assist in reducing the burden of pain and distress by engaging in supportive, empathetic and relational communication with them. It is proven that caring medical care delivery can increase patient satisfaction, feeling, and trust in healthcare providers (Sinclair et al., 2021). A palliative care environment requires compassionate communication, an emotional presence, and interdisciplinary collaboration as these techniques are crucial in helping patients and families deal with the psychological and existential problems that come with the extreme disease.

Despite all these, caring cannot be squared into the standard health care financial systems. The accounting models, which tend to follow the clinical process and resource utilization rather than relationships of care, are normally the basis of healthcare organizations (Hussien et al., 2025). This means that most of the effort that the palliative care team made such as patient

counseling, emotional support and communication between patients and their families is not known in terms of the healthcare costs systems.

The increased demand of the palliative care services has strained healthcare systems to ensure that there is a balance in delivering the patient-centred care and financial sustainability. The scarce resources in healthcare institutions should be managed effectively and on the other hand, patients need to receive quality services that will address the needs in relation to both clinical and psychosocial. However, the traditional healthcare costing model Fee-for-Service (FFS) and fixed reimbursement models are primarily focused on the operations that can be billed and measured clinical intervention (Porter, 2010).

Such financial models fail to give the worth of compassionate care occurrences which palliative medicine is based upon. By doing so, the healthcare providers may operate within systemic incentives favoring procedural interventions instead of relational care actions despite the fact that compassionate engagement may have a higher influence on better patient outcomes and experiences (Connor et al., 2020). This absence of systematic procedures of the economic value of caring is therefore a significant gap in the health care expenditure management.

Without adopting proper costing frameworks, the healthcare leaders may face challenges to finance an investment in an interdisciplinary support structure, longer patient consultations, or psychosocial care programs. The risk associated with this disadvantage is that this will interfere with the development process of the healthcare systems that are geared towards attaining the objectives of the patient-centered care using the financial incentives.

Though the already available literature has talked about the introduction of Time-Driven Activity-Based Costing (TDABC) in a healthcare environment to improve the cost visibility and operational effectiveness (Kaplan and Anderson, 2007; Kaplan and Porter, 2011), the strategies have only been applied to clinical procedures and operational processes. The relational activities, which may be defined as compassionate care have been given a very narrow focus in the research on the healthcare costs. Similarly, the newly established science of compassion has also exhibited enough validated scales of compassion on healthcare exchanges, such as the Sinclair Compassion Questionnaire (SCQ) (Sinclair et al., 2021). However, in the health care financial assessment models such measurement tools have barely been used. The absence of models capable of discharging the results of compassion in opposition to the quantification of healthcare costs limits healthcare systems to determine whether an investment in compassionate care brings about a calculable patient worth. The answer to this gap is that there is a necessity to develop a framework that can be applied to integrate cost accounting methods with patient-reported compassion outcomes.

1.1 Significance of the Study

To assist the sphere of healthcare management and palliative care in the future, the following paper will be able to propose a framework within the framework of which compassion is not only a clinical but also an economical aspect of healthcare delivery. The TDABCC model offers a systematic approach to measuring the worth of relational care activities previously beyond the view of financial measurement systems, through the integration of cost accounting with patient outcomes on compassion.

The specified framework has a practical implication as well, concerning the healthcare leadership and policy creation. With clear cost information involved in compassionate care processes, healthcare organization will be in a position to undertake effective decision-making regarding the resources management, workforce designs, and service designs. Further, compassion-focused outcome measures can be utilized as a subset of the reimbursement and performance evaluation system by policy-makers who are interested in promoting value-based healthcare systems.

Lastly, the TDABCC model targets correcting the healthcare financial system based on the moral and humanistic aim of palliative medicine and, consequently, will facilitate providing patients with serious illness with sustainable and high-quality care.

2. LITERATURE REVIEW

2.1 Palliative Care and the Importance of Compassionate Care

The concept of palliative care has gained a critical component of the health care system in the new era particularly in cases of managing the increasing cases of chronic and life limiting illnesses which are age related. The primary purpose of palliative care is to improve the quality of life of individuals and families suffering by addressing their physical, emotional, social, and spiritual aspects of the severe cases of the disease (Parkinson et al., 2017). Palliative care is also concerned with comfort, dignity and patient-centered care as compared to curative medical practices applied in the treatment of illness and end-of-life care.

One of the features of the palliative care is the emphasis on providing compassionate care, such as recognizing patient suffering and actively intervening to help mitigate it through supportive and relationship interventions (Sinclair et al., 2021). The activities that constitute compassionate care are empathetic communication, emotional support, meaningful communication with the patients and their families. These relationships are very important in helping patients to transcend the psychological, and existential inadequacies that accompany chronic diseases.

Evidence-based practice can testify that the caring attitude is an important aspect of patient satisfaction, their mood, and the overall experience of medical care delivery (Connor et al., 2020). Dignity, emotional comfort, and personal presence is what palliative care patients envision instead of the active approach to medical treatment. Although it is essential, compassionate care is difficult to quantify with the help of the conventional healthcare performance metrics and indicators that tend to be based on clinical performance or practice efficiency.

2.2 Disadvantages of Conventional Healthcare Costing Models.

Healthcare systems have a significant role of using financial accounting models to determine how the resources are to be distributed, reimbursements and performance in an organization. The two major healthcare methods are traditional methods such as Fee-for-Service (FFS) and a fixed amount of the payment per deme, which measures the healthcare efforts according to the billable clinical services and treatment volumes (Porter, 2010). The paradigms do not completely capture the universe of care performed by workers in the healthcare system although they provide a system of tracking healthcare spending.

The issue with the conventional costing models is that they fail to take into consideration the relational based activities and non-procedural activities related to care. In palliative care, healthcare professionals spend much time on patient counseling, family conference, care coordination, and psychosocial support among other activities. Such services can hardly be reimbursed in the traditional financial system and lead to an incomplete picture of the importance of processes of compassionate care in the system (Connor et al., 2020).

Failure to record in the financial accounting systems of relational care activities, may cause unintentional incentives that work against providers who are motivated to take sufficient time to relate to patients in a caring way. As pressure on healthcare organizations to pursue cost control and efficiency mounts, activities that are difficult to quantify may be sidelined yet they may have a robust potential to enhance patient well-being.

2.3 Activity-based Costing using Time in Healthcare.

Researchers and health care administrators in response to the inadequacy of the traditional costing systems have been embarking on an increasing trend of adopting the concept of Time-Driven Activity-Based Costing (TDABC) as a better approach to the cost of a healthcare service. Activity-based costing was also simplified further to develop TDABC which was calculated based on the time required to complete some activity and the cost of the resource required (Kaplan and Anderson, 2007).

In healthcare facilities, TDABC has been used to increase visibility of the cost and identify the areas of inefficiency in care delivery process (Kaplan and Porter, 2011). The methodology will involve mapping of clinical workflow, time required to perform an activity and the cost allocation depending on the capacity cost rate of the healthcare facilities. With this strategy, the healthcare organizations can get a clearer picture of the resource utilization with the different care processes.

Some of the studies revealed that TDABC can be successfully used to understand the costs of healthcare and justify value-based care delivery (Chola et al., 2022; Shakya et al., 2025). TDABC enables healthcare leaders to discover a method of improving efficiency and resource allocation by providing detailed information of costs on activities level. However, despite these advantages, in healthcare, TDABC applications have been more focused on clinical processes and operational level operations but little relational care activities.

2.4 Comparison of Compassion in Healthcare.

Researchers have developed a new understanding of the necessity to develop effective tools to measure compassion in healthcare over the past few years. Typically, compassion is the awareness of the suffering of a person or community of people, and the desire to alleviate the suffering through a supportive intervention (Sinclair et al., 2021). Empathic communication within health care centres can impact patient trust and satisfaction levels and their psychological well-being.

To measure compassion, Sinclair and colleagues have developed the Sinclair Compassion Questionnaire (SCQ), which is a patient-reported outcome measure, and reliably-validated to assess the compassion experienced during a healthcare encounter (Boss et al., 2025). The SCQ has different scales of compassionate care, which include emotional presence, respectful communication and responsiveness to patient suffering.

The development of universal compassion measurement tools provided new opportunities to use relational outcomes in the healthcare performance measurement system. The question of quantifying the perceptions of compassion on the part of patients can allow healthcare organizations to determine the fit and adjustment of care delivery processes with humanistic values of the palliative focus of medicine.

2.5 The Value-Based Healthcare and Cost and Outcomes Integration.

Value-based healthcare is a concept that has remained increasingly taking center stage as healthcare systems grapple in a measure to balance the cost management aspect and patient outcomes. Porter (2010) describes healthcare value as the patient outcomes to the cost of obtaining the outcomes. This model advocates the notion of making sure the healthcare organisations are geared towards realisation of significant patient gains in the minimum number of unnecessary costs.

Traditionally, clinical outcome measures were considered to be: survival rates, decrease of complications, and functional recovery as to value-based healthcare initiatives. However, in the palliative care context, emotions support, dignity, and compassion are vital aspects of quality care as well (Malenfant et al., 2022). It is necessary to mention, that the interpretation of these dimensions is that there is a need to expand the conventional frameworks of measuring the values, in order to include patient-reported experiential outcomes.

When the compassion outcomes are included, in the analysis of the healthcare costs, a more comprehensive view of healthcare creation of value is provided. By relating financial investments to the result of compassion, as reported by patients, healthcare organizations can evaluate how the resources are allocated to help them deliver patient-centered care.

3. METHODOLOGY

3.1 Research Design

The necessity to create human oriented process of modelling the cost of process of palliative care delivery has given rise to the development of a research design in the current study. In a bid to develop new models that would fill the gap that exists in the practice and scholarship, conceptual research integrates the above theoretical and empirical research (Jaakkola, 2020). One of the fields where conceptual research can be applied is in healthcare management through the form of coming up with mechanisms of quantifying where financial models fails to reflect any significant factors of value of care.

The model, which will be discussed in the paper, is a new one, which will be an extension of the old model Time-Driven Activity-Based Costing (TDABC) referred to as Time-Driven Activity-Based Compassion Costing (TDABC). TDABC has been known to be one of the most powerful tools of calculating the cost of healthcare services as it attempts to estimate the number of resources consumed in the process of providing care (Kaplan and Anderson, 2007; Kaplan and Porter, 2011). At a slow pace, it has found its way into healthcare facilities to make the process of allocating costs more responsible and bring the concept of value-based healthcare (Chola et al., 2022; Shakya et al., 2025).

Yet, the current costing systems are at the core of the clinical and procedural costing and would hardly pay attention to relational, emotional components of care a palliative medicine is all about. The large percentage of the palliative care delivery, such as counseling of patients, emotional support, interdisciplinary communication, are not accommodated in the classic cost accounting schemes (Sinclair et al., 2021; Connor et al., 2020). To counter this, the current study has incorporated the concept of measurement of compassion to the health care costing of the implication of the Sinclair Compassion Questionnaire (SCQ) which is a patient-report outcome measure to assess the compassion in healthcare relations and has been shown to be validated (Sinclair et al., 2021).

3.2 Evaluation of Framework Development Strategy.

The development of the TDABCC framework was organized into three stages, and they included the literature synthesis, model adaptation and analytical integration.

To begin with, it selectively reviewed the literature in interdisciplinary literature across three disciplines, i.e., the healthcare cost accounting, compassion science, and value-based healthcare management. The papers on the application of TDABC to the healthcare sector have enabled determining the methodological principles in estimating the cost and mapping the processes (Kaplan and Porter, 2011; Chola et al., 2022). Meanwhile, the articles on measuring compassion in the health care environment have been analyzed with the aim of determining the methods of the possibility of measuring patient experience of information about compassionate care proved (Sinclair et al., 2021).

Second, the TDABF as it used to be applied traditionally was modified to match the peculiarities of the palliative care work. However, in contrast to other clinical services, palliative care is relatively more focused on the relational, psychosocial and spiritual care. These interactions may be time-consuming and may involve a lot of time expense by the interdisciplinary teams of physicians, nurses, social workers, and spiritual care providers (Parkinson et al., 2017; Connor et al., 2020). The caring processes were therefore incorporated in costing structure which is a measurable process and is understandable and clear cut.

Third, a measure of patient outcome was through Sinclair Compassion Questionnaire (SCQ). The SCQ evaluates how much of the patients think that the care provider is caring in terms of presence, emotional support and respect in the interactions (Sinclair et al., 2021). Associating patient-reported outcome with cost reimbursement, the framework will allow quantifying the correlation between the healthcare expenditure and value of compassion-centered care.

3.3 The Model Costing Specification

TDABC model is developed on the basis of the concepts of TDABC which approximate the cost of service in terms of the cost of resource capacity and time utilized to undertake activities connected to care (Choudhery et al., 2021). The compassionate care processes in the framework approach were estimated to be cost as follows:

TDABCC Cost = Capacity Cost Rate Simple x Time Observed x Complexity Factor.

Where:

Capacity Cost Rate (CCR): It is a unit cost price of time of either personnel or funds expended to offer palliative service. This can be calculated by dividing the amount of total cost of capacity to provide (e.g. salary, effects, infrastructure) by the practicable capacity of the resource (Kaplan and Anderson, 2007).

Time Observed (T) The time may be realized as time on compassionate care activities which can include communication with the patient and family, emotional support, coordinating care and interdisciplinary collaboration.

Complexity Factor (CF) is employed to expound on the diverse changes in patient needs, level of disease and psychosocial situations that might lead to variations in the amount of given compassionate care.

This element of complexity is further augmented by the fact that the model takes into account the heterogeneity of the palliative care populations where patients in most of the cases have dissimilar clinical as well as emotional support requirements.



Figure 1: Operational Workflow for Implementing TDABCC

The current workflow has been depicted in Figure 1 as the process of implementing the Time-Driven Activity-Based Compassion Costing (TDABCC) framework in the palliative care setting. The steps include the identification of palliative care activities, assessment of the cost of capacity rate (CCR), a time spent on compassionate care processes, and the correction of patient complexity. All these factors are combined in computing the overall TDABCC cost.

3.4 Compassion Outcome Measurement.

The Sinclair Compassion Questionnaire (SCQ) has been used as patient-reported outcome in the study to explore the outcomes of providing compassionate care. SCQ is a valid tool, and it has been designed to identify the attitude of the patients towards compassion in the healthcare facilities (Sinclair et al., 2021). It is a tool that measures different aspects of compassion that involve the relational interaction, emotional availability, dignity and the care to patient distress.The inclusion of the SCQ scores in the costing system would provide healthcare organizations with the opportunity to consider the perspectives of the investment into the process of compassionate care that would lead to the positive patient experience. This is nevertheless an outcome measure which conforms to the general principles of value-based healthcare which is inversely related with the aim of maximizing patient outcomes to the spending on the provision of care (Khalil et al., 2025).

3.5 Value Efficiency Metric

The second scale, Value Efficiency, suggested to be: is the research hypothesis to operationalise the correlation between compassionate outcomes and healthcare expenditure:

Value efficiency = SCQ score/TDABCC cost.

The indicator is a consensus definition of the competence in the use of the healthcare resources during the transformation of it into the compassion-oriented outcome in patients. The better the values the greater the efficiency of the delivery of compassionate care as compared to the amount of money spent.

The TDABCC model can help fund the existing efforts in the area of the value-based healthcare measurement that goes beyond the clinical aspect of the care to include the relational and experiential ones (Malenfant et al., 2022; Connor et al., 2020).

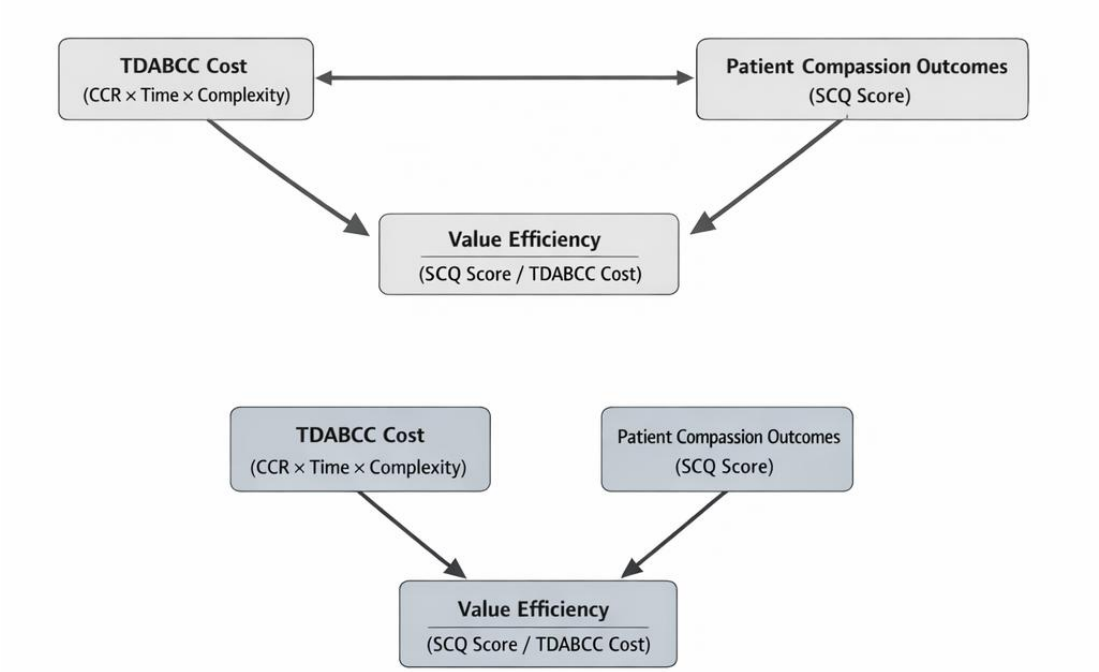


Figure 2: Value Efficiency Analytical Model

Figure 2 presents the analytical structure used to evaluate value efficiency in the TDABCC model. Compassion outcomes measured through the Sinclair Compassion Questionnaire (SCQ) are evaluated relative to the calculated TDABCC cost to determine value efficiency, providing an integrated measure of compassionate care effectiveness relative to resource utilization.

3.6 Analytical Application of the Framework

The introduction of the TDABCC model to the healthcare organizations could be systematized by mapping the care process, time measurement, calculating the costs of the care process and patient outcomes. Mapping of palliative care process is the first stage which is carried out to determine clinical and compassionate interdisciplinary team actions. Second, time observations are monitored that identifies the time-promptness of each of the activities of various scenarios of patient care. Third, comparisons of cost rates of capacity with service delivery staff are done. Lastly, patient outcomes, measured aided by SCQ scoring are also considered as compassioned experience in patient-care provider interactions.

An integration of these data would aid policy makers and healthcare managers to understand what most effectively have been achieved by compassionate care investments at financial sustainability in terms of patient value attributes.

4. CONCEPTUAL FRAMEWORK OF TDABCC MODEL

The system can be referred to as Time-Driven Activity-Based Compassion Costing (TDABCC) which entails the healthcare costing methodology, patient-reports compassion outcomes in the development of the overall value analysis in offering palliative care. The model is pegged on the Time-Driven Activity-Based Costing (TDABC) model and compassionate care activities and its relationship with the already proven compassion outcome measures.

The previous conceptualizations of healthcare costs put an excess amount of focus on the delivery of clinical care and utilization of resources and overlook relational processes like the delivery of emotional care, family communication and coordination of interdisciplinary care. They are the key practice of the palliative care and the activities have a substantial impact on patient experience and quality of life (Sinclair et al., 2021; Connor et al., 2020). The TDABCC model will provide the medical administrators with an opportunity to consider the economic value of providing compassionate care by simply reflecting on compassionate care practices to cost estimation.

There are three components of the conceptual framework of the TDABCC model which have three interrelated components i.e. input resources, compassionate care processes and patient-centered outcomes. The model starts by considering the resources of the healthcare which is a blend of interdisciplinary manpower, time allocation and financial prowess. They are flowed into the kindly care actions which are gauged with the aid of the activity mapping and time observations approach premised on the TDABC strategy (Kaplan and Anderson, 2007; Kaplan and Porter, 2011).

The calculation of the formula of TDABCC is done with the help of capacity cost rate, time observed and patient complexity factor to calculate the cost of compassionate care delivery. This is a rough estimate of the amount of money that must be used in provision

of services that are compassionate. The results of compassion reported by patients to identify the usefulness of such investments are estimated with the assistance of the Sinclair Compassion Questionnaire (SCQ) which is a valid measurement tool to estimate the degree of compassion provided to patients in their dialogue with caregivers (Sinclair et al., 2021).

Lastly, the structure combines the data on the expenses and outcomes in accordance with the Value Efficiency measure that determines the level of correlation between the outcomes of compassion and the amount of money needed to achieve the outcomes. The act falls within an ideals range of caring based on value since it is patient-centered in its quest to maximize the patient outcome against the cost of delivering care opposition (Hariri et al., 2024).

The value in the turn can be created through the process: TDABCC framework can be presented as the process of creating the value:

Healthcare Resources → Compassionate care activities → TDABCC Cost Calculation → Patient Compassion outcomes (SCQ) → Value Efficiency.

This framework allows healthcare organizations to find out whether the investments on compassionate care contribute to the enhancement of the patient experience and healthcare value.

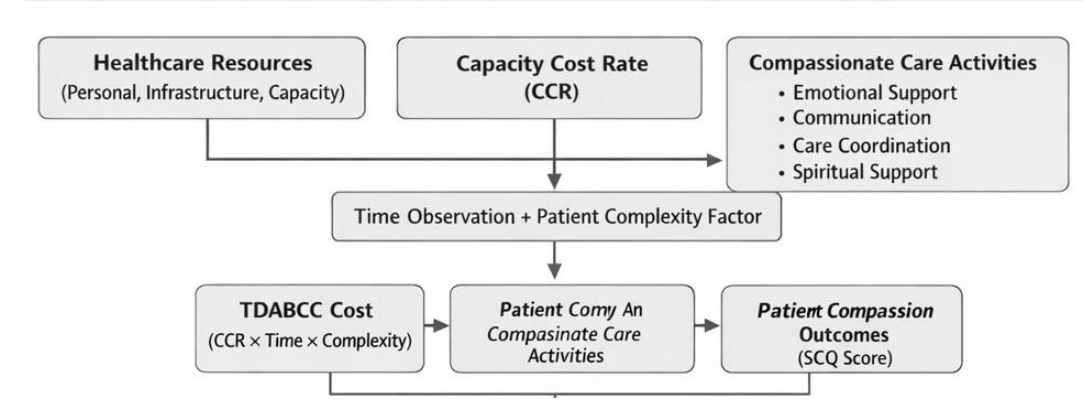


Figure 3: Conceptual Framework of the Time-Driven Activity-Based Compassion Costing (TDABCC) Model

Figure 3 illustrates the conceptual structure of the Time-Driven Activity-Based Compassion Costing (TDABCC) framework. The model integrates healthcare resource capacity, compassionate care activities, and patient complexity adjustments to calculate the cost of compassionate care delivery. Patient-reported compassion outcomes measured using the Sinclair Compassion Questionnaire (SCQ) are then linked to the calculated cost to produce a Value Efficiency indicator, reflecting the relationship between compassion outcomes and resource expenditure.

5. Variables, Indicators, and Measurement Methods for the TDABCC Model

Variable Category	Variable	Indicator	Measurement Method	Source
Input Variable	Capacity Cost Rate (CCR)	Cost per unit time of healthcare personnel	Total cost of resource capacity divided by practical working capacity	Kaplan & Anderson (2007)
Process Variable	Time Observed	Duration of compassionate care activities	Direct observation or time tracking of patient interactions	Kaplan & Porter (2011)
Process Variable	Compassionate Care Activities	Emotional support, communication, care coordination, spiritual support	Activity mapping of palliative care processes	Parkinson et al. (2017)
Moderating Variable	Complexity Factor	Patient clinical and psychosocial complexity	Complexity scoring based on patient condition and care needs	Connor et al. (2020)
Cost Output Variable	TDABCC Cost	Cost of compassionate care delivery	CCR × Time Observed × Complexity Factor	Adapted from TDABC
Outcome Variable	Compassion Outcome	Patient-reported compassion experience	Sinclair Compassion Questionnaire (SCQ)	Sinclair et al. (2021)
Value Indicator	Value Efficiency	Compassion outcome relative to cost	SCQ Score ÷ TDABCC Cost	Porter (2010); Jemal et al. (2023)

6.1. Operationalization of the TDABCC Model: Illustrative Application

To describe the way the framework of the proposed Time-Driven Activity-Based Compassion Costing (TDABCC) can be turned into practice, the given section will elaborate on the purpose to present a demonstrative example of how the activities of a palliative care facility in providing compassionate care can be enumerated in a list of quantified cost and value measures. One of the most widespread healthcare management research practices in terms of conceptual research is illustrative operationalization whose purpose is to show the practicability of the models of analysis of interest (Kaplan and Anderson, 2007; Jaakkola, 2020).

The long-term communication to the patients and their families, emotional support, planning the delivery of the care and interdisciplinary consultation in the palliative care environment are all the typical activities of caring. They are the most important to guarantee patient experience and quality of life in healthcare yet are not typically applied as a typical representative of the traditional healthcare costing processes (Sinclair et al., 2021; Connor et al., 2022). A possible measure of how the TDABCC model will tackle this weakness is in the decision to have quantifiable cost estimates of the compassionate care processes, and in the measurement of its outcomes in the form of patient-reported compassion scales.

Step 1: Estimation of the Capacity Cost rate.

The latter entails calculation of, among others, the Capacity Cost Rate (CCR) that is the price per unit of time of medical staff that renders compassionate care service. The TDABC technique estimates it by how the total cost of the resource capacity is split by the practical cost of the personnel capacity it is utilized in the personnel (Kaplan and Anderson, 2007).

In order to provide an example, suppose that on average, the average palliative care nurse costs the hospital an average of 120,000/per year, in salary, benefits and overhead. Assume that the CCR is going to consist of 1500 hours/per year, the CCR would be:

CCR = 120,000 / 1,500 hours = 80 dollars per hour

This is equivalent to 1.33 in terms of nursing minutes.

Step 2: Time spent on Compassionate Care Activities Measurement.

The second one is either observation or estimation of the time that would have been spent to perform some of the activities of the compassionate care. The next activities that can be included in the palliative care can be emotional counseling, a discussion of the symptoms, communication with the family, and coordination of interdisciplinary care (Parkinson et al., 2017).

This can be exemplified by an average visit by a patient that may involve:

Table 1: Illustrative Table

Compassionate Care Activity	Time Observed (minutes)
Emotional support and listening	20
Family counseling and discussion	15
Care coordination with interdisciplinary team	10
Spiritual or psychosocial support	15

The totality of time that would then be required to offer compassionate care to the patient would then be 60 minutes.

Step 3: Incorporating the Patient Complexity Factor

A certain level of clinical/psychosocial complexity is generally a characteristic aspect of the clients in the palliative care. Based on this variation, the TDABCC model would consider Complexity Factor (CF) that would adjust the cost estimate based on the needs of the patient. These aspects of complexity can be the severity of the disease, emotional pain, family or culture (Connor et al., 2020).

Among them would be to presume that the patient has a moderate/high level psychosocial support with 1.4 factor of complexity.

Step 4: Calculating TDABCC Cost

Using the TDABCC formula:

TDABCC Cost = Capacity Cost Rate × Time Observed × Complexity Factor

The compassionate care cost for the patient interaction can be calculated as:

TDABCC = 1.33 x 60 x 1.4

TDABCC = 111.72

Thus, the estimated cost of compassionate care delivery for the interaction is approximately $111.72.

Step 5: Measuring Compassion Outcomes Using the SCQ

The patients are studied in terms of their perceptions to determine the effectiveness of providing compassionate care with the help of Sinclair Compassion Questionnaire (SCQ). The SCQ contains the patient experience, and a variety of compassion aspects, such as relational engagement, emotional presence, respect, and responsiveness to suffering (Sinclair et al., 2021).

Imagine that the patient is scoring SCQ after a care and he scored 88/100 i.e. he thought that compassion was high.

Step 6: Calculating Value Efficiency

The last one will be calculating Value Efficiency Index in which the results of the compassion will be weighted with the cost of providing compassionate care.

The formula is:

Value Efficiency = SCQ Score / TDABCC Cost

Substituting the illustrative values:

Value Efficiency = 88 / 111.72

Value Efficiency = 0.79

This value is calculated to demonstrate the result of the compassion with the reference to compassionate care being provided to each unit of expenditure incurred.

6.2 Interpretation

The efficiency score obtained is a practical data and can be applied by the healthcare managers to determine the correlation between investment on compassionate care and the patient reported outcomes. The fact that the score increased means that the process of transformation of resources into the compassionate patient experiences was successful and the decrease in the score can be used to tell that the processes of care or resource allocation can be improved.

A combination of cost transparency and patient-reported compassion outcomes with TDABCC model offers a methodology to acquire knowledge about the role of the investments in relational care activities on the overall healthcare value. This information can be leveraged to inform the leadership decision-making process of the staffing, interdisciplinary care design and restructuring of the reimbursement policy within the palliative care systems (Porter, 2010; Jemal et al., 2023).

7. DISCUSSION

The objective of doing this study was to arrive at a human oriented costing model which has the potential to quantify the financial and nonfinancial aspect of the value of compassionate care in a palliative care establishment. The reason why the new concept of the use of Time-Driven Activity-Based Costing approach as the Time-Driven Activity-Based Compassion Costing approach can allow the researcher to fill in a major gap in the research in the area of healthcare management i.e. systematic underestimation of the relational care activities in the financial decision making processes is due to this new concept.

The traditional healthcare costing that is the fee based-service reimbursement and fixed amounts of demean payment is mainly concerned with quantifying the procedure and clinical interventions. However, unlike the fact that such models introduce positive consumption processes of the resource, they do not honor relational care processes that is the primary theme of palliative medicine, such as the emotional support, counseling of the patient, and interdisciplinary communication (Connor et al., 2020). It may lead to structural incentives in healthcare facilities to lay more emphasis on the measurable clinical interventions as compared to the practices, which are part of relational care and significantly impact the welfare of the patients.

The TDABCC model suggests one of the possible solutions, which can be traced in the recognition of the compassionate care as the economically significant and quantifiable facet of healthcare delivery. The model helps the healthcare organizations to estimate the cost of resources of the compassionate care activities as regards the Time-Driven Activity-Based Costing concepts. This transparency on costs can aid in making improved decisions on the staffing rates, interdisciplinary teamwork and resource allocation of the palliative care systems (Kaplan and Porter, 2011).

The model is highly effective as it is introduced with the introduction of the patient-reported compassion outcomes in the form of the Sinclair Compassion Questionnaire. The value of caring medical relationships that have a significant impact on patient satisfaction, adherence to the treatment and their mental state was also indicated in the mentioned research implemented (Sinclair et al., 2021). These are the relationship outcomes, which are not traditionally considered in financial performance. One such model is TDABCC which helps healthcare institutions to determine the extent to which investments made by the institutions to compassionate care have a significant impact on patient experience by measuring the difference between the cost estimates and patient experience outcomes measures.

Moreover, the suggested Value Efficiency indicator is grounded on the value-based approach to healthcare that is presumed to attain the greatest patient outcomes in comparison with the expenditure on healthcare (Porter, 2010). In the traditional forms of

value-based healthcare, they tend to concentrate on the clinical outcomes in terms of the survival rates, reduction of complications or improvement of functions. The latter measures are required but are unlikely to be effective with the holistic objectives of palliative care that focus more on dignity, comfort and emotional support that occurs during debilitating illness. The TDABCC model thus, brings the value-based healthcare measurement to the concept of the compassion as an outcome measurement.

It also has some significant policy implications to the policy formulation and as well leadership in health care. The decisions that leaders make concerning palliative care are usually extremely difficult most of the time in terms of resources that have to be allocated in a very financially strained environment and whose patient population is increasing. The leaders who do not see the evident indicators of the importance of compassionate care investments, will also struggle to justify the need to invest in the interdisciplinary support services. The TDABCC model suggests an argumentative proving-plan the economic sense of giving compassion-based care.

The framework would help facilitate the overall changes in the healthcare systems at the policy making level in a manner that would bring about the integration of reimbursement systems and the patient-centered outcomes. The policy makers have learnt that it is time to change the system of volume based in healthcare to value based systems (Porter, 2010). The reimbursement systems can be made more useful through the TDABCC model that can increase the relational caring behaviours, rather than the number of the procedures and some of the measurable outcomes of caring when compared to the cost of care.

However, this framework can be visualized and it is connected with several constraints. The TDABCC conceptual framework is a conceptual model, but is still one that has yet to be empirically validated, and using real data of palliative care organizations. The model will then have to be implemented in the clinical environment in the future to know how well the cost estimates were correct and how well the recommended measure of value efficiency is. Additionally, the heterogenization of the healthcare systems, the notion of staffing, and the perception of compassion in the cultural setting might also have a role to play in the functioning of the framework in the various institutional settings.

These shortcomings however do not rule out the fact that the TDABCC framework would be a perfect place to consider further the research on provision of caring care and financial sustainability to the palliative healthcare systems. The other approach to treating the evaluation of the economical and humanistic value of compassionate care and bridges the gap existing in the present state of medical informatics is the model that supposes the involvement of the cost accounting, compassion measurement and value-based health care as the significant component of it.

8. CONCLUSION, CONTRIBUTION, IMPLICATION.

8.1 Conclusion

In the paper, the Time-Driven Activity-Based Compassion Costing (TDABCC) model which is a humanistic costing model has been introduced that has been developed to reflect the economic worth of compassionate care in palliative hospitals. The conventional healthcare financial models have been very procedural in nature and the relational processes of care which make significant contribution to the well being of patients and overall care experience have been given minimal attention.

The approach to the quantification of the cost of caring process like emotional support, patient counseling, the interdisciplinary coordination that are motivational in the sphere of medicine will be provided in the TDABCC model protruding the ideas of the Time-Driven Activity-Based Costing. The summative of the Sinclair Compassion Questionnaire also allows the health care facilities to determine whether the investments in a compassionate care have any patient-centred outcomes worth the cost.

A single new measure that can be implemented in the palliative care setting is the Value Efficiency measure that is the health care outcomes in relation to the cost of providing care that can be adopted in health care setting. The model and its incorporation of monetary spending and the patient reported experiences of benevolence in the relational and humanistic aspects of care extends the horizons of the classic value-based models of health care.

As it is a conceptual framework that has to be created empirically in a real-life healthcare setting it would provide an excellent starting point on how to advance the research on the field of compassionate healthcare delivery and sustainable healthcare management.

8.2 Theoretical Contributions

The research has numerous implications to the literature in the field of the healthcare management profession, health economics and compassion science.

Firstly, what the Time-Driven Activity-Based Costing (TDABC) of communicating the relational healthcare processes does has never been modelled in the financial cost models. Although TDABC has been extensively used in enhancing cost transparency in healthcare facilities (Kaplan and Anderson, 2007; Kaplan and Porter, 2011) the use of such a tool has mostly focused on the operations and clinical procedures. This study will be able to broaden the theoretical underpinning of TDABC by rediscovering the

scope of the study by presenting the processes of compassionate care with the intention of being more accommodating to the realities of delivering palliative healthcare.

Second, the science of care and healthcare economic control have been growing on different levels, which are integrated by the article. The caring research of healthcare has been more mindful to the psychological, ethical and clinical outcomes (Sinclair et al., 2021). Conversely, the cost-efficiency, resource utilization has been given an attention in the literature in health care financial management. The TDABCC model will be more equipped to bridge the gap between these spheres as it will be shown how the concept of compassion can be made a reality as one part of the value creation in healthcare.

Third, the research is an addition to the literature that already is saturated with information on value-based healthcare and presentation of a new outcome measure, with the relational aspects of patient experience. The traditional value-based healthcare systems are more likely to be biased towards the clinical outcome measures as compared to the cost (Porter, 2010). Nevertheless, when it comes to delivering care to the patient in the palliative phase, patient dignity, emotional support, and kind interactions are primarily the quality indicators of care. The significance of Efficiency measure could bring a contribution of compassion outputs to the set of the cost-outcome evaluation models by adding the Value Efficiency measure to the theoretical discussion on the topic of healthcare value.

Lastly, the research is an extension of the theoretical background of human-based care systems because it underlines the timeliness of the work as the balancing of financial organizations and ethical/relational in terms of providing care. The health care systems, which do not see the importance of compassionate care, may potentially frustrate the practices that can make people healthy. By providing a way of quantifying the value-generation of compassion, in a systematic way, the TDABCC model would perhaps be able to provide a way of balancing the economic incentives with humanistic support of palliative care.

8.3 Implications Policy-wise Policy and Leadership Implications.

The implication of TDABCC framework to the healthcare leadership, healthcare management and policy development is immense. The healthcare leaders in the palliative care delivery have limited resources at their disposal to deliver and have to strike a balance between the quality patient-centered care and cost-efficiency. The TDABCC model is a helpful tool that could be applied to delineate the worth of the investments on the evidence-based decision-making on compassionate care and fit in the context of resource allocation.

The policy front is on the move towards value-based healthcare systems, which are focused on outcomes, as opposed to cost, and are being viewed as replacing the healthcare systems of the world. Nevertheless, most of the existing value of measurement processes are more based on clinical practices rather than ascertaining relational care aspects. Introducing compassion outcome measures into financial analysis system would also assist policy-makers to model reimbursement systems that will make it easy to deliver compassion care rather than a quantity of procedure.

Moreover, the healthcare performance measurement might also possess evidence-based care indicators that would better plan the investments that healthcare organizations make in the interdisciplinary support services, communication trainings, and patient-centered care programs. The healthcare systems will also be in a position to create a culture that will have them create an economic viability and human dignity in the healthcare provision by striking a balance between the economic drivers and the culture of caring healthcare provision.

The palliative care facilities need to be empirically tested of the TDABCC framework to comprehend how the TDABCC framework can be used practically, whether it is a reliable framework or it will bring any implications on the healthcare management decision-making in future.

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