

UNIVERSITI TEKNOLOGI MARA

**DOCTORS' ETHICAL DILEMMAS
AT THE INTERFACE OF
CONVENTIONAL MEDICINE AND
TRADITIONAL &
COMPLEMENTARY MEDICINE
IN MALAYSIA:
ANALYSIS AND
RECOMMENDATIONS**

HELWA HUSNA BINTI KATIMAN

**Master in Medical Ethics and Medical
Jurisprudence**

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HELWA HUSNA BINTI KATIMAN

Dissertation submitted in partial fulfillment
of the requirements for the degree of
**Master in Medical Ethics and Medical
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CONFIRMATION BY PANEL OF EXAMINERS

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ABSTRACT

One of the most prominent criticisms levelled towards traditional & complementary medicine (T&CM) is the lack of sufficient proof of quality, safety and efficacy of most T&CM therapies. Furthermore, studies have shown that doctors are often unprepared to discuss or draw appropriate conclusions concerning T&CM. These problems are further compounded by the absence of ethical guidelines for doctors when at the interface of conventional medicine and T&CM. Setting on this background, this study sought to address a gap in local policy and literature by proposing recommendations on ethical practices when doctors are at the interface of conventional medicine and T&CM. The study employed a library-based research method to examine the current development of Malaysia's T&CM regulatory framework, and it is followed by an analysis of the ethical dilemmas faced by doctors concerning T&CM. The ethical dilemmas analysed focused on the conflict between respect for autonomy and paternalism, issues with the doctor-patient relationship, and emerging issues relating to the promising therapeutic effect of traditional herbal medicine during a pandemic. Following the analysis, this study developed recommendations on the most appropriate ethical practices, which can be divided into three main components. Begin with 'Pre-Care' which was intended for relevant stakeholders to make strategic interventions in knowledge dissemination. Following that, 'During-Care' encompassed eight pillars of an ethical framework for doctors when at the interface of conventional medicine and T&CM. Finally, 'Post-Care' addressed the duty to report harmful or adverse events related to T&CM. This study aimed to assist the medical fraternity and key stakeholders to take necessary interventions by incorporating ethical practices in T&CM, in order to ensure patients receive the utmost benefit while minimising potential harms.

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LIST OF ABBREVIATIONS

Abbreviations

CPC	Code of Professional Conduct
DG	Director-General
FDA	Food and Drug Administration
GMP	Good Medical Practice
GlobinMed	Global Information Hub on Integrated Medicine
JAKIM	Department of Islamic Development Malaysia / <i>Jabatan Kemajuan Islam Malaysia</i>
MMC	Malaysia Medical Council
MOH	Ministry of Health
NCCIH	National Center for Complementary and Integrative Health
NPRA	National Pharmaceutical Regulatory Agency
QALY	Quality-Adjusted Life-Year
SDGs	Sustainable Development Goals
T&CM	Traditional & Complementary Medicine
TPC	Traditional Postnatal Care
UHC	Universal Health Coverage
UK	United Kingdom
US	United States of America
WHO	World Health Organization

LIST OF DEFINITIONS

INTERFACE

“A point where two systems, subjects, organizations, etc. meet and interact” (Lexico Oxford, n.d.).

CONVENTIONAL MEDICINE

“Therapeutic concepts, diagnoses, treatments, practices, and products that are considered mainstream medicine. This type of medicine is commonly provided in hospitals and speciality or primary care practices and taught in medical schools” (College of Physicians and Surgeons of Ontario, 2021).

TRADITIONAL MEDICINE (TM)

“The sum total of the knowledge, skill and practices based on the theories, beliefs and experiences indigenous to different cultures, whether explicable or not, used in the maintenance of health as well as in the prevention, diagnosis, improvement or treatment of physical and mental illness” (World Health Organization, 2013, p. 15).

COMPLEMENTARY MEDICINE (CM)

“A broad set of health care practices that are not part of a country’s tradition nor part of conventional medicine, and are not fully integrated into the dominant health care system. CM practices are used interchangeably with TM practices in some countries” (World Health Organization, 2013, p. 15).

TRADITIONAL AND COMPLEMENTARY MEDICINE (T&CM)

“T&CM merges the terms TM and CM, encompassing products, practices and practitioners” (World Health Organization, 2013, p. 15). Based on the Malaysian T&CM Act 2016 (section 3), T&CM is *“a form of health-related practice designed to prevent, treat, or manage ailments or illness or preserve the mental and physical well-being of an individual. Practices include traditional Malay medicine, traditional Chinese medicine, traditional Indian medicine, Islamic medical practice, homeopathy, and complementary therapies, but excludes medical and dental practices used by a medical and dental practitioner respectively”*.

ALTERNATIVE MEDICINE

“A non-mainstream approach [that] is used in place of conventional medicine”
(National Center for Complementary and Integrative Health, 2021a).

COMPLEMENTARY AND ALTERNATIVE MEDICINE (CAM)

“A broad domain of healing resources that encompasses all health care systems, modalities, and practices and their accompanying theories and beliefs, other than those intrinsic to the politically dominant health system of a particular society or culture in a given historical period. CAM includes all such practices and ideas self-defined by their users as preventing or treating illness or promoting health and well-being. Boundaries within CAM and between the CAM domain and that of the dominant system are not always sharp or fixed” (O'Connor et al., 1997, p. 50).

INTEGRATIVE MEDICINE

Practising medicine in such a way that aspects of CAM are judiciously incorporated into comprehensive treatment plans together with conventional methods of diagnosis and treatment (Rees & Weil, 2001).

DOCTOR

A registered medical practitioner as interpreted in section 2 of the Malaysian Medical Act 1971.

T&CM PRACTITIONER

A registered T&CM practitioner as interpreted in section 3 of the Malaysian T&CM Act 2016.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Traditional and complementary medicine (T&CM) has been extensively used worldwide for disease prevention, diagnosis, and treatment (World Health Organization [WHO], 2001). The population from low- and middle-income countries have contributed to the increased use of T&CM in recent years (Gureje et al., 2015). A systematic review shows that eastern countries have higher rates of national T&CM usage compared to western countries (Harris, Cooper, Relton, & Thomas, 2012). For instance, Asian countries like Japan, South Korea and Malaysia each recorded 76%, 75%, and 56% of 12-month prevalence of national T&CM usage by general populations, respectively, as opposed to western countries like the United States of America (US), the United Kingdom (UK), and Canada (38%, 26%, and 12% respectively) (Harris et al., 2012). Nevertheless, other affluent countries such as Australia have also recorded a high national T&CM usage at 52% (MacLennan, Wilson, & Taylor, 2002). These findings demonstrate that the prevalent use of T&CM in various countries may be influenced by historical background and cultural beliefs.

People have chosen T&CM in treating their illness for different reasons, with perceived benefits and safety of T&CM being the most apparent motives for the usage (Tangkiatkumjai, Boardman, & Walker, 2020). Others believe that conventional medicine does not treat an individual's bodily, psychological, or spiritual needs sufficiently (White, 2000; Zhu & Chan, 2018). The inadequacy of conventional medicine leads patients to seek T&CM, either as an alternative or as complementary medicine. A significant proportion of people with chronic or life-threatening illnesses have used T&CM at some stage throughout their condition, especially when being informed by doctors that conventional medicine is ineffective in treating their illnesses (Institute of Medicine (US) Committee on the Use of Complementary and Alternative Medicine by the American Public [IOM], 2005).

It is pertinent to note that, the term 'complementary and alternative medicine' (CAM) is frequently used in literature to address a non-mainstream health-related practice, primarily in western countries (Barrett, 2003). Nevertheless, the commonly

used acronym CAM obscures distinction between therapies used as complementary to the patient's conventional medicine (for example, chiropractic to relieve pain in patient taking prescribed analgesics), and therapies used as an alternative for standard conventional medicine (for example, instead of getting chemotherapy, patient focus solely on a diet as a cancer treatment). Whether a treatment is complementary or alternative is ultimately determined by the aim of treatment of the referring doctor or consumer of the therapy. Alternative treatments that are pushed to substitute conventional medical care invite particular dangers and issues that vary depending on the user's health circumstances.

For the purposes of this study, the term T&CM will be utilised (rather than CAM) to ensure consistency throughout this study. Furthermore, the usage of T&CM's acronym is in accord to application by the Malaysian Ministry of Health (MOH) and the majority of WHO publications (Traditional and Complementary Division [T&CM Division], 2021g; WHO, 2019b).

1.1.1 Role of T&CM in Strengthening Healthcare System

In the 2013 International Conference on Traditional Medicine for South-East Asian Countries, the WHO Director-General (DG) stated that:

Traditional medicines, of proven quality, safety, and efficacy, contribute to the goal of ensuring that all people have access to care. For many millions of people, herbal medicines, traditional treatments, and traditional practitioners are the main source of health care, and sometimes the only source of care. This is care that is close to homes, accessible and affordable. It is also culturally acceptable and trusted by large numbers of people. The affordability of most traditional medicines makes them all the more attractive at a time of soaring health-care costs and nearly universal austerity. Traditional medicine also stands out as a way of coping with the relentless rise of chronic non-communicable diseases. (Chan, 2013 cited in WHO, 2013, p. 16)

The accessibility and affordability of T&CM interventions are the key reasons for the high prevalence of T&CM use among African communities, in light of conventional medicine's high cost and limited accessibility (Tangkiatkumjai et al., 2020). The scenario is comparable to that of Malaysia's rural population, where

obtaining medicinal herbs from the tropical rain forest is more accessible and inexpensive than seeking conventional medicine (Muhammad & Awaisu, 2008).

Furthermore, T&CM appears to be a viable option for cost reductions since it avoids the need of high-tech devices, allowing it to offer low-cost interventions. In a comprehensive systemic review of T&CM economic evaluations conducted by Herman, Poindexter, Witt, and Eisenberg (2012), it was found that there was a significant number of highly cost-effective and cost-saving T&CM interventions for various study populations. When used in combination with conventional medicine, for example, acupuncture had better health outcomes and also was regarded a cost-saving therapy (in terms of quality-adjusted life-year [QALY]) than standard conventional medicine alone (Herman et al., 2012). With the availability of T&CM economic evaluations, health policymakers will be able to establish clinically effective and financially responsible disease management strategies to boost the national healthcare system.

Realising the growing demand for T&CM and its potential to satisfy healthcare needs, the WHO aspires to employ diverse approaches to assist its Member States, including Malaysia. For example, by encouraging Member States to develop their own national T&CM policies for T&CM integration into national health systems and publishing various T&CM-related documents to advocate the rational use of evidenced-based T&CM (WHO, 2013). These efforts are being made to ensure that T&CM services provided to the population are safe, qualified, and effective (Zhang, Sharan, Espinosa, Gallego-Perez, & Weeks, 2019).

One of the overarching goals of the WHO is to strengthen healthcare systems through Sustainable Development Goals (SDGs), which are relevant to low, middle and high-income countries (WHO, 2019a). The WHO's 13th General Programme of Work 2019–2023 established strategic priorities in the context of SDGs, with the goal of achieving universal health coverage. The goal of universal health coverage is to ensure that all individuals have access to high-quality preventive, curative, and rehabilitative health services, while also ensuring that they do not suffer financial hardship when paying for these services (WHO, 2019a). T&CM has the potential to make a significant contribution toward universal health coverage, particularly through primary healthcare systems. This strategic goal has recently been reinforced by reimagining and reorganising primary healthcare service delivery to enable system integration, particularly in South-East Asia (WHO, 2021). Thus, by harnessing the potential of

T&CM services, the universal health coverage will be attained, thereby strengthening nations' healthcare systems.

1.1.2 Overview of T&CM Approaches

The American National Center for Complementary and Integrative Health (NCCIH) (2021a) classifies complementary medicine into four major categories (refer to Figure 1.1). T&CM also has been connotated as therapies with 'holistic' approach that considers the individual as a whole, including physical, mental, emotional and spiritual elements (IOM, 2005). Ideally, in addition to administering medications when treating patients, doctors are also encouraged to treat their patients holistically, offering lifestyle counselling and advice. Indeed, many medical schools now emphasise the importance of treating the patient as a whole individual (Boon, 1998). Nevertheless, the line between holistic and scientific approaches to health is blurred to some extent, and most people think that holism and science are not readily compatible (Caulfield & Feasby, 2001).

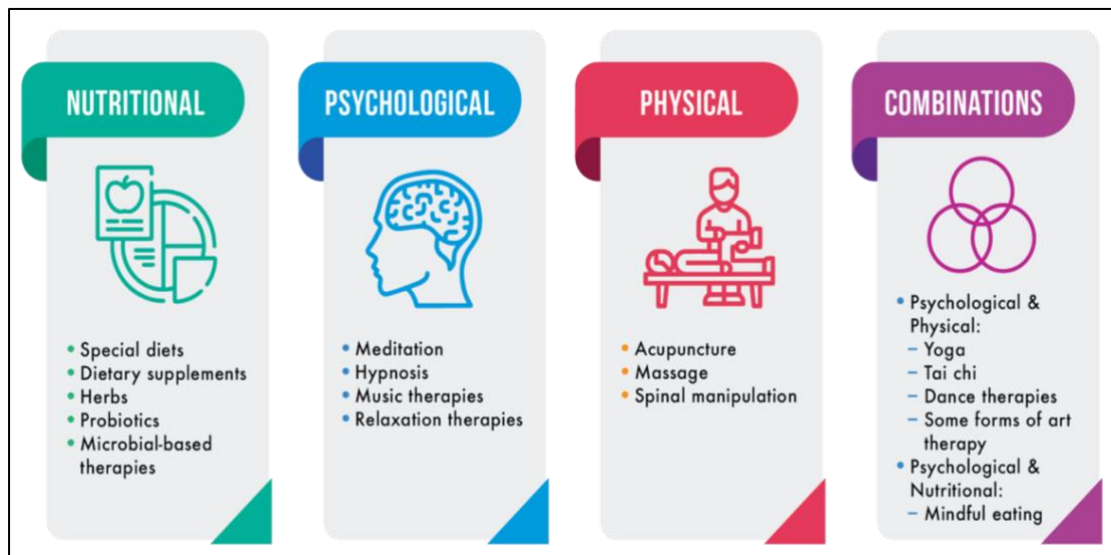


Figure 1.1 Four Major Categories of T&CM Approaches

Note/Source: Some T&CM approaches, such as traditional medicine, homeopathy, and naturopathy, may not clearly fall into any of the categories stated (NCCIH, 2021a)

Moreover, the other aspects of T&CM that is worth noting is the evolving contribution of herbal medicine in the pharmaceutical industry. Plants are the source of up to one-third to one-half of all pharmaceutical drugs (Barrett, Kiefer, & Rabago,

1999). Some notable historical examples are listed in Table 1.1 below:

Table 1.1

Usage of Herbal Medicine in the Pharmaceutical Industry

Pharmaceutical Drugs	Source of Plants / Herbal Medicine	Application
Digoxin	<i>Digitalis purpurea</i> (purple or common foxglove)	To treat various cardiac conditions
Morphine and codeine	<i>Papaver somniferum</i> (poppy)	For pain relief
Atropine	Plants of the nightshade family	To treat autonomic nervous system problems
Aspirin	Willow bark	As anti-inflammatory medication
Quinine	<i>Cinchona ledgeriana</i> (quinine tree)	To treat malaria
Taxol	<i>Taxus brevifolia</i> (pacific yew)	A chemotherapy medication to treat cancer

Source: (Abbott, 2014, p. 10; Chatfield, 2018, p. 10)

1.1.3 Overview of T&CM in Malaysia

Even before achieving independence, Malaysia has been home to people from diverse ethnic groups (such as those of Malay, Chinese, and Indian descent) who have coexisted in harmony. Hence, Malaysia is in a unique position as a nexus for three distinct Asian cultures, each with its own historical healing traditions. Malaysia's abundant tropical biodiversity provides a consistent source of natural products, that have been utilised for generations to maintain health and well-being (MOH, 2007). After independence, the healthcare system underwent modernisation that emphasised on modern conventional medicine (Ooi, 1993). Notwithstanding, the growth of the healthcare industry has not resulted in the abolition of traditional medicine but rather in the persistent support for consumer use of T&CM (Ooi, 1993).

Malaysia is also one of the countries that is committed to achieving the WHO's goal by paving the path towards the integration of the mainstream conventional medicine and T&CM services across all healthcare levels (MOH, 2017). Less than half of the 194 WHO Member States have a national regulatory framework for T&CM practitioners (Zhang et al., 2019). Malaysia is among the countries with a national T&CM regulatory framework. The regulation of T&CM practices and practitioners through the gazettment of the T&CM Act 2016 [Act 775], is one of the biggest

milestones achieved in Malaysia. The Act is to ensure the safe provision of T&CM service delivery and to cater high prevalent of T&CM usage in the country.

Data by the WHO (2002) shows that Malaysians spent US\$ 500 million (RM 2.1 billion) per year on T&CM compared to US\$ 300 million (RM 1.3 billion) per year on conventional medicine. This demonstrates the widespread use of T&CM with high out-of-pocket T&CM expenses by the population. Additionally, the National Health and Morbidity Survey 2015 reported that almost one-third of Malaysians seek T&CM therapy, with most of the individuals coming from urban areas (Institute for Public Health, 2015). The intention for using T&CM by these individuals was for complementary purpose (41.2%), as a first line therapy prior to seeking conventional medicine (40.4%), with a minority choosing to use T&CM as alternative medicine (Institute for Public Health, 2015).

1.2 Problem Statement

One of the most prominent criticisms levelled towards T&CM is the lack of sufficient proof of safety and efficacy of the majority T&CM therapies. Given the limited scientific studies on many T&CM therapies, doctors recommendations will rarely match an anticipated threshold for evidence-based information (Sugarman & Burk, 1998). In contrast to conventional medicine, new pharmaceutical drugs would not be permitted to enter the market, unless they have been investigated thoroughly using accepted scientific methods such as clinical trials, to produce concrete evidence of benefit. On one hand, doctors have a professional responsibility to assist patients in meeting treatment objectives. On the other hand, is it ethically permissible to administer therapies that lack evidence of its safety and efficacy? Given that patients have the right to expect doctors to act ethically when integrating conventional medicine and T&CM, the evolving duties surrounding T&CM merits consideration. Ethically justified decisions by doctors on patient care will benefit many parties, whereby patient care is optimised, the trust in doctor-patient relationship is maintained, and society in general will continue to respect the medical profession.

However, due to the lack of general acceptance of T&CM among the medical fraternity, coupled with the scarcity of scientific evidence on T&CM, it is challenging for doctors aspiring to an integrated model of care to comply with the established codes of ethics (Ernst, 1996). Furthermore, the present Code of Professional Conduct (CPC)

by the Malaysian Medical Council (MMC) does not address topics beyond the norm of standard of care for a practicing doctor. There is an ongoing need for the formulation of an ethical practice guideline that specifically considers the prevalent community use of T&CM. Addressing this gap is critical to safeguard both doctors and patients when using T&CM. Setting on this background, this study sought to address the scarcity of local literature on the topic at hand. It is anticipated that the proposed recommendations from this study can be used as an ethical framework that can benefit many stakeholders. Most importantly, the aim of this study was to ensure doctors are able to provide safe, holistic, and culturally relevant care when at the interface of conventional medicine and T&CM.

1.3 Research Questions

- i) What are the current developments of T&CM regulatory framework in Malaysia?
- ii) What are the ethical dilemmas faced by doctors arising from the interface of conventional medicine and T&CM?
- iii) How should doctors handle ethical dilemmas at the interface of conventional medicine and T&CM in Malaysia?

1.4 Research Objectives

- i) To examine the current developments of T&CM regulatory framework in Malaysia.
- ii) To analyse the ethical dilemmas faced by doctors arising from the interface of conventional medicine and T&CM.
- iii) To propose recommendations on ethical practices for doctors at the interface of conventional medicine and T&CM in Malaysia.

1.5 Literature Review

The topic of integration of T&CM into the mainstream conventional medicine invites many scholarly debates. Numerous studies have attempted to clarify the

complexities and barriers of the ethical issues emerging from the interface of conventional medicine and T&CM (Ernst, 2009b; Gilmour, Harrison, & Vohra, 2011; Pirotta, 2011; Weir, 2003). The literature search revealed the data paucity and limited information regarding the ethical aspect on such topic within the Malaysian context. Therefore, this study was conducted aligned with the knowledge gap found in the literature. The literature review of this study can be divided into two parts. The first part discusses the ethical framework concerning doctors' ethical issues related to T&CM. The second part focuses on the legal framework pertaining doctors' ethical duty and other legal considerations related to the integration of T&CM.

1.5.1 Ethical Framework

In 1979, Tom Beauchamp and James Childress first proposed the four *prima facie* principles in biomedical ethics as a general framework of norms to handle the nuances of ethical dilemmas (Holm, 2002). Respect for autonomy, beneficence, non-maleficence, and justice are the four fundamental principles at the core of moral reasoning in healthcare. These principles can assist doctors and other healthcare professionals in making ethical decision when confronted with moral dilemmas that arise at work. Ernst (1996) was the first to highlight the ethical issues surrounding T&CM, on which he formed his ethical reasoning, based on principlism. Nevertheless, it is arguable that principlism simply lack foundational theory to sufficiently give a strategy for selecting the most appropriate ethical approach (Amer, 2019). In contrast, Stone (2000) considered the use of duty-based or virtue ethics to determine what is the 'right' course of action to pursue, which may be based on moral attributes or ethical duties that go beyond the standards of care, due to the difficulty in applying principlism to address the ethical dilemmas related to T&CM.

The most common ethical dilemmas in medicine, which typically relate to respect for autonomy, emerges when there is disagreement about what constitutes the patient's best interest and who should decide (Taylor, 2013). Non-maleficence duties compel doctors to refrain from committing intentional harm or to avoid actions that could be expected to cause harm (Chatfield, 2016). Ethical implications when doctors do not address T&CM issues would subsequently affect the doctor-patient relationship in the long run, as potentially hazardous T&CM usage may go undiscovered, and patients may seek information from less credible sources (Pirotta, 2011). In contrast,

when thorough assessment of patients' perspectives about conventional medicine and complementary use of T&CM are conducted, it would enable doctors to educate patients on the necessity of complying to conventional medicine (Ithnain, Panting, Kassim, Amirudin, & Krishnan, 2020).

A recent study by Liu, Tang, Baxter, Yin, and Tumilty (2021) warned that problems such as safety, effectiveness, and practicality of T&CM use may be disregarded if doctors remain hesitant or lacking in confidence when advising patients on the use of T&CM. Furthermore, Saidi, Isa, Jamaludin, and Hassan (2021) proposed that an adequate assessment or method should be in place to establish patients' associations with T&CM usage, in order to understand factors contributing to T&CM use and patients' decision, and to conceal it from doctors.

In the context of T&CM in public healthcare facilities, the equitable distribution of resources for T&CM therapies may present a challenge. According to Ernst (1996), in a simplified model of a healthcare system, spending money on anything other than conventional medicine, may imply that these resources will not be accessible elsewhere. The ethical implications following the rationing of healthcare resources, consequently raise debates, particularly during the unprecedented COVID-19 pandemic (Aaron & Schwartz, 1990; Andrews, Ayers, Brown, Dunn, & Pilarski, 2021; Farrell et al., 2020). Freemantle, Henry, Maynard, and Torrance (1995) highlighted that pursuing the outcome of drugs' effectiveness, without considering the cost, may deprive other patients of proper care that might benefit them more, which could be inefficient and unethical.

Overall, a review of the literature revealed that doctors must reflect on various ethical considerations when at the interface of conventional medicine and T&CM. However, this has not been comprehensively examined in any local study.

1.5.2 Legal Framework

Under the jurisdiction of the Malaysian Medical Act 1971 (section 34), doctors are bound to practise according to the modern scientific method, which may be contrary to some practices of T&CM. Doctors should not use, prescribe or promote traditional health supplements or pharmaceuticals, unless such goods or practices are supported by evidence, as delineated in the CPC by the MMC (2019a). These restrictions imply that doctors who associate themselves with T&CM products or practices that are not

registered or recognised (refer to Figure 2.3 for the list of recognised T&CM practice areas) by the MOH, are considered to have committed ‘serious professional misconduct’. They can be subjected to disciplinary proceedings if complaints are brought against them. Knowing that doctors must adhere to the professional body’s standard of care, doctors must take reasonable steps to ensure that every decision made on patient care is justifiable if they decide to depart from standard medical practice. In accordance with the Good Medical Practice (GMP) guideline by the MMC (2019b), doctors must treat all patients equally and must not discriminate against their patients, regardless of the patients’ values and preferences.

Common law courts review a doctor’s legal duty of care as a single and undivided duty that is enshrined upon the duty to diagnose, the duty to treat, and the duty to warn (*Sidaway v Bethlem Royal Hospital Governors*, 1985). The duty to warn or advise is entrenched within the informed consent process that must be obtained prior to commencing treatment. With the growing demand and acceptance of evidence-based T&CM, there are concerns that doctors may incur legal liability if they disregard a patient’s use or preference for T&CM, in the context of the American jurisdiction (Cohen & Eisenberg, 2002).

In the Malaysian jurisdiction, the standard of care for duty to advise was deliberated in the case of *Foo Fio Na v Dr Soo Fook Mun & Anor* (2007). The case followed the common law standard as established in the Australian case of *Rogers v Whitaker* (1992), which recognises the scope of disclosable information broadened to include ‘material risks’ surrounding patient’s circumstances and interests. According to Kerridge and McPhee (2004), in the context of T&CM, information is material if a reasonable person in the patient’s position would value it, or if there is evidence that this patient would value the information regarding complementary medicine. The authors go on to say that delivering the material information can be performed in either a ‘proactive’ or a ‘reactive’ mode, with proactive referring to “*what a reasonable person in the patient’s position might wish to know*”, and reactive referring to “*what the patient has asked for or otherwise communicated a desire to be given*” (Kerridge & McPhee, 2004, p. 165).

Studies by Zollman and Vickers (1999), and White (2000) highlighted doctors’ important role in identifying patients who use T&CM, reducing their risk of harm, and, to the greatest extent feasible, ensuring that their treatment decision is in their best interests. The pivotal role of doctors has also been highlighted from studies by Adams,

Cohen, Eisenberg, and Jonsen (2002), and Zakaria et al. (2015), whereby doctors are encouraged to remain active in clarifying patient's underlying values and beliefs whenever advising on T&CM therapies.

Authors such as Caulfield and Feasby (2001), and Sanderson, Koczwara, and Currow (2006), have discussed the legal implications following a conflict between the trend towards evidence-based care and the scientifically loose ethos associated with T&CM. The authors further highlighted the importance of informed consent and the appropriate standard of care should be applied accordingly by doctors and T&CM practitioners. Sugarman (2003) also suggested that doctors and T&CM practitioners should generally discuss relevant T&CM modalities with patients to the extent of their knowledge and competence to meet their fiduciary responsibility. These events have been linked to supporting the well-being of patients, in accordance with the concept of shared medical decision-making. The opponents for incorporating T&CM within conventional medicine, argued that T&CM has not been subjected to rigorous trials to evaluate its efficacy and risks (Shankar, Dubey, Saini, & Prasad, 2020; Yang, 2020; Young, Worswick, & Stoffell, 2001). However, some authors have partially embraced T&CM practice with some restrictions about conducting appropriate trials to validate the procedures (Verhoef, Casebeer, & Hilsden, 2002; Yamey, 2000).

Gilmour, Harrison, Cohen, and Vohra (2011) discussed that there have been few cases in the Canadian legal system dealing with the use of T&CM, in which the same general legal concepts were used in conventional medicine while taking into account issues unique to T&CM. A study by Ries and Fisher (2013) highlighted that existing regulatory models by provincial and territorial governments, medical colleges, and sending conflicting messages should be revised to assist doctors in balancing patient demand and patient safety on the use of T&CM, including doctors' referral to T&CM, and doctors' agreement to patient self-referral to T&CM.

A review of literature from legal framework signified that T&CM has distinct characteristics that impact doctors' ethical duties when at the interface of conventional medicine and T&CM. Nevertheless, no local study has been conducted that comprehensively addresses doctors' ethical duties or practices in such a situation.

1.6 Research Methodology

This study used a library-based research method. The data collection and

analysis were the main components in the study design. Extensive secondary data (digital and non-digital libraries) on ethics, law and clinical texts relevant to T&CM practices were collected using relevant resources. Several search engines were used for the medical literature resources, including Science Direct, Scopus, Web of Science, Cochrane Library, PubMed, EBSCO, and Google Scholar. For resources on ethics, this study referred to books, journal articles and doctoral dissertations searched from PubMed, Google Scholar, ProQuest, or EThOS British Library. Whereas for legal references, Current Law Journal, Hein Online, and LexisNexis were utilised. Information regarding statutes, policies, guidelines, and other relevant publications were referred from the official government agencies' websites, such as the MOH, MMC, T&CM Division, the US National Center for Complementary and Integrative Health, and the Medical Council of New Zealand. Several health regulators (such as from the MOH T&CM Division and Medical Council of New Zealand) were contacted to learn about their policies and experiences with T&CM regulation. In addition to the academic publications search, non-academic medias such as newspaper articles, websites, Parliament Hansards, and blogs were carefully considered to provide a comprehensive view on the research topic.

Content analysis was used to analyse the data and to address the research questions on examining the current development of T&CM regulatory framework in Malaysia and doctors' ethical problems. Several principles of doctors' ethical duties derived from the discussed ethical issues were used to emulate the most appropriate ethical practices, when doctors are at the interface of conventional medicine and T&CM, particularly in Malaysia setting. The keywords used for the online search were 'complementary medicine', 'traditional medicine', 'traditional and complementary medicine', 'complementary and alternative medicine', 'doctor', 'ethics', 'duty' and 'COVID-19'. Materials selection were in either in English or *Bahasa Melayu* languages.

1.7 Organisation of Chapters

This study is organised into five chapters, beginning with the introduction in Chapter One. It is followed by the examination of the current development of Malaysia's T&CM regulatory framework in Chapter Two, and the analysis of the ethical dilemmas faced by doctors arising from the interface of conventional medicine and T&CM in Chapter Three. Afterwards, Chapter Four provides deliberation on

recommendations on ethical practices for doctors at the interface of conventional medicine and T&CM in Malaysia. In the concluding chapter at Chapter Five, this study summarises the findings of this study that correspond to the research questions specified for this study.

1.8 Scope and Limitation of the Study

T&CM covers a wide range of topics, including (i) practices; (ii) education and training; (iii) medicinal materials and goods; and (iv) T&CM-related research. However, this study focuses on relevant aspects of T&CM practices in the Malaysian context, particularly on the ethical conduct of doctors, comprising the issues of decision-making and professional ethics. Whereas ethical issues revolving around doctors with dual qualifications (doctors practising T&CM) nor T&CM practitioners were not examined in this study.

In terms of the research limitations, most studies in the existing literature focused on CAM rather than T&CM. By virtue of ‘other than dominant healthcare practices’ rendered by CAM’s definition, it corresponds with the general context of the term, T&CM, as defined in this study. Thus, the word T&CM is being asserted throughout this study. Furthermore, considering the limited time available to conduct this study, in-depth interviews were not conducted due to time constraint. Hence, a library research method was selected as the research methodology. This study design has no provision to ascertain the actual ethical dilemmas faced by doctors in the field. Therefore, this topic would be ideally and further explored using a qualitative study that incorporates observation, interviews or focus group discussions with relevant subjects.

1.9 Significance of the Study

The comprehension of the topic would contribute significantly to the body of knowledge, which is currently limited in the Malaysian context. Presently, MMC guidelines such as the CPC, GMP, and the 2006 Guideline on Ethical Implications of Doctors in Conflict Situations, do not address ethical quandaries arising from the interface of conventional medicine and T&CM. Therefore, the recommendations from this study can be regarded as an ethical framework to aid doctors in best practices when confronted with problems related to T&CM. Furthermore, the proposed

recommendations will serve as a catalyst for the formulation of policy or guidelines for key stakeholders. For example, (i) the MOH or MMC can either develop a new guideline or improve the existing guidelines; (ii) universities with medical programmes and other relevant government agencies can partake in developing strategic interventions to promote knowledge dissemination on T&CM; (iii) regulators and enforcement agencies that deal with T&CM issues will gain insights on related T&CM practices; and (iv) T&CM users will be indirectly informed about their rights and responsibilities when using T&CM.

CHAPTER TWO

THE DEVELOPMENT OF T&CM REGULATORY FRAMEWORK IN MALAYSIA

Understanding the development of T&CM regulatory framework in Malaysia will offer some insights into how the country approaches the growing interest of T&CM. This chapter begins with an overview of historical progression and development of national T&CM regulatory framework. Three important elements under the T&CM regulatory framework will be further highlighted, encompassing: (i) the national policy; (ii) the T&CM Act; and (iii) the national blueprint. Subsequently, an overview of T&CM recognised practice areas will be examined. Aside from gaining knowledge on the government's effort to regulate safe and evidence-based T&CM, this chapter aims to develop better understanding on the types of recognised T&CM practices in Malaysia. Setting clear boundaries between authorised and non-authorised practice will facilitate the regulatory and enforcement processes, as well as enable doctors to take appropriate measures when at the interface of conventional medicine and T&CM.

2.1 Overview of the Development of T&CM Regulatory Framework in Malaysia

A timeline of T&CM regulatory framework is depicted in Figure 2.1 (refer overleaf), starting from T&CM conception to the gazettelement of the federal statute regulating T&CM practices and practitioners, as well as other landmark development related to T&CM legislation. The notion of T&CM control was initiated in 1987, when there was increased interest in T&CM in Malaysia, which prompted the MOH to begin work on a position paper for an Alternative Medicine Research Agenda (T&CM Division, 2021g). The National Pharmaceutical Control Bureau¹ contributed by commencing traditional medicine product registration in 1992 (Goh, 2021). In 1996, a

¹ The Bureau was renamed to National Pharmaceutical Regulatory Agency on 2016 following a reform of the agency.

Post-Cabinet decision was made to establish an organisational framework for T&CM in Malaysia, whereby a T&CM Unit was set up as part of the MOH's Family Health Development Division (T&CM Division, 2006).

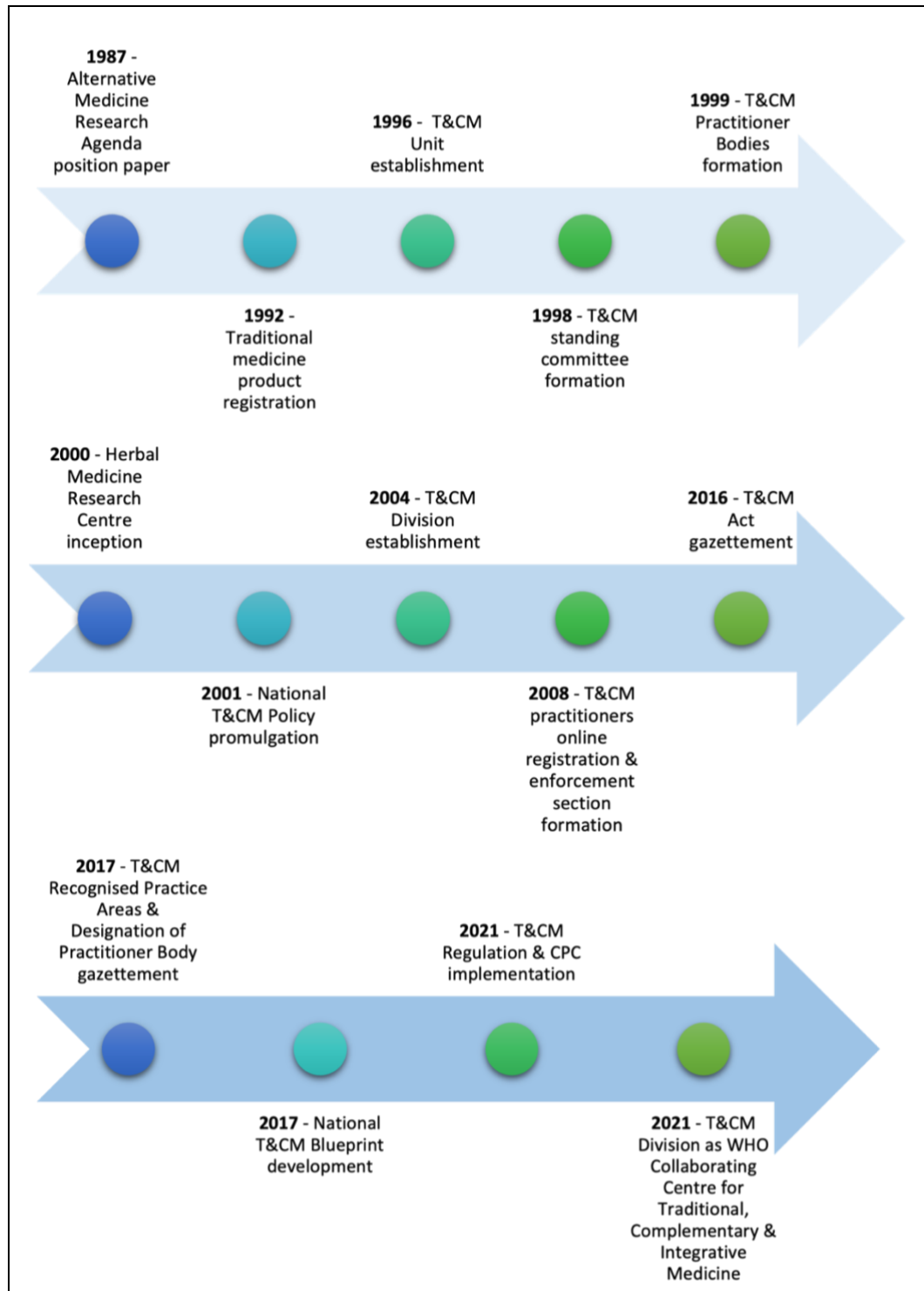


Figure 2.1 Timeline of the Development of T&CM Regulatory Framework in Malaysia

Abbreviations: CPC = Code of Professional Conduct, T&CM = Traditional and complementary medicine, WHO = World Health Organization

In 1998, as interest in herbal therapy grew around the world, the Malaysian government established a standing committee to advise MOH regarding control of T&CM in Malaysia (Lee, 2011). Subsequently, T&CM practitioner bodies were formed in 1999, while the Herbal Medicine Research Centre under the purview of the Institute for Medical Research was established in the year 2000 (GlobinMed, 2021).

The National T&CM Policy was developed in 2001 to optimally integrate T&CM into the Malaysian healthcare system through the development of a comprehensive strategy, aimed at improving the health and quality of life of the Malaysian population (Hasneezah et al., 2016). The T&CM Division was founded in 2004 to manage and implement different T&CM initiatives, particularly those relating to practitioners, training, and policy, as well as to monitor T&CM integration into the national healthcare system (T&CM Division, 2006). Online registration for T&CM practitioners was launched in 2008, as well as the formation of the Inspectorate and Enforcement Section under the T&CM Division. Several T&CM units in MOH hospitals nationwide were established between 2007 to 2016 (GlobinMed, 2021).

Subsequently, the T&CM Act was gazetted on 10 March 2016 with implementation conducted in phases. Thereafter, two orders have been gazetted, namely, the T&CM (Recognised Practice Areas) Order 2017 [*P.U. (A) 223/2017*] and the T&CM (Designation of Practitioner Body) Order 2017 [*P.U. (A) 224/2017*]². In response to the challenge faced by the T&CM industry, the National T&CM Blueprint 2018 – 2027 (Health Care) was developed. In 2021, T&CM Regulations and a CPC for T&CM Practitioners were enforced. Meanwhile, the MOH's T&CM Division has been in charge of developing several practices and practitioner guidelines. Finally, the WHO has classified the T&CM Division as a “*WHO Collaborating Centre for Traditional, Complementary, and Integrative Medicine*” (Goh, 2021, p. 2314). This international recognition will further strengthen T&CM's position in Malaysian healthcare system.

² The decree of P.U. (A) 224/2017 was effective from 1 August 2017 to 31 July 2019. Subsequently, T&CM (Designation of Practitioner Body) Order 2020 [*P.U. (A) 74/2020*] was gazetted and deemed to have come into operation on 1 August 2017.

2.1.1 National Policy of T&CM

The expanding global demand for natural healthcare, as well as the widespread usage of T&CM in Malaysia, has called forth the government to take further steps in developing the T&CM service. This is consistent with the global revolution occurring in the healthcare landscape (MOH, 2001). Hence, the National Policy of T&CM was launched in 2001 and later revised in 2007. The aim is to support the effort to integrate T&CM into conventional medicine and introduce it to the mainstream of the national healthcare system incrementally where appropriate (MOH, 2007). According to the Policy, T&CM would be an integral component of Malaysia's healthcare system, which will coexist with conventional medicine and help to improve the health and quality of life of all Malaysians. T&CM governance in Malaysia is primarily concerned with practitioners and practices, education and training, products and research. Apart from education and training, the MOH is in charge of all three components (Goh, 2021).

Several strategies are proposed for each component in order to achieve their specific objectives. For the provision of T&CM practitioners, the government will control through T&CM practitioner bodies recognised by the T&CM Council, beginning with self-regulation based on mutually agreed-upon and acceptable standards and proceeding to statutory requirements. All potential T&CM practitioners are expected to go through a defined system of training and accreditation under education and training. Overall, the integration of recognised T&CM practices can only take place when the policy is well-comprehended and regulations to protect the welfare of the public are in place (MOH, 2007).

The T&CM Division began operations not long after the policy was introduced. Spa businesses had become popular and were mushrooming at that time, contributing significantly to economic development through health tourism. Realising the potential of the T&CM industry, the Division was leading the effort in drafting legislation to govern the industry (T&CM Division, 2006). In the early years after establishing the Division, aside from seminars, workshops, meetings and visits, T&CM 'health tourism' promotion roadshows and activities were organised by the Division to create awareness on the potential of T&CM benefits among MOH staff and T&CM practitioners (T&CM Division, 2006).

Later in 2006, the Malaysian Cabinet approved the MOH's plan to establish T&CM Units in three designated MOH hospitals to integrate selected T&CM practices

into the national healthcare system (T&CM Division, 2021i). Gradually, the number of MOH hospitals with integrated practice increased, and as of January 2020, 15 MOH hospitals throughout the states provide T&CM services, of which 12 of the hospitals are located in Peninsular Malaysia and the rest are in East Malaysia. Among the T&CM services available in selected MOH hospitals are listed in Appendix A. Additionally, the MOH announced a Traditional Postnatal Care (TPC) Transformation Plan in 2018, whereby the TPC services provided in MOH hospitals were shifted to primary care (T&CM Division, 2019). The wider community will gain more access to T&CM service as TPC are offered within the primary healthcare level. The transformation is in line with the WHO's strategic goal of maximising T&CM's contribution to achieving universal health coverage.

2.1.2 T&CM Act 2016

The implementation of the T&CM Act marks a significant milestone in the MOH's efforts to regulate the industry and ensure safe and high-quality T&CM services are available to the public. The T&CM Act 2016 is a piece of legislation "*to provide for the establishment of the Traditional and Complementary Medicine Council to regulate the traditional and complementary services in Malaysia and to provide for matters connected therewith*", as stipulated in its preamble. According to the T&CM Division (2021h), the enforcement of the Act is conducted in three phases (refer to Figure 2.2). Following the Act's enactment, many establishments transpired, including the formation of the T&CM Council, the establishment of the T&CM practitioner bodies, and the promulgation of seven recognised T&CM areas of practice. The designations were all appointed during the five years of Phase 1 implementation.

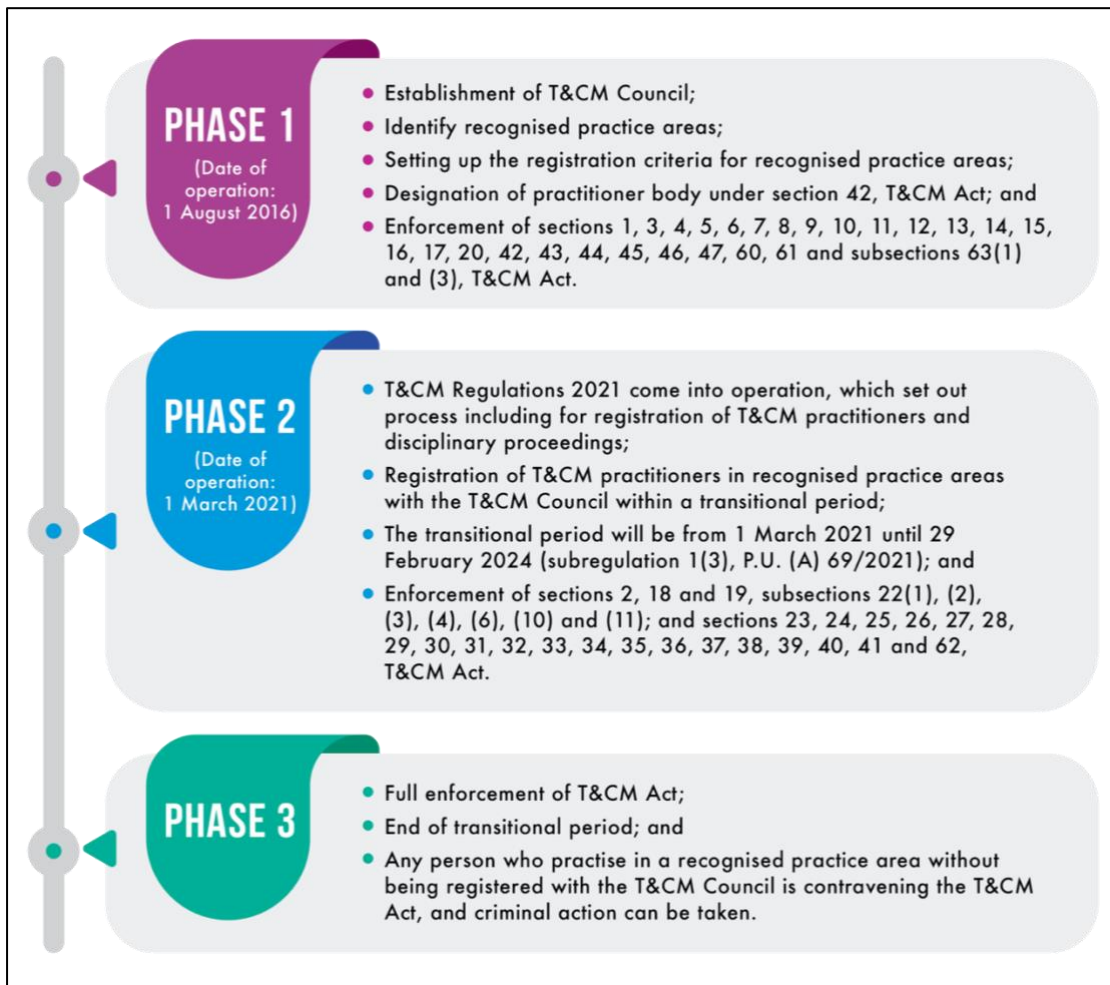


Figure 2.2 Phases of T&CM Act 2016 Enforcement

In Phase 2, which recently came into effect on March 2021, the statutory regulation requires T&CM practitioners to be registered to the T&CM Council within a ‘transitional period’. According to the T&CM Division (2021b, p. 1), for the purpose of practitioner registration, transitional period means “*a duration to allow practitioners under the grandfathering category, namely practitioners with no recognised qualification but is skilled and experienced in a particular recognised practice area, to register under the T&CM Council according to the requirements specified*”. The ‘grandfathering clause’ applies to all recognised practice areas, excluding osteopathy and chiropractic. It allows specific experienced practitioners who do not meet the minimum qualification to be exempted from the registration’s requirements (T&CM Division, 2021f). In return, they need to attend a ‘capacity building course’ at training centres approved by the T&CM Council (T&CM Division, 2021e).

The practitioners are encouraged to submit a voluntary registration to the Council within the three years of the transitional period. When the transitional period

expires (Phase 3), persons who practise in a recognised practice area without being registered with the T&CM Council commit an offence under section 21 of the T&CM Act. If convicted, they will be liable³ to a fine of not more than RM 30,000 or RM 50,000; or imprisonment of not more than two or three years; or both. All T&CM practitioners are generally required to apply for the Registered Practitioner Practising Certificate from the Council in order to legally practice in Malaysia. They are also expected to complete a set number of continuing professional development courses as a requirement to renew their practising certificate in the future. On the other hand, the T&CM Regulations 2021 [*P.U. (A) 69/2021*] establishes the mechanism for T&CM practitioner registration and disciplinary proceedings. The disciplinary procedure is similar to that outlined by the MMC. Now that a T&CM registry has been set up, T&CM practitioners can face statutory penalties and be disciplined if they engaged in any misconduct.

2.1.3 T&CM Blueprint

The National T&CM Blueprint 2018 – 2027 (Health Care) was developed in order to “*facilitate the regulation, integration and economic development of the T&CM industry so that it can contribute optimally to the national health care system, meet economic and socio-cultural goals, maximise health systems’ reach towards universal health coverage and enhance the total well-being of all Malaysians*” (MOH, 2017, p. iv). The direction and objectives of the blueprint are driven by the National Policy of T&CM and were adjusted to suit the rising healthcare requirements and to solve the concerns and challenges of the sector (MOH, 2017). The blueprint was a by-product of numerous engagements and discussions with relevant stakeholders, including from the industry. According to the blueprint, the national master plan was intended to guide T&CM implementation over a ten-year period, from 2018 to 2027. An interim review will be conducted after the fifth year of implementation “*to assess the status of implementation and performance, to ensure the relevance of the proposed strategic actions and to make suitable revisions to the action plans in accordance to current*

³ The liability varies depending on whether it is the first or subsequent offence.

recommendations and findings of studies” (MOH, 2017, p. 54).

2.2 Overview of T&CM Recognised Practice Areas

Following the rolling out of Phase 1 of the T&CM Act, seven recognised practice areas and six designated practitioner bodies of T&CM have been gazetted as listed in Figure 2.3 (refer overleaf). Six designated practitioner bodies are delegated under subsection 17(1) of the T&CM Act to perform and exercise T&CM Council’s functions. Each practitioner body oversees a particular recognised practice area (except for the ‘Federation of Complementary and Natural Medical Associations, Malaysia’ designated to watch over osteopathy and chiropractic services). Standardised practice guidelines were developed to ensure the practice of T&CM practitioners are in accordance with the MOH’s standards and T&CM’s CPC. Patients who want to obtain T&CM services at MOH facility can get a referral letter, as deemed appropriate by the doctors (T&CM Division, 2019). Further historical descriptions and definitions related to the recognised T&CM practices can be referred to in Appendix B.

It can be emphasised here that recognised traditional medical practices are limited to Malaysia’s three major ethnic groups: Malays, Chinese, and Indians. Hence, the proceeding question is why the other traditional ‘native’ medicine owed by the principal ethnic groups in Malaysian Borneo (such as the Ibans in Sarawak and the Kadazans in Sabah) are not part of the recognised T&CM practice areas? According to the Deputy Health Minister, the MOH has taken necessary approaches (such as on-going consultations, dialogues and various engagements with the relevant stakeholders) to ensure each traditional medicine by the indigenous groups are being considered in the T&CM regulatory framework (Parliament of Malaysia, 2017). Nevertheless, in deciding whether these indigenous medical practices, or other modalities of medical practices are recognised by the MOH, the ultimate decision will be determined by the T&CM Council (T&CM Division, 2015a). At present, practitioners of non-recognised practice areas are allowed to practise ethically while ensuring the intervention offered are safe and would not harm the patients (T&CM Division, 2021b).

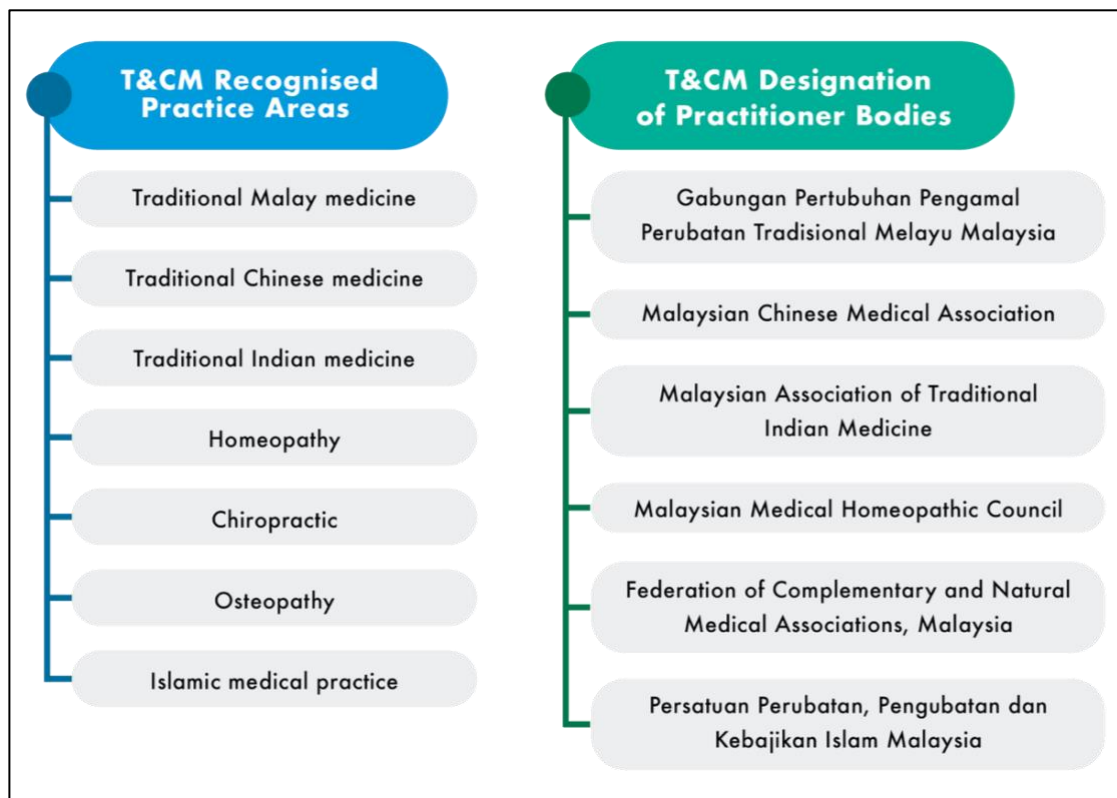


Figure 2.3 Recognised T&CM Practice Areas and Designated T&CM Practitioner Bodies

2.2.1 Traditional Malay Medicine

The MOH restricted the branch of recognised traditional Malay practice to the usage of Malay massage, Malay herbs, Malay cupping and postnatal care (T&CM Division, 2021a). Traditional Malay healers' practices such as *bomoh*, *dukun*, or *pawang* (an individual perceived as a wise person or village doctor who heals the sick using traditional healing methods) are not recognised by the MOH because they are not considered as individuals with formal training (Ikram & Abd Ghani, 2015). They are commonly regarded by society to have the esoteric knowledge obtained from prophetic dreams or assisting spirits (Haque, 2008). As previously mentioned, traditional postnatal care (TPC) is the only T&CM service offered at the primary healthcare level. TPC service is provided by the selected private T&CM practitioners at the client's home in order to improve maternal health and welfare during the confinement period using traditional care approaches (T&CM Division, 2019). The implementation of TPC across all states are conducted in phases starting in 2019.

2.2.2 Traditional Chinese Medicine

In Malaysia, the recognised branches of practice areas for traditional Chinese medicine include Chinese herbs, acupuncture, moxibustion, Chinese cupping and *tuina* (T&CM Division, 2021a). Since 2007, herbal medicine has been offered at T&CM Units in MOH hospitals with oncology service, as an adjunct treatment for cancer. All herbal products are required to be registered with the National Pharmaceutical Regulatory Agency (T&CM Division, 2018a). Overall, acupuncture service is accessible in almost all MOH hospitals with T&CM Units (refer to Appendix A) and is approved for post-stroke care, chronic pain management, and chemotherapy-induced nausea and vomiting (T&CM Division, 2017). Besides, discussion relating to the government's efforts to incorporate traditional Chinese medicine during the pandemic warrant separate discussion, which will be analysed in section 3.3 'Promising Therapeutic Effect of Traditional Herbal Medicine During COVID-19 Pandemic'.

2.2.3 Traditional Indian Medicine

Ayurveda, *siddha*, *unani*, and yoga, as well as naturopathy, are examples of recognised traditional Indian medicine in Malaysia (T&CM Division, 2021a). Types of Ayurvedic modalities that are offered in two T&CM Units in MOH hospitals are external *basti* therapy and *shirodhara* (T&CM Division, 2021c). *Shirodhara* and *basti* have been available in MOH facilities since 2011 as an adjunct to conventional medicinal treatment for specific disease indications. *Varmam* is a *siddha* medicine modality that is available in one of the T&CM Units of MOH hospital (T&CM Division, 2021c). Nevertheless, *shirodhara* and *external basti therapy* services are presently discontinued pending the Government of India's deputation of a new traditional Indian medicine therapist (T&CM Division, 2020a).

2.2.4 Homeopathy

Homeopathy refers to “*any pharmaceutical dosage form used in the homoeopathic therapeutic system in which diseases are treated by the use of small amount of such substances, which are capable of producing in healthy person symptoms similar to those of the disease being treated*” (Control of Drugs and Cosmetics

Regulations 1984 [*P.U.(A) 223/84*]). Homeopathy is used to treat minor ailments such as colds, migraines, ear infections, and sore throats (Ernst, 2009a). It is claimed that homeopathy able to treat chronic illnesses such as asthma, depression, autism, and arthritis (Mohd Ramli, Abd Rashid, Mohamad Hood, & Ariff Hisham, 2018). Currently, there are no MOH facilities providing homeopathic service.

2.2.5 Chiropractic and Osteopathy

Osteopathy and chiropractic are synonymously described as manipulative therapies (Vickers & Zollman, 1999). Although chiropractic is a recognised T&CM area of practice, its integration in MOH facilities is yet to be implemented. Nevertheless, T&CM Division (2012) has issued a chiropractic guideline intended for use in MOH hospitals' T&CM Units. A study by Wong, Tan, and Haneline (2020) discovered that about one-third of 186 respondents in Klang Valley used chiropractic, which is only available in private healthcare facilities. Osteopathy is not widely practised in Malaysia (Binisol, 2018). Furthermore, no data supporting such practice can be found in local literature or on the official government website.

2.2.6 Islamic Medical Practice

In terms of regulation of Islamic medical practice in Malaysia, following an agreement by the Department of Islamic Development Malaysia (JAKIM) and all of the states' Islamic religious departments, the MOH agreed to include Islamic medical practices in the T&CM Bill and managed to be tabled and debated in the Parliament (Parliament of Malaysia, 2012). The amendment to include the practice was proposed in response to concerns about the future of Islamic medicine and an increase in the use of black magic by *bomoh* to treat patients (Bernama, 2012). Currently, Islamic medical practice is not explicitly formed as a stand-alone practice provided by the T&CM Unit in MOH hospitals. However, the practice has been incorporated into the *Ibadah* Friendly Hospital initiative in MOH hospitals since its inception in 2016 (Ashaari, Bakar, & Jalil, 2020). Aside from receiving physical conventional medicine in the hospital, the psychological, mental or spiritual aspect will be addressed by the professionals, as needed, including teaching or reciting *ruqyah* to patients (Dahalan, Abd Rahman, Jusoh, Khan, & Awang, 2018; Serdang Hospital, n.d.). A teaching

hospital in Kuala Lumpur is providing such service, as complementary medicine when patients receive treatment in that particular hospital (TV Jakim, 2020).

2.3 Conclusion

The Malaysian government has recognised the importance of T&CM in contributing to the general well-being of the public by adopting various approaches to support T&CM initiatives. The establishment of the National Policy on T&CM in 2001 provided the MOH with a roadmap for introducing T&CM into mainstream conventional medicine and, where suitable, gradually integrating it into the national healthcare system. The goals include ensuring the quality and safety of T&CM practices and products to maximise potential in healthcare delivery. In order to appropriately provide for the multicultural society, the national policy implementation appears to leave the aspect of T&CM efficacy for the future agenda (Park, Yi, & Kwon, 2022).

One important T&CM milestone was the gazettelement of the T&CM Act in 2016 to regulate the T&CM practice and practitioners and ensure safe and high-quality T&CM services are available to the public. The Act's enforcement is carried out in phases. When the Act is fully implemented, persons who violate the Act commit an offence and are liable to a fine or imprisonment. The National T&CM Blueprint was devised to adapt to and meet the growing healthcare needs, as well as to address the sector's concerns and challenges. The blueprint intends to enhance the regulation and integration of T&CM, towards achieving the universal health coverage goal by maximising national healthcare delivery.

Currently, only seven recognised areas of T&CM practices are governed by the respective designated practitioner bodies. The recognised practice areas are traditional Malay medicine, traditional Chinese medicine, traditional Indian medicine, homeopathy, chiropractic, osteopathy and Islamic medical practice. It can be deduced that MOH is taking a cautious approach to ensure the allowed T&CM modalities offered in public hospitals are scientifically proven, beneficial and safe. Examining the evolution of T&CM regulatory framework in Malaysia gives the impression that only certain types of T&CM practices are permitted in this country. The T&CM Division plays a significant role, acting as a safety net to ensure that T&CM practices and products are safe, high-quality and compatible with conventional medicine.

With the rate at which T&CM development is progressing, the full integration

of T&CM into the healthcare system is a plausible outcome. Hence, doctors should be mindful of the possibility of coexistence with T&CM and be prepared to embrace the notion.

CHAPTER THREE

ETHICAL DILEMMAS AT THE INTERFACE OF CONVENTIONAL MEDICINE AND T&CM

Having discussed the development of T&CM regulatory framework in Malaysia, the next step is to analyse the ethical issues related to T&CM practices from a doctor's perspective. Doctors may find themselves in dilemmas from time to time, unsure how to make the most reasonable decision when presented with T&CM-related treatment decisions that are ethically contentious. These dilemmas could be the result of a myriad of perspectives, such as the patient's unique circumstances, and the doctor's knowledge, attitude and practice towards T&CM. Patient's concerns, values and preferences may collide with the doctor's moral approach in decision-making. The scope of this chapter is limited to doctors' perspectives, as opposed to T&CM practitioners or doctors practising T&CM when they are at the interface of conventional medicine and T&CM. Three key areas which raise ethical dilemmas related to T&CM are analysed such as follow: (i) conflict between respect for autonomy and paternalism; (ii) doctor-patient relationships; and (iii) promising therapeutic effect of traditional herbal medicine during COVID-19 pandemic.

3.1 Conflict Between Respect for Autonomy and Paternalism

Respect for patients' autonomous choices may include allowing competent patients' access to T&CM if that is what they choose. Doctors are morally and legally bound to protect their patients' autonomy and their rights to make an informed decision. However, because respect for autonomy does not take precedence over other principles, the choice to respect autonomy should be balanced against other ethical principles. Doctors dominating the patient's decision indirectly refers to medical paternalism, where the principles of beneficence and non-maleficence override respecting the patient's autonomy to choose. Among the highlighted ethical dilemmas that doctors may face revolving around issues related to respect for patient autonomy are:

- i) When a patient is adamant about using T&CM despite its lack of evidence;
- ii) When T&CM therapy is used for children by their parents; and

- iii) When a patient requests a discharge against medical advice to seek T&CM.

3.1.1 When a Patient is Adamant about Using T&CM Despite its Lack of Evidence

Prior to therapeutic interventions, doctors must engage with and seek consent from patients as necessitated by the law and the autonomy principle. It compels doctors to disclose to patients the likelihood of benefit and potential risks of the treatment in question. The guidance by the MMC (2016) requires that doctors must discuss their treatment and care with patients, as well as listen to and respect their patients' views concerning their health. The process of informed consent enables doctors to address patients' misconceptions while attempting to persuade them to accept the recommended treatments. However, if doctors disagree with the patient's viewpoint, tension may occur, which must be resolved amicably. This problem may arise when a patient is adamant about using T&CM despite the lack of evidence. The scarcity of high-quality data on the efficacy or safety of many T&CM therapies often force doctors to take a contradicting stance - not to allow the usage of requested T&CM alongside with conventional medicine (Hunter, Leach, Braun, & Bensoussan, 2017).

In the framework of shared decision-making, both the doctor and the patient play essential roles in clinical decisions. The doctor has medical knowledge and judgement, whereas patients know their values and preferences, such as what risks and side effects they are willing to endure (Lo, 2013). Those who believe from scientific evidence that T&CM does not truly benefit patients may argue that doctors should not administer, prescribe, or refer patients for T&CM therapies. The basis of such views resonates with the principle of non-maleficence, where doctors promote their patients' health and well-being by protecting them from potential harm. Many people believe that paternalistic policies are illiberal and that patients should be free to make their own decisions regardless of whether these decisions are likely to result in the best outcomes for them (Wilkinson, 2014).

A counter argument of paternalism would be that the concept of informed consent itself places a high value on respecting patient self-determination. Patient involvement in decision-making may have subtle positive impacts for patients, such as increased sense of control, self-efficacy, and adherence to treatment plans (Lo, 2013).

Since the objective of medical care is to improve patients' well-being, it can only be judged by respecting patients' goals and values. Doctors may focus on different aspects of patient outcome, for example, doctors aim to increase the patient's chances of survival, in contrast to patient's preference who is more concerned about the quality of life (McNeil, Weichselbaum, & Pauker, 1978). However, there is controversy over how far the doctrine of respect for autonomy should be extended and what it means for doctors in terms of providing care rather than deferring or withdrawing it (Wilkinson, 2014).

Following the discussion above, doctors can decide (i) whether to keep dissuading patients no matter what; (ii) continue to provide conventional medicine while monitoring for the T&CM usage; or (iii) in extreme cases the doctors may refuse to continue the care. The discussion on issues related to refusal of care warrants separate discussion, which will be highlighted under section 3.2.3 'Doctor's Withdrawal of Care due to a Fundamental Conflict'.

3.1.2 When T&CM Therapy is Used for Children by Their Parents

The bioethics literature (albeit usually in the context of conventional medicine), frequently discuss concerns about paediatric treatment decision-making especially with regards to who appropriate decision-makers are (Gilmour, Harrison, Cohen, et al., 2011). Informed consent may present difficulties in cases involving children, including when a parent requests T&CM therapy for a child who lacks competence. Children do not usually make treatment decisions for themselves, since they are regarded not to have the capacity to make decisions. They are considered incapable of balancing risks and benefits, comparing options, or comprehending the long-term ramifications of actions, and hence incapable of making informed decisions. Since children are deemed immature and vulnerable, they require an adult to make decisions on their behalf based on their best interests. Parents are presumed to be the best decision-makers for their children. Nevertheless, despite the children are not being autonomous, their potential to become one should be respected and as they attain maturity, their values may diverge from those of their parents (Lo, 2013).

Malaysian legislation recognises the responsibility of parents in making decisions for their children, including consenting to medical care. This is specified in section 3 of the Guardianship of Infants Act 1961 [*Act 351*], which makes the guardian

(e.g., parents) fully accountable for the child's care, maintenance, health, and education. Furthermore, the Law Reform (Marriage & Divorce) Act 1976 [*Act 164*] specifies that each parent is solely responsible for each of his or her children under the age of 18. Essentially, under Malaysian law, the proxy or decision-maker for children who are unable to give consent to medical treatment is their parents or legal guardian to make decisions in the child's best interest. Malaysia is yet to recognise the rights of mature minors via law, as proclaimed by the United Nations Convention on the Rights of the Child on consent to medical treatment.

According to literature, the use of T&CM therapies may be more widespread in children with chronic, recurring, or incurable illnesses (Cohen, Kemper, Stevens, Hashimoto, & Gilmour, 2005). Several studies have found potential benefits of T&CM usage in paediatric populations; for example, application of acupuncture in chronic and severe pain (Golianu, Yeh, & Brooks, 2014); massage therapy for various medical conditions (Çelebioğlu, Gürol, Yildirim, & Büyükavci, 2015; Davies, Campbell, Fullwood, Hulbert, & Marks, 2008; Gao, Jia, & Huang, 2018; O'Flaherty, van Dijk, Albertyn, Millar, & Rode, 2012); and homeopathy as a treatment for attention deficit hyperactivity disorder (Frei et al., 2005). Despite the reported positive outcome from T&CM studies above, the relative scarcity of paediatric research in the subject contributes to the growing ethical issues surrounding the use of T&CM in children (Gilmour, Harrison, Cohen, et al., 2011).

The situation may become more problematic if parents are adamant about their children receiving unproven treatment (Jackson, 1994). Ernst (1996) emphasises that it is immoral to recommend therapy to children if there is proof that the application of T&CM is going to be harmful. When it is unknown whether the therapy is harmful, the doctor can agree with the parents' request to utilise T&CM along with conventional medicine (Ernst, 1996). However, when T&CM is intended to be used as an alternative treatment on children, replacing it over the proven effective conventional medicine, more harm would occur that may trigger a public health concern (Wilkinson, 2014).

It has been suggested that a 2003 measles outbreak in Germany could be traced to a school that subscribed to T&CM ideas and discouraged parents from vaccinating their children (Ernst, 2011). The same trend happened in Malaysia in 2015, where parents opted for 'homeopathy vaccination', causing a significant increase in the number of cases of preventable infectious diseases in the area (DG of Health Malaysia, 2015). These public health considerations may present unique ethical issues, as

vulnerable individuals who do not opt to undertake T&CM, may be subjected to unwarranted harm.

Following the issues raised above, it is critical for doctors to make clinical decisions based on their professional judgement and in accordance with the best interest principle when treating children through their parents (who act as proxy decision-makers). Given the paucity of scientific evidence to support the beneficial use of T&CM in children, doctors must be cautious when advising parents on the potential dangers and harm imposed by T&CM, particularly in a condition of uncertainty.

3.1.3 When a Patient Request Discharge Against Medical Advice to Seek T&CM

Discharge against medical advice, or commonly known as discharge ‘at own risk’ (AOR) in the Malaysian setting, refers to a patient who decides to leave the hospital before his or her doctor recommends discharge (Alfandre, 2009). A patient who requests AOR discharge have longer average hospital stays (upon readmission) and poorer health outcomes (Berger, 2008; Saritemur, Denizbasi, Akoglu, Ozturk, & Dogan, 2014). This will substantially increase the usage of hospital resources and, as a result, will have an indirect impact on the delivery and quality of treatment to other patients (Ibrahim, Kwoh, & Krishnan, 2007).

One of the contributing factors influencing patient’s decisions for AOR in Malaysian healthcare setting is the cultural beliefs in seeking T&CM practitioners for alternative treatment (Zakaria et al., 2015). Though the majority of patients agreed to the prescribed conventional medicine, a small percentage of patients disagree with the proposed treatment due to strong belief in T&CM (Ismail, Mohamad, & Che’Man, 2016). According to Razali, Khan, and Hasanah (1996), over half of the 134 participating patients in their study attributed their psychological disorder to supernatural origins. The authors also reported that patients who believe in witchcraft and evil spirit possession had high rates of consultation with *bomoh*, particularly in schizophrenia, anxiety disorder and depression (Razali et al., 1996). Although *bomoh* is not a recognised practitioner in T&CM, the cultural norm within the local community view it as an acceptable practice (Ahmad, Ariffin, & Suliaman, 2014). Furthermore, the patient’s failure to respond to conventional medicine also has led the patient or family to seek the services of a traditional healer (Zakaria et al., 2015).

How should doctors strike a balance between respecting patients’ decisions

while also preventing harm to their patients? Should doctors continue to encourage, or perhaps coerce patients to follow standard conventional medicine? When doctors are aware that the request for AOR discharge is made by a competent patient, a reasonable patient would want their autonomous decision to be respected. Furthermore, respect for patient autonomy and the freedom to refuse medical treatment is regarded as one of the important elements of medical law. Lady Butler-Sloss confirmed this position in *Re B (Adult: Refusal of Medical Treatment)* (2002), in which she reiterated her statements in *Re MB (Medical Treatment)* (1997, p. 432) wherein she asserted that “*a mentally competent patient has an absolute right to refuse to consent to medical treatment for any reason, rational or irrational, or no reason at all, even if that decision may lead to his or her death*”.

In contrast, a reasonable doctor would want to ensure that the patient well-being is protected and potential harm is avoided. Generally, false claims of healing efficiency by certain T&CM practices can be harmful to patients and contravene the fundamental ethical requirement of all medical procedures. The risk of adverse effects increases if the patient is not encouraged to receive the proven effectiveness of conventional medicine. Another option is for the doctor to configure patients’ underlying concerns that may have contribute to the patients’ decision to seek alternative medicine following AOR discharge. There are chances that the concerns can be addressed without difficulty. For example, doctors may provide further consultation and assurance to patients who are hesitance to receive the standard of treatment in a hospital. Doctors have an ethical duty to respond to their patients’ concerns to the best of their ability and to the greatest extent possible.

Following the preceding discussion, doctors must appropriately weigh the risk and benefit of a patient’s request, while also keeping cultural norms and beliefs in mind. If the patient insists on AOR discharge in order to seek T&CM intervention, doctors may professionally assist the procedure and take precautionary measures to alert patient on ‘red flag’ symptoms associated with the patients’ illness. Patients are also welcome to return to the hospital, and if practicable, avoid abandoning the patient (refer to section 4.2.8 ‘Ending the Relationship’). All steps taken must be properly documented, to safeguard the doctors.

3.2 Issues with Doctor-Patient Relationship

One facet of the doctor-patient relationship is that doctors must maintain their professionalism by adhering to legal standards of medical practice. Nevertheless, to achieve the best patients' outcome, it aspires doctors to go above and beyond what is required in the standard of care, such as the provision of honesty, confidentiality, integrity, conflict of interest, and refusal of care. Individual doctors may have a distinct style or approach to carrying out the patient's treatment plan, depending on the doctors' professionalism or private conscience. Some doctors may value their patients' preferences by attaining therapeutic goals through various means. Other doctors may adhere to their ethical duty as a virtue agent, upholding the ideals of honesty and dedication to their patients. Other doctors, on the other hand, are unable to accommodate their patients' preferences or rights, as they need to strictly adhere to their moral conscience in order to avoid future moral repercussions. Hence, in this section, three issues revolving around the ethics of doctor-patient relationship will be discussed:

- i) Doctors recommending T&CM options with insufficient evidence;
- ii) Deceiving patient for the placebo effect; and
- iii) Doctor's withdrawal of care due to a fundamental conflict.

3.2.1 Doctors Recommending T&CM Options with Insufficient Evidence

Patients frequently agree with doctors' recommendations, especially when the goals of care are clear, one alternative is superior, the benefits are substantial, or the risks are minimal (Lo, 2013). This observation is supported by research conducted by Wong et al. (2021), whereby 70% of those surveyed would consult their doctor before utilising T&CM. Most respondents stated that they would follow their doctor's advice if their doctors discouraged them from using T&CM (Wong et al., 2021). Nevertheless, when it comes to interventions with insufficient evidence, a moral doctor would argue whether is it even ethical to recommend such intervention to the patient in the first place? Given that T&CM practices and products are widely available in the community, should it not be an issue to discuss T&CM during the consultation?

The MMC's CPC strictly prohibit doctors "*not [to] prescribe or promote traditional health supplements or traditional medications, or practise traditional*

treatment methods, unless such products or practices are evidence-based” (MMC, 2019a, p. 22). This statement implies that, regardless of how beneficial T&CM is, doctors cannot advocate for it on a professional level unless there is scientific evidence of its safety and efficacy. In addition, the opponents of T&CM may argue that recommending T&CM which are lacking or without evidence violate the beneficence and non-maleficence principles by inflicting more harm on the patient rather than preventing it. Doctors’ professionalism and value would be called into question, and society’s trust in the noble profession would be tarnished.

While for T&CM scholars, their first argument would be to defend the T&CM’s status on clinical trials, whereby the limited availability of high-quality T&CM evidence should not be taken as proof that T&CM is ineffective or harmful (Pirota, 2011). The evidence of T&CM also should not be compared to a ‘gold standard’ model of conventional medicine due to its value (Wilkinson, 2014). Weir (2020) contends that traditional or anecdotal evidence indicating the safety of T&CM over many generations may be adequate unless there is scientific evidence to the contrary. He further added that this form of evidence is considered sufficient in a variety of contexts, including conventional medicine (Weir, 2020). Furthermore, it is estimated that only as little as a quarter of conventional medicine is based on Level I evidence, the highest quality of evidence-based medicine (Abeni et al., 2001). Based on this argument, doctors can ethically initiate or incorporate the discussion of potential beneficial T&CM into the framework of informed consent (that includes a thorough history, examination, and diagnosis of the patient), followed by encouraging or discouraging its use, where appropriate (Pirota, 2011).

Doctors who do not address T&CM may affect the doctor-patient relationship in the long run, as potentially dangerous T&CM use may go undetected, and patients may seek information from less credible sources (Evans et al., 2007). Patients will endure further injury if doctors do not act in a beneficent manner by attempting to prevent them from unsafe courses of action.

Proponents of T&CM believe that it is part of doctors’ duty to discuss T&CM choices with their patients in order to responsibly fulfil their role as their trusted doctors (Evans et al., 2007). This further strengthens the doctor-patient relationship by enabling doctors to efficiently monitor for adverse events associated with the complementary use of T&CM. Patients would feel more at ease asking questions about T&CM, which would encourage patients to take responsibility for their own well-being. Nevertheless,

if doctors frequently allow such practice (acknowledging patient use of T&CM and continue usage monitoring), a slippery slope argument might set in. Patients will become more upfront, demanding and ask doctors to monitor their T&CM usage. It would be unethical for a doctor to keep accepting such patients' behaviour if the doctor believes that allowing the practice will lead to substantial harm.

Conversely, ethical T&CM prescription will be permitted only if doctors possess a sufficient understanding of the proposed intervention and act in the best interests of their patients (Pirota et al., 2010). This is to ensure doctors are able to provide relevant information on the possible risk of recommended therapy. Besides, it will be unethical if the recommended T&CM therapy causes delays in the treatment of serious illnesses where evidence-based conventional medicine are available (Pirota, 2011). Doctors would be violating the CPC if the T&CM therapy recommended to vulnerable patients is proven unsafe or ineffective (MMC, 2019a).

3.2.2 Deceiving Patient for the Placebo Effect

Despite limited available evidence to scientifically prove that T&CM is effective and efficacious, there have been ongoing debates on whether the good effects produced by the T&CM interventions are indeed a placebo effect (Rawlins, 2015; Shang et al., 2005; Wilkinson, 2014). The opponents of placebo may regard it as sham medications, bogus therapies and ineffective treatment, that have been long employed to appease patients (Rawlins, 2015). On the contrary, since the reason for good outcome produced by placebo remain unclear, proponents of placebos generally accept that the patients should be made unaware that the intended intervention is not efficacious (Shaw, 2009). This will indirectly require the doctors to deceive their patients regarding the nature of the treatment and its manner of action (Wilkinson, 2014). However, it is questionable whether it is ever ethical to deceive patients in order to achieve the good outcome of a placebo effect? To understand 'the art of deceiving', one may consider grasping the differences between 'lying', 'deception', 'misrepresentation' and 'non-disclosure' (refer to Appendix C).

According to Sokol (2007), lying and deception are considered *prima facie* wrong since they are deemed inappropriate and must be justified. However, some researchers in the placebo field have advocated that the medical profession should leverage the placebo effect and use it to the benefit of patients (Olson, Lifshitz, Raz, &

Veissière, 2021). If T&CM is considered as effective rather than efficacious, it may still be worthwhile for patients to benefit from the therapy. Furthermore, denying patients' access to T&CM may wrongfully deprive them of these apparent health advantages (Wilkinson, 2014). On the other hand, doctors are trusted to provide all relevant information during informed consent deliberation, so that patients can make an informed decision. As the expression goes, 'honesty is the best policy', when doctors are honest in discussing therapies options, patients would feel enlightened and better informed as to receive adequate information relevant to make an informed decision.

3.2.3 Doctor's Withdrawal of Care due to a Fundamental Conflict

As mentioned in the previous chapter, to ensure the safety and quality of T&CM practice by individuals and the community, the law in Malaysia only allows a limited area of T&CM practices. Despite the strict regulation of T&CM practices in Malaysia or other countries, some doctors strongly opposed the entire practice of T&CM and equate the T&CM practitioners as 'quack doctors' (Wahlberg, 2007). Their major argument is based on the grounds that such therapy has not been put to scientific scrutiny and that the patient is putting his or her health at risk by seeking T&CM (Adams et al., 2002). This stand is also closely related to the concept of conscientious objection in medicine, whereby doctors may refuse to participate in a medical intervention on religious or moral ground belief. Nevertheless, Abuduli, Isa, Eker, and Aljunid (2016) found that only a small number of healthcare professionals, including doctors, rebutted the usage of T&CM. Otherwise, most doctors agreed that T&CM has some therapeutic value for the health and well-being (Abuduli et al., 2016).

The perspective of doctors who have a judgemental view that T&CM would never offer benefit to patient, can indirectly cause harm to patient, especially when there is available good evidence supporting T&CM. Such a situation may exist when the doctors offer conventional medicine as the sole viable option to patients. In such cases, the patient is being denied a potentially beneficial T&CM therapy, and unable to actively participate in decision-making due to limited choice in treatment options. When doctors decide not to consider other viable options believing that T&CM can substantially cause harm to the patient, the doctors are invoking a paternalistic action. In this case, patient's right to potentially beneficial therapy will be diminished.

The doctor's dilemma in this situation is whether to continue providing

conventional medicine for the patient when it is obvious that the doctor's value is strong and valid. Furthermore, there is only little prospect that the patient is going to reconsider and accept the doctor's recommendation of not pursuing T&CM. Such refusals to continue providing medical care to the patient present ethical dilemmas, as the doctor's refusal may contradict with the patient's medical needs and his or her best interests. In fact, why can't a doctor choose the type of patients they want to treat, just as patients may choose their preferred doctors in delivering medical care? As a result of this issue, doctors are forced to choose one of the most drastic options: withdrawing from patient care. When the doctor in question is the patient's primary care provider for the patient, the issue of withdrawal from care becomes more complicated (Adams et al., 2002). The doctor's long-standing therapeutic connection with patients may be strained, leaving the patient in distress. Additional harm would result if the doctor 'abandons' the patient without taking any pragmatic measures for the patient's best interests.

3.3 Promising Therapeutic Effect of Traditional Herbal Medicine During COVID-19 Pandemic

It is pertinent to discuss the contemporary topic of T&CM during the COVID-19 pandemic due to its significance in the current health landscape. When the COVID-19 pandemic emerged in early 2020, people were desperate to find a cure or, at the very least, preventive measures to protect their health and well-being. Access to conventional medicine was limited as healthcare resources were diverted toward the pandemic, in response to the benevolent public health initiatives (Tan, 2021). The urgent need for treatment decisions along with limited data available makes it difficult to strike a balance between the common good and individual liberties, as well as the necessity to control its spreading against economic losses (Chaturvedi, Kumar, Tillu, Deshpande, & Patwardhan, 2020).

Numerous studies have been conducted worldwide focusing on the prospects of T&CM modalities in managing COVID-19, either as a cure or complementary medicine to be used with conventional medicine (Chaturvedi et al., 2020; Ganguly & Bakhshi, 2020; Li et al., 2021; Shankar et al., 2020; Vicidomini, Roviello, & Roviello, 2021; Wu, Dong, Chi, Yu, & Wang, 2021; Yang, 2020). Ng (2020) found that a disproportionately large number of T&CM-related COVID-19 studies were conducted on traditional Chinese or herbal medicine by scholars with Chinese affiliations. This discovery is not

surprising given that, prior to COVID-19, China used traditional Chinese medicine as a complementary therapy to treat and prevent viral outbreaks such as SARS-CoV in 2003 (WHO, 2004), and H1N1 (swine flu) in 2009 (Ge et al., 2010). In response to the COVID-19 pandemic, the National Health Commission & National Administration of Traditional Chinese Medicine (2020) issued a treatment protocol for managing COVID-19 patients, which includes the use of traditional Chinese medicine. From the protocol, it can be learned that herbal medication is prescribed for all types of clinical manifestation, ranging from mild to severe symptoms, as well as for patients in the recovery phase (National Health Commission & National Administration of Traditional Chinese Medicine, 2020).

The promising therapeutic effect shown by the traditional Chinese medicine in fighting against the SARS-CoV-2 virus, had prompted the Malaysian MOH to engage in discussions with medical experts from China (T&CM Division, 2020a). Nevertheless, its incorporation in COVID-19 management is subjected to Malaysian healthcare regulatory systems. Several ethical and legal hurdles need to be addressed before the practice can be implemented in Malaysia, such as the issue of justice in research allocation and the statutory prohibition on the particular type of ingredients used in herbal medicines (T&CM Division, 2020a). The majority of the herbal formulations recommended by China's COVID-19 treatment protocol contained forbidden substances, which is not permitted in traditional medicine products registered with the MOH's Drug Control Authority, such as ephedra⁴ (T&CM Division, 2020a).

Traditional Chinese herbal medicine has been shown to have potential therapeutic benefits, however there are considerable risks (such as toxic compounds) that make its present usage unfeasible until further research is undertaken. However, it is also pertinent to emphasise that the government must allow some freedom to practice selected T&CM that have shown significant benefit in improving overall health and well-being (Ng et al., 2021). This may further empower Malaysians to care for themselves while adhering to the measures outlined by the government. Overall, from

⁴ Ephedra (also known as *Ma huang*, Chinese ephedra, and ephedrine) is a herb used in China and India to treat colds, fevers, headaches, coughing, wheezing, and other diseases (NCCIH, 2020). Due to the reported adverse reactions (including hypertension, irregular heartbeat, nerve damage, injury, insomnia, tremor, and headaches) the herbal preparation is banned in Malaysia (National Pharmaceutical Control Bureau, 2000).

an ethical standpoint, the government is taking a utilitarian public health approach by not allowing the incorporation of herbal medicine in the COVID-19 treatment regimen upon weighing the risks and benefits highlighted.

3.4 Conclusion

This chapter has focused on analysing the ethical dilemmas that may arise following the interface of conventional medicine and T&CM. The key principles in biomedical ethics were used to analyse the highlighted issues, including respect for patient's autonomy, beneficence, and non-maleficence. Three main themes were addressed to examine the ethical issues concerning T&CM: (i) conflict between respect for autonomy and paternalism; (ii) doctor-patient relationships; and (iii) promising therapeutic effect of traditional herbal medicine during COVID-19 pandemic. With regards to the conflict of autonomy and paternalism, dilemmas may emerge in conditions such as when patients insist on using T&CM despite the lack of evidence; when T&CM therapy is used for the children by their parents, and when patients request AOR to seek T&CM.

Examination of ethical dilemmas surrounding the doctor-patient relationship revolved around doctors recommending T&CM options with insufficient evidence; deceiving patients for the placebo effect; and doctors' withdrawal of care due to the fundamental conflict. The last theme revolved around the issue of contemporary medicine, which discussed consideration on the usage of T&CM during the COVID-19 pandemic. The issue underlying promising therapeutic effect of traditional herbal medicine was analysed. Several elements covered in this chapter are emphasised in the following chapter. The aim was to systematically develop the most appropriate ethical practices when doctors are at the interface of conventional and T&CM in Malaysia.

CHAPTER FOUR

RECOMMENDATIONS ON ETHICAL PRACTICES FOR DOCTORS AT THE INTERFACE OF CONVENTIONAL MEDICINE AND T&CM IN MALAYSIA

Following the analysis of ethical dilemmas faced by doctors when at the crossroad of conventional medicine and T&CM in the previous chapter, this chapter will propose recommendations for doctors on ethical practices related to T&CM. The recommendations are significantly correlated with the existing MMC guidelines (such as the GMP and CPC), which will be highlighted when applicable. Overall, the recommendations are structured into three main sections based on the juncture at which the doctor interact with the patient. Beginning with ‘Pre-Care’ (preparation prior to patient interaction); followed by ‘During-Care’ (fostering a good doctor-patient relationship); and finally, ‘Post-Care’. The first part of recommendations in Pre-Care is intended for relevant stakeholders to undertake strategic interventions in knowledge dissemination. This is followed by focusing on enhancing doctors’ knowledge of T&CM. Next, for During-Care, the presented recommendations serve as an ethical framework for doctors that could be applied in general conventional medicine or when T&CM provision is involved. Lastly, the Post-Care section focused on reporting harmful or adverse events related to T&CM.

4.1 Pre-Care: Preparation Prior to Patient Interaction

4.1.1 Strategic Interventions by Key Stakeholders

4.1.1.1 Developing Educational Intervention

The high prevalence of T&CM use combined with doctors’ limited knowledge creates a scenario that requires intervention. Due to this limitation, there is a premise that T&CM should be included in future medical school curricula (Abuduli et al., 2016; Clement et al., 2005; Maha & Shaw, 2007). The argument is that educational intervention is required to bridge the gap between acceptance and information so that doctors are appropriately prepared to engage with their patients about T&CM (Clement

et al., 2005). The baseline knowledge is also important in reminding doctors to inquire about any T&CM usage and instil confidence in the proven T&CM practices. If the curriculum is implemented, it is envisaged that prospective doctors will be capable of providing more relevant and efficient care that is culturally sensitive. In fact, this goal has been envisioned during the establishment of T&CM policy, for proper incorporation of T&CM module in various educational levels and training programmes (MOH, 2007).

Several module opportunities for T&CM exposure can be introduced into the undergraduate elective curriculum in medical school. To begin, on the subject of 'Primary Care Medicine', students might be taken on fieldwork to designated T&CM providers to gain exposure to T&CM practices. Second, if the 'Interprofessional Collaboration in Healthcare' module is offered, the enrolled students will be exposed to numerous important professional groups in the healthcare sector, such as allied health professionals and T&CM practitioners. Third, whenever a career pathway programme for medical graduates is organised, the committee may invite individuals with a substantial background in T&CM research, or doctors with dual qualifications (doctors who practise T&CM) to participate in a sharing session. These individuals may contribute to promoting T&CM research, as they may have experience in evidence-based T&CM practice.

4.1.1.2 Supporting T&CM Research

It is pertinent to highlight the importance of establishing good evidence through research to fill in the scarcity of credible T&CM resources. It can be performed by generating and reporting local T&CM data, allocating research for funding, and enhancing research centres' activities in order to analyse the efficacy of potentially valuable local traditional products (Tahir, Thomas, & Li, 2015). On that note, relevant stakeholders (e.g. the Ministry of Finance, MOH or Ministry of Science, Technology and Innovation) should support the development of T&CM research by allocating reasonable budgets and providing necessary needs (facility, equipment, human resources and so on) for researchers. Local and international collaboration in research and continuing education is vital for knowledge and skill exchange, thereby equipping Malaysians with more health advantages from T&CM practices.

During the pandemic, many local scientists have attempted in studying the potential of T&CM interventions towards the improvement of well-being (Ng et al.,

2021; Rahim, Singh, Pardi, Zainuddin, & Salleh, 2021; Sun et al., 2021). By staying alert on current evidence related to T&CM, it will assist doctors in providing material knowledge to patients during consultations. As a result, the doctor can discern between beneficial and futile therapies and counsel the patient accordingly.

4.1.1.3 Providing Reliable T&CM Resources

Besides staying cognizant of relevant scientific evidence related to T&CM, doctors require assistance, particularly in obtaining reliable T&CM resources. Doctors may argue that they are not aware of the several published randomised controlled trials of T&CM. Furthermore, the public or patients (or even professionals) tend to seek information from social media, which may or may not be credible, especially in the current era of health consumerism. It is unsettling to consider the dangers of seeking guidance from unverified resources. Hence, as for a start, the relevant government agencies (such as the Health Education Division of MOH, the T&CM Division, or the MMC) should helm this project on setting up reliable T&CM resources. A ‘one-stop centre’ online database that consolidates all credible information regarding T&CM, including from selected well-known peer-reviewed journals can be established. The database may cater to both the general public and professionals, as well as any additional groups that may be required. As for the public, scientific knowledge about T&CM may need to be translated into a simplified version (e.g., infographic, brief information, poster and so on) for easy understanding. For example, the National Institute of Health in the US offers credible health information to the general public in a language that laypeople can understand⁵. Establishing this initiative will empower patients to make well-informed decisions before opting for T&CM use.

If the recommended strategy seems too ambitious, the alternative effort is to provide an up-to-date list on where the public or professionals can find reliable and verified resources (see Appendix D for example). One may consider the Medical Council of New Zealand’s effort, whereby the Council has produced a list of credible T&CM materials, including journal databases, books, and internet portals, included in

⁵ Public health information by the National Institutes of Health can be retrieved from <https://www.nlm.nih.gov/portals/public.html> [accessed 9 December 2021]

the guidebook for new fresh graduate doctors (Holt, 2021). Another option is for MOH hospitals with T&CM Units to take advantage of '*Hari Bersama Pelanggan*' (Day with Customers), to directly introduce their T&CM services to their staff and general public. Therefore, T&CM providers can directly interact with the public and offer knowledge relating to T&CM provision.

4.1.2 Enhancing Doctors Knowledge of T&CM

As stated in provision 2.2.2 of GMP, a doctor must keep up with new developments in medicine and his speciality to provide the highest quality of medical service (MMC, 2019b). In this sense, one of the most significant tasks of a doctor is to commit to life-long learning, a feature that distinguishes the medical profession as honourable. Knowledge is a valuable tool when a doctor is dealing with diverse clinical or non-clinical situations. Doctors would be more confident in using their skills and eliciting crucial information from their patients if they have the knowledge. The advantage here is that overall patient care will be optimised since expected harm will be prevented.

Due to lack of knowledge, doctors and healthcare professionals have been demonstrated in several studies as often unprepared to discuss or draw appropriate conclusions concerning T&CM (Bahall & Legall, 2017; Giannelli, Cuttini, Da Frè, & Buiatti, 2007). This might be the most likely reason why people are reluctant to disclose their T&CM usage, fearing that the doctors would dismiss them (refer to section 4.2.2 'Patient Evaluation and Duty to Inquire T&CM Use'). Doctors have an ethical duty to improve their knowledge and competencies in their field of practice, to ensure the practices are safe and correspond to a high quality of healthcare delivery. In terms of gaining T&CM knowledge, it is not necessary for doctors to learn until the 'advance level' to practise the T&CM modality. It is sufficient for doctors to be familiar with the T&CM products that are commonly used by the general public, as well as the prevalent T&CM practices in the particular community.

Additionally, continuous medical education such as journal clubs or self-study may offer significant opportunities for doctors to be exposed to new advances or reported hazards related to T&CM. Such formal programmes can be organised periodically by academic or medical institutions, T&CM Divisions, the MMC, or other health agencies. In general, doctors need to promote critical evaluations of T&CM in

order to hone their skills when managing their patients.

4.2 During-Care: Fostering Good Doctor-Patient Relationship

4.2.1 Cultivate Good Communication

An established doctor-patient relationship necessitates both parties to speak honestly in order to form and preserve the professional partnership and collaborative effort. Doctors who communicate effectively using basic and understandable language, while acknowledging their limitations in certain areas of knowledge, can further strengthen those relationships. Thus, deception or lying for the patient's greater good outcome must be avoided as much as possible. When the basic ethical foundation is adhered to, trust will grow and patients are more ready to disclose their personal circumstances, including discussing T&CM usage. As outlined in the GMP and CPC, doctors should also adhere to other traditional norms, such as confidentiality, proper documentation of patient health information, being polite and compassionate, refraining from making remarks that may irritate the patient, and maintaining professional boundaries and etiquette.

In accordance with the CPC, when doctors have a conflict of interest related to T&CM (such as a financial commitment or affiliation with T&CM practitioners, products, services, or facilities), the matter should be disclosed to patients. Furthermore, doctors should avoid leveraging patients' emotions or weaknesses for personal gain in respect to the nurtured relationship. Fostering a respectful doctor-patient relationship will ideally improve patient care, improve patient safety, promotes doctors' integrity and be able to build trust between the doctors, patients, medical institutions and professions, and society as a whole.

In the context of T&CM provision, patients would want to discuss something that appears to be inconsequential or trivial but is clearly vital for the patient. This is where the doctor's additional knowledge comes into play. Doctors who learn about T&CM services and familiarise themselves with local T&CM practitioners will have a greater advantage when dealing with patients who choose such T&CM therapy. Furthermore, understanding specific cultural beliefs with associated T&CM practice will allow doctors to be culturally sensitive while being mindful when communicating with patients about it.

For example, in Islamic medical practice, there are specific areas that involve spiritual cleansing by *bomoh* using *jinn* as intermediate, which is not recognised by the practitioner body governing Islamic medical practice. It is feared that the usage of such objects invoked spirits and other powers other than God (*syirik*), which will compromise Islam's strict monotheism (Yucel, 2007). To point out the case, a study conducted by Ahmad et al. (2014) revealed that out of 70 private Islamic-oriented healing centres in Peninsular Malaysia, nine of the premises used *jinn* as intermediaries to treat patients. Meanwhile, 10% of the practitioners did not receive formal Islamic medical practice education but claimed to receive prophetic dreams or revelation (*ilham*)⁶. Therefore, when a patient decides to use the service of the *bomoh*, a knowledgeable treating doctor would cautiously communicate the matter without belittling the patient. Subsequently, the doctor may assist the patient in finding a qualified and registered T&CM practitioner to supplement the conventional medicine that has been established on the patient.

4.2.2 Patient Evaluation and Duty to Inquiry T&CM Use

After establishing a doctor-patient relationship, a doctor must conduct a clinical assessment in accordance with standard medical practice. The process includes conducting a thorough history taking, performing a physical examination, and conducting any required tests, before making a diagnosis. Focusing on the history-taking part, doctors have an ethical duty to inquire about T&CM use by utilising keywords such as 'natural', 'herbal', 'traditional', or 'alternative' to prompt patient's T&CM disclosure. Next, doctors can carefully explain to patients how certain T&CM may affect the outcome of a conventional medical treatment plan. Some patients are more guarded about disclosing their T&CM usage for fear of being condemned. Therefore, it is critical for doctors to routinely and cautiously elicit information about T&CM information from their patients.

Despite the wide use of T&CM among the population, studies have shown that patients frequently decide to use T&CM without consulting a doctor (Saidi et al., 2021). Wong et al. (2021) highlighted that doctors rarely converse with patients in addressing

⁶ Though experiencing prophetic dreams or revelation does not necessarily violate *syari'ah* law, the authenticity of the healing knowledge is questionable (Ahmad et al., 2014).

patients' utilisation of T&CM. Doctors' lack of understanding and awareness about the implications following unsupervised T&CM use may alter the efficiency of conventional medicine, thereby leading to undesired complications. For example, the use of herbal products poses a significant risk to chronic haemodialysis patients due to their poor excretory renal function in comparison to the general population, resulting in the accumulation of toxins derived from herbal products (Zakaria, Noor, & Abdullah, 2021).

Diabetic patients who believe that T&CM (including herbal medicines and other T&CM treatments) may effectively control their diabetes could also be at risk of suffering further complications since polypharmacy is common among these patients (Wong et al., 2021). Hence, drug-herb interactions are more likely to occur and they are also linked to poor cardiometabolic control and drug compliance (Handley et al., 2017; Saidi et al., 2021). Even though not all herbal medicines are recognised to be risky and deemed safe or effective when taken appropriately, the potential hazard of unfavourable drug-herbal interactions can be alleviated when doctors routinely screen patients' usage.

4.2.3 Communicating Treatment Options

During the deliberation of the treatment plan, patients should receive not just information about the principal conventional medicine but also about other alternatives, including non-treatment and the consequence of each option. The scope of disclosable information could be expanded to include reasonable T&CM options. When there is reliable research evidence that a particular intervention may relieve symptoms (even if that intervention may be considered outside of the conventional medical setting), doctors have an ethical duty to inform the patient about T&CM options, especially following unsuccessful conventional intervention. For instance, the efficacy of acupuncture is well-documented in the areas of pain relief, nausea and vomiting, and the risks are deemed smaller than those of conventional medicine (Weir, 2003). Doctors who are not convinced that T&CM treatments are beneficial may be reluctant to discuss them with patients, which is reasonable when research data are either unavailable or inconclusive. Otherwise, not disclosing to patients the reasonable T&CM options may impede patients' decisions in receiving greater health benefit that may potentially affect their quality of life.

According to the bioethical principle of respect for autonomy and common law,

doctors are required to disclose sufficient information to patients for the latter to determine the appropriate course of treatment. This obligation is reflected in the consent guideline by the MMC (2016), which states that doctors should discuss with patients the proposed approach to treatment and the alternatives. A doctor's duty of care includes informing patients of their treatment alternatives so they can select the one that best meets their needs. Meanwhile, the beneficence and non-maleficence principles encourage doctors to take proactive steps to dissuade patients from treatments that are known to be dangerous or have been linked to clinically significant adverse outcomes. Nevertheless, in order to counsel and advise patients on related treatment modalities that include T&CM, doctors must equip themselves with relevant knowledge, or not, it will be considered as unethical conduct.

In other words, it is important for doctors to consider the use of T&CM for their patients by promoting evidence-based T&CM. When there is credible evidence of possible therapeutic benefit, the legal and ethical need to acquire informed consent to treatment necessitates disclosure and discussion of relevant therapies. These aspects are discussed in the next section.

4.2.4 Encouraging Patient to Make an Informed Decision

Acknowledging patients' rights to make informed decisions means enabling individuals to make autonomous decisions in accordance with their values and preferences. The decision may include whether the patient decides to pursue or refuse treatment of conventional medicine and/or T&CM. To ensure a patient can make an informed decision, reasonable information must be discussed with the patient, including disclosing the risks and benefits of each treatment option (as part of informed consent deliberation). In a shared decision-making approach, doctors actively express their recommendations for what they believe is best for the patient. Here, the doctors play their role by helping competent patients weigh the risks and benefits and facilitating patients to come to shared decision-making on what is in their best interests.

If patients express an interest in T&CM, doctors should respond professionally regardless of their T&CM viewpoints. Notably, a patient's autonomous decision can however be overruled if significant and unjustifiable harm to the patient is expected. When a doctor and a patient disagree on what is best for the patient, further discussions are encouraged until a point of agreement is reached. Any disagreement or hesitation on

doctors' recommendations should be explored and addressed professionally. For doctors who are not well versed in T&CM modalities, they may obtain the necessary information or refer to a colleague who is knowledgeable in the area.

When doctors are considering integrating T&CM into the patient's care, they must apply risks and benefits ratio analysis to guide them in making an ethical decision. By weighing the risks and benefits of T&CM intervention, doctors may develop a treatment plan that is clinically sound, ethically appropriate, and tailored to the patient's contextual features. If the proposed T&CM intervention produces greater benefits to the patients and minimal potential harms, the utility principle can be applied, whereby the T&CM usage is considered ethically appropriate for that particular patient. Nevertheless, the decision to recommend; allow with caution and monitor; or avoid and discouraging T&CM complimentary usage, will also depend on the appraised scientific evidence (Cohen, 2008).

4.2.5 Getting Help or Second Opinion

An ethical decision-making framework may not always be able to assist doctors in dealing with T&CM-related issues. This is due to the complexities of the problems presented and the doctors' lack of knowledge and understanding of the subject. In cases of medical uncertainty such as severely ill patients, particularly children, the best course of action is unclear. Therefore, it is advisable to consult the case with a qualified specialist in the respective medical field who is more experienced in managing such cases. The service of local ethics committees or bioethicists should be utilised whenever feasible, to assist doctors in making a decision, and to ensure a different point of view is considered. It will also help in relieving moral distress experienced by the treating doctors. As a result, although a course of action might clash with the patient or surrogate decision-makers stands, a decision made from a consensus of medical professionals involved can be ethically justified. When the medical consensus agrees that using T&CM with insufficient evidence in conditions of medical uncertainty has higher benefits for the patient, the potential legal liability following an adverse event of T&CM usage can be significantly minimised since the standard of care of a professional is fully observed.

4.2.6 Monitoring Patient Use of T&CM

If a patient is unable to accomplish the anticipated recovery while using conventional medicine, doctors must investigate potential causes thoroughly and respectfully. If it is discovered that the unsuccessful recovery was caused by underlying conventional medicine-T&CM interactions, the complication must be disclosed to patients so that they understand the repercussion of their action. Nonetheless, it is critical not to patronise the patient and to maintain tact throughout the therapeutic relationship. Doctors must take necessary steps to re-establish patients' confidence and adjust their practices to accommodate for the growing prevalence of various usage of T&CM modalities.

When a doctor refers a patient to a registered T&CM practitioner (applicable to doctors and T&CM practitioners affiliated with MOH), the T&CM practitioner must communicate⁷ back to the doctor by filling out an assessment form only upon completing the T&CM service regime. This standard is in place to allow doctors to get input from T&CM practitioners, improve mutual understanding amongst health providers, and facilitate continuity of treatment. Nevertheless, the impact is questionable since the scope of service is only limited to the government setting and the predominance of T&CM providers in the private sector. The strategy to allow two-way communications sounds promising, thus, need to be expanded throughout the country. Through this approach, the patient's quality of treatment will be improved as a more holistic approach is undertaken. This also supports the coordinated and unfragmented care of concurrent conventional medicine and T&CM services.

Another aspect that needs consideration is whether the doctor has an ethical duty to monitor the patient's progress of T&CM usage, particularly when it involves nutritional consumption (this is included as T&CM products as classified by the National Pharmaceutical Regulatory Agency (2022)). One may argue that it will be an unnecessary burden for the doctor to monitor the status and progress of such patients.

⁷ Refer to guideline 'Two-Way Communication Mechanism Between T&CM Practitioners and Registered Medical Practitioners (RMPs) in Ministry of Health (MOH) Hospitals' (Traditional and Complementary Medicine Division, 2020b). The procedure is to be followed by T&CM practitioners in T&CM Unit of MOH, in order to improve patient care and allow integration of T&CM in MOH hospitals.

However, if the doctor had already acknowledged the patient's use of certain T&CM products, the doctor is obligated to review the patient's progress. In the case of adverse side effects, new symptoms, and no progress or improvement, the doctor must re-evaluate the patient and determine whether more tests are required or discontinue the T&CM products. In this situation, doctors have the utmost duty of non-maleficence in managing the patient's care.

4.2.7 Consider Applicable Legal Rules

When assessing, treating and monitoring patients, doctors have to routinely elicit information from patients of T&CM usage. This duty will evolve and warrant the doctors to warn about material risks associated with T&CM. In Malaysia, no instances involving legal liability for drug-T&CM interactions have been decided. However, local judicial rulings have a clear tendency to broaden doctors' disclosure requirements in general (Matta, 2000). Given the popularity of T&CM use and the possibility that some may interfere with the patient's treatment plan, a reasonable patient would wish to know this information (MMC, 2016). In addition, doctors' failure to inquire about the use of T&CM that may affect the success of conventional medicine, may violate the standard of care to exercise reasonable care in treating the patient and the responsibility to get informed consent (MMC, 2019a).

Currently, there is no local authority that questions doctors' responsibilities to explore treatment options other than those recommended by conventional medicine. In other common law jurisdictions, the bounds of the responsibilities have not been adequately defined in case law (*An NHS Trust v SR (Radiotherapy and Chemotherapy)*, 2013; *Pozdrik (Next friend of) v. Wilson*, 2002). Nevertheless, the complementary therapies must be considered therapeutically beneficial at the very least. The level of disclosure is dictated by the reason for the disclosure, which is to empower patients to make informed decisions. Even in standard care, doctors may disagree on what treatments are suitable. When there is a genuine difference of opinion within the medical community and the treating doctor does not support the alternative, the patient must be informed and why the doctor thinks it is inadvisable.

Other aspects of legal consideration include the provision of medical confidentiality. Doctors are bound to keep patients' confidentiality to maintain trust in providing care. Nevertheless, according to the confidentiality guideline by the MMC

(2011), there are several situations whereby disclosure of patient's confidential information is permissible, such as (i) when patient consented; (ii) when required by law (as stipulated in relevant statutes or required for legal proceeding); (iii) on the basis of patient's interest (e.g. patient is the victim of abuse); and (iv) when the disclosure is in the public interest (e.g. to control an outbreak). The benefit of disclosing confidential information must outweigh the harm imposed. The provision of allowing to disclose information on the patient's interest is linked with the duty to report harmful or adverse events (see section 4.3: Post-Care 'Reporting Harmful or Adverse Event'). Another aspect is the issue of conflict of interest, such as fee-splitting or any sort of kickback agreement that is not permitted as an inducement to refer or receive a patient from another practitioner or facilities (MMC, 2019a).

4.2.8 Ending the Relationship

Doctors may decline to treat patients for a variety of reasons, including safety concerns, moral or religious objections, and a dysfunctional or confrontational doctor-patient relationship (Lo, 2013). Some T&CM modalities involve a spiritual component that is directly related to a patient's belief system. It will be difficult for doctors to give ethical and clinically sound advice that respects and accepts the patient's values despite the little evidence to support the treatment efficacy. Doctors' moral or religious convictions are not expected to be compromised by the ethical ideal of delivering treatment, regardless of the patient's characteristics. If common ground cannot be reached in such situations, a long-standing doctor-patient relationship will be strained or entirely dissolved.

Choosing to withdraw from a patient's care due to the fundamental conflict is a decision that requires extensive self-examination and consultation with trusted colleagues, and it should never be made lightly (Quill & Cassel, 1995). Furthermore, it is morally inappropriate for doctors to decide to abandon their patients with whom they have established a doctor-patient relationship. The obligation of non-abandonment emphasises the doctor-patient relationship that has been fostered through time. Caring for patients and working with them to collaboratively resolve difficulties during their therapeutic relationship is an ethical prerequisite of non-abandonment. The doctor must respond to the patient's clinical conditions and needs with an open mind, but not at the expense of his or her own principles and views.

When such conflicts arise, both the doctor and the patient must look for common ground. Doctors, for example, must try to understand the patient's point of view and agree on how to move on. Because withdrawal of care is an extreme approach, it should be exercised only when all other options have been exhausted. If the doctor chooses to withdraw from care, the ethical requirement of non-abandonment necessitates that the patient is referred to a doctor who can continue to observe the patient. When there is no evidence for or against a certain T&CM therapy, doctors may choose to tolerate and monitor the usage or overtly discourage its usage.

4.3 Post-Care: Reporting Harmful or Adverse Event

All health interventions come with their own risk that must be weighed against their intended benefits. The concern is more heightened in T&CM as limited evidence are available to support its safety usage. Furthermore, traditional-herbal medicinal items that have been tampered with, such as common cold medicines, weight-loss products, and women's health products (these are included as T&CM products as classified by the NPRA (2022)), are widely sold and contain dangerous components with associated adverse outcomes (Ariffin, Wahab, Hassan, & Abd Wahab, 2021). Doctors have an ethical duty to report⁸ adverse events, regardless of types of health interventions, whether conventional medicine or T&CM. The burden to report the adverse event is more significant when it involves intervention-related research trials.

Unforeseeable incidents or adverse events are likely to occur when no reasonable precautions are taken during patient care, whether using conventional medicine, T&CM, or a combination of the two. Interactions between conventional medicine and T&CM that produce an adverse outcome or patients who suffer adverse reactions after using T&CM products are quite common (Chu, 2018). According to an

⁸ In the event of an adverse reaction to a T&CM product, the incident can be reported to the National Pharmaceutical Regulatory Agency (<http://www.npra.gov.my>). Other adverse events (that fall within the criteria) which occur within MOH facilities must be reported to the Patient Safety Council of Malaysia (<https://patientsafety.moh.gov.my/>). For adverse events in private healthcare facilities, the person in charge of the facility shall report it to the DG of Health via the Secretariat, which is formed under the provisions of the Private Healthcare Facilities and Services Act 1998 [Act 586] (<https://medicalprac.moh.gov.my/>).

18-year review of Malaysia's centralised reporting database, T&CM products are in fact the second most prevalent drug that causes liver problems after an antituberculosis drug (Lee et al., 2020). Therefore, the attending doctor, responsible personnel, or the patients themselves should remain aware, report and respond to the adverse event to prevent the recurrence. Participating in quality reporting will assist regulatory authorities, such as the NPRA, in enhancing pharmacovigilance activities. If the drug contains a hazardous substance, a public warning on the drug's safety will be issued, or if serious, the NPRA could deregister the product (DG of Health Malaysia, 2019, 2021).

Aside from the circumstances described above, reporting a harmful incident could extend to reporting a 'victim'. In conventional medicine, doctors have an ethical and legal duty to lodge a report on victims (such as child abused, abandoned child, domestic violence and so on). In the context of T&CM, if it is discovered that the parents have been exposing the child to T&CM intervention that is deemed harmful, doctors are obligated to report⁹ the child for welfare protection. For instance, if it is known that the parents have abandoned effective conventional medicine or that providing T&CM will delay imminently necessary treatment from conventional medicine. The report can be filled when doctors have a reasonable ground that the child is in grave jeopardy of suffering harm.

4.4 Conclusion

The proposed recommendations in this chapter were based on a synthesis developed following a comprehensive literature review. It was intended for doctors when at the interface of conventional medicine and T&CM in Malaysia. In fact, there are relatively very few available guidelines for doctors on the topic discussed (College of Physicians & Surgeons of Nova Scotia, 2020; College of Physicians and Surgeons of Ontario, 2021; Medical Council of New Zealand, 2017). Otherwise, none of the sources reviewed have presented the same ethical framework as outlined in this chapter.

This chapter is unable to address every aspect of ethical practices in relation to

⁹ According to section 27(1) of the Malaysian Child Act 2001 [*Act 611*], if doctors believe on reasonable grounds that a child he is examining is physically or emotionally injured as a result of being ill-treated, neglected, abandoned or exposed, or is sexually abused, he shall immediately inform to a Social Welfare Officer.

T&CM due to the limited scope of this study. Nevertheless, this chapter has tried to provide recommendations for doctors to conduct ethical practices when at the interface of conventional medicine and T&CM. The basis of recommendations were in support of preserving medical plurality, whereby the distinct values of both conventional medicine and T&CM are honoured. The recommendations primarily focus on balancing the principles of respect for patient’s autonomy, beneficence and non-maleficence. The recommended ethical practices are summarised in Figure 4.1.

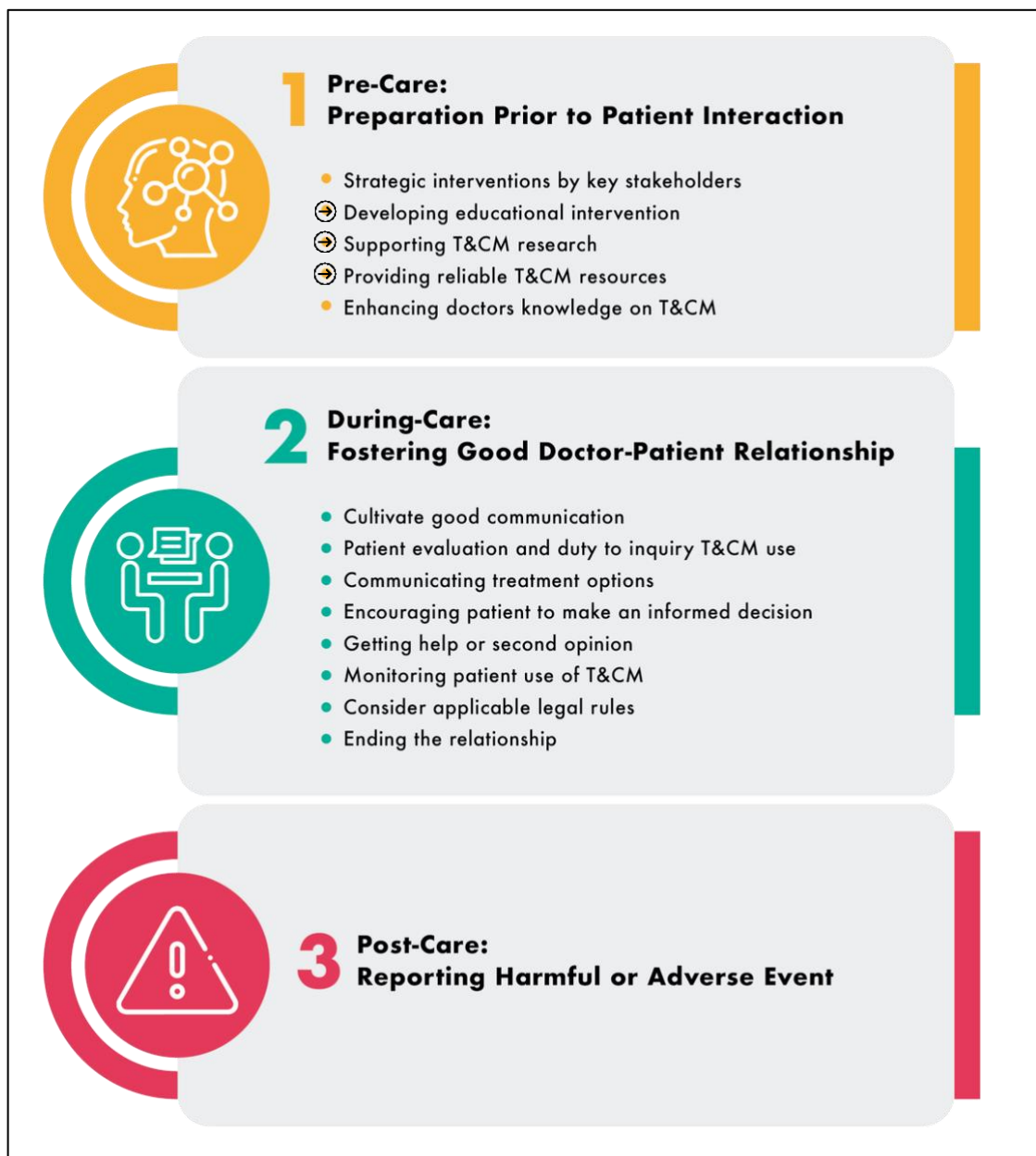


Figure 4.1 Recommended Ethical Practices for Doctors at the Interface of Conventional Medicine and T&CM

CHAPTER FIVE

CONCLUSION

T&CM has the potential to make a significant contribution towards reaching one of the WHO's goals: universal health coverage. The goal is to ensure that all individuals have access to high-quality preventive, curative, and rehabilitative and affordable health services mainly through the provision of primary healthcare systems. Malaysia is one of the few countries worldwide that regulates the various T&CM practices and practitioners. It is estimated that over one-third of the Malaysian population seek T&CM, according to the 2015 National Health Morbidity Survey. Recognising the importance of T&CM in promoting public health, the MOH launched a T&CM policy in 2001 to integrate T&CM into mainstream conventional medicine and, if feasible, gradually incorporating it into the national healthcare system.

In Chapter Two, the current development of T&CM regulatory framework in Malaysia were further examined. The T&CM Act went into effect in 2016, with phased implementation to allow for adequate time transitions before its full enforcement. When T&CM Act is fully enforced, persons who violate the Act can face criminal actions, depending on the type of offences. The National T&CM Blueprint was devised to adapt and fulfil the expanding healthcare demands, as well as to address the sector's problems and challenges. Currently, only seven T&CM practices are recognised (traditional Malay medicine, traditional Chinese medicine, traditional Indian medicine, homeopathy, chiropractic, osteopathy and Islamic medical practice) which correspond to the six designated practitioner bodies. T&CM frameworks, including policies, statutes, and guidelines are necessary for ensuring its usage is safe and effective for improving the population's health and well-being.

In response to the positive development of T&CM, doctors practising conventional medicine should be informed of the available T&CM services for patients to receive overall high quality, safe, holistic, and culturally relevant care. Therefore, doctors are expected to deliver their services while accommodating the complementary usage of T&CM. However, to date, there is no guideline for doctors on how to ethically practise especially when conflict arises following the interface of conventional medicine and T&CM. Addressing this gap, this study have examined the current development of T&CM regulatory framework in Malaysia as presented in Chapter Two.

Secondly, the ethical dilemmas faced by doctors arising from the interface of conventional medicine and T&CM have been analysed in Chapter Three. Finally, by responding to the ethical issues discussed, recommendations for ethical practices to justify doctors' decisions have been proposed in Chapter Four.

In Chapter Three, three main themes of ethical issues concerning T&CM have been analysed: (i) conflict between respect for autonomy and paternalism; (ii) doctor-patient relationships; and (iii) promising therapeutic effect of traditional herbal medicine during COVID-19 pandemic. The first theme covered dilemmas that may emerge in conditions such as when patients insist on using T&CM despite the lack of evidence; when T&CM therapy is used for the children by their parents; and when patient request AOR to seek T&CM. The second theme analysed ethical dilemmas revolved around doctors recommending T&CM options with insufficient evidence; deceiving patients for the placebo effect; and doctors' withdrawal of care due to the fundamental conflict. For the last theme, it focused on the promising therapeutic effects of traditional herbal medicine during the pandemic, but the implementation likely incompatible with the domestic legislation.

Several elements covered in Chapter Three were highlighted in Chapter Four, to systematically develop the most appropriate ethical practices when doctors are at the interface of conventional medicine and T&CM in Malaysia. In Chapter Four, this study proposed three main components of the most appropriate ethical practices. Beginning with 'Pre-Care' (preparation before patient interaction); followed by 'During-Care' (fostering a good doctor-patient relationship); and finally, 'Post-Care' (reporting harmful or adverse events related to T&CM).

The recommendations in Pre-Care were intended for relevant stakeholders to make strategic interventions in knowledge dissemination. Then, it focused on enhancing doctors' knowledge of T&CM. Next, for During-Care, the presented recommendations serve as an ethical framework for doctors that can be applied in general conventional medicine or when T&CM provision is involved. There were eight recommendations that can act as pillars for the ethical framework in decision-making. The During-Care covered (i) cultivating good communication; (ii) patient evaluation and duty to inquiry T&CM use; (iii) communicating treatment options; (iv) encouraging patient to make an informed decision; (v) getting help or second opinion; (vi) monitoring patient use of T&CM; (vii) considering applicable legal rules, and (viii) ending the relationship. Lastly, under the section of Post-Care, there is an ethical or legal duty that doctors must

report harmful or adverse events under T&CM usage.

The recommended ethical practices would be a stepping stone in formulating proper guidelines by the responsible professional body, which is the MMC. The guidance is important to assist doctors in making ethically justified decisions when conflict arise following the interface of conventional medicine and T&CM. Overall, it is morally right for doctors to equip themselves with the necessary ethical knowledge to ensure patients are safeguarded from harm while delivering the highest standard of medical care. This is commensurate with the development of T&CM regulation in Malaysia, whereby with the rate at which T&CM development is progressing, the full integration of T&CM into the healthcare system is a plausible outcome. Hence, doctors should be mindful of the possibility of coexistence with T&CM and be prepared to embrace the notion. In order to address the limitation of this study, future qualitative studies are required in ascertaining the genuine ethical dilemmas faced by Malaysian doctors who are relevant to the topic. When appropriate, the study may use observation, in-depth interviews, and/or focus group discussions as data collecting methods.

Word Count: 18,486

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APPENDICES

APPENDIX A

T&CM Services Offered at MOH Hospitals

No	MOH Hospital	Year Established	T&CM Services Offered
1	Hospital Kepala Batas, Pulau Pinang	2007	<ul style="list-style-type: none"> ▪ Acupuncture ▪ Traditional massage ▪ Herbal therapy as adjunct treatment for cancer patient
2	Hospital Putrajaya, Wilayah Persekutuan Putrajaya	2008	<ul style="list-style-type: none"> ▪ Acupuncture ▪ Traditional massage
3	Hospital Sultan Ismail, Johor	2008	<ul style="list-style-type: none"> ▪ Acupuncture ▪ Traditional massage ▪ Herbal therapy as adjunct treatment for cancer patient
4	Hospital Sultanah Nur Zahirah, Terengganu	2009	<ul style="list-style-type: none"> ▪ Acupuncture ▪ Traditional massage
5	Hospital Duchness of Kent, Sabah	2009	<ul style="list-style-type: none"> ▪ Acupuncture ▪ Traditional massage
6	Hospital Sultanah Bahiyah, Kedah	2010	<ul style="list-style-type: none"> ▪ Acupuncture ▪ Traditional massage
7	Hospital Port Dickson, Negeri Sembilan	2010	<ul style="list-style-type: none"> ▪ Acupuncture ▪ Traditional massage ▪ <i>Shirodhara</i> ▪ External <i>basti</i> therapy
8	Hospital Umum Sarawak, Sarawak	2010	<ul style="list-style-type: none"> ▪ Acupuncture ▪ Traditional massage
9	Hospital Sultanah Hajjah Kalsom, Pahang	2011	<ul style="list-style-type: none"> ▪ Acupuncture ▪ Traditional massage
10	Hospital Raja Perempuan Zainab II, Kelantan	2011	<ul style="list-style-type: none"> ▪ Acupuncture ▪ Traditional massage
11	Hospital Rehabilitasi Cheras, Wilayah Persekutuan Kuala Lumpur	2012	<ul style="list-style-type: none"> ▪ Acupuncture ▪ Traditional massage ▪ <i>Shirodhara</i> ▪ External <i>basti</i> therapy
12	Hospital Wanita dan Kanak-Kanak Sabah, Sabah	2013	<ul style="list-style-type: none"> ▪ Acupuncture

No	MOH Hospital	Year Established	T&CM Services Offered
			<ul style="list-style-type: none"> ▪ Traditional massage ▪ Herbal therapy as adjunct treatment for cancer patient
13	Institut Kanser Negara, Wilayah Persekutuan Putrajaya	2013	<ul style="list-style-type: none"> ▪ Acupuncture ▪ Herbal therapy as adjunct treatment for cancer patient
14	Hospital Jasin, Melaka	2014	<ul style="list-style-type: none"> ▪ Acupuncture ▪ Traditional massage
15	Hospital Sungai Buloh	2017	<ul style="list-style-type: none"> ▪ <i>Varmam</i> therapy

Source: (T&CM Division, 2020a, p. 18)

APPENDIX B 1

Description of T&CM Services: Traditional Malay Medicine

T&CM Service	Description
Traditional Malay medicine	“A cultural system based on beliefs, knowledge and practices related to well-being, ill-health and indisposition” (T&CM Division, 2018b, p. 6).
Malay massage (<i>urut Melayu</i>)	A type of massage therapy typically enhances relaxation and reduces stress, commonly use together with massage oils (Anuar, Fadzil, Ahmad, & Abd Ghani, 2012).
Malay herbs	The use of herbs among the Malay community includes various uses ranging from ingredients in cooking to daily medicine using spices (Hamid & Fauzi, 2012).
Malay cupping (<i>bekam</i>)	A traditional practice that involves placing a cup on nicked skin to create a low-pressure air chamber (creating suction) after deflating the cup, with the goal of removing toxins and stagnation (T&CM Division, 2013).

APPENDIX B 2

Description of T&CM Services: Traditional Chinese Medicine

T&CM Service	Description
Traditional Chinese medicine	Traditional Chinese medicine was founded on a cultural vision of the universe in which the elemental forces yin and yang and the Five Elements are in harmonious balance (Chen, 1981). The doctrine of yin and yang, are manifested naturally as two primary complementary energies. Health is regarded to be the outcome of an optimal yin and yang balance in the body, an imbalance of which can lead to a range of ailments (Keji & Hao, 2003). While the Five Elements refer to the primal natural energies – wood, fire, earth, metal and water that corresponds to the body’s functional systems – liver, heart, spleen, lung and kidney (known as organ networks). By controlling and preserving qi (vital energy), blood and body fluid, these networks regulate certain tissues, mental functions, and physical activities (Keji & Hao, 2003).
Chinese herbal medicine	<i>“Herbs, herbal materials, herbal preparations and finished herbal products that contain, as active ingredients, parts of plants, other plant materials or combinations thereof. In some countries, herbal medicines may contain, by tradition, natural organic or inorganic active ingredients that are not of plant origin (e.g. animal and mineral materials)”</i> (WHO, 2019b, p. 8).
Acupuncture	A practice that explores meridians, collaterals and acupoints under the direction of basic traditional Chinese medicine’s belief (Chai, 1998 cited in T&CM Division, 2017). Acupuncture is a therapeutic practice that includes inserting and manipulating fine filiform needles into acupoints to stimulate qi in the meridians, either alone or in combination with moxibustion (Lao, 1996).
Moxibustion	Moxibustion is a technique that involves burning a moxa plant (<i>Artemisia vulgaris</i>) above the skin or on acupuncture points. It can be applied as a cone, stick, loose herb, or at the tip of acupuncture needles. The goal of moxibustion is to relieve symptoms by applying heat to acupuncture sites (Lao, 1996).
<i>Tuina</i>	A type of Chinese manipulative therapy used in traditional Chinese medicine which are often used together with acupuncture, moxibustion, cupping, Chinese herbs, tai chi and qigong. The practitioner can use a range of motion, traction, and massage, with the stimulation of acupressure points (Institute for Public Health, 2015).

APPENDIX B 3

Description of T&CM Services: Traditional Indian Medicine

T&CM Service	Description
Traditional Indian medicine	A system of medicine that is considered to be Indian in origin or that has come to India from elsewhere and been assimilated into Indian culture (Prasad, 2002 cited in Ravishankar & Shukla, 2007).
<i>Ayurveda</i> (ayurvedic medicine)	A healthy-living system that has been practised in India since 1500 BC (Mukherjee, 2001). This type of traditional medicine stresses excellent health and sickness prevention and treatment through lifestyle activities like massage, meditation, yoga, and dietary adjustments, as well as the use of herbal therapies (Ravishankar & Shukla, 2007). The fundamental doctrine of Ayurveda is that whatever is present in the universe (macrocosm) should be present in the body (the microcosm). A theory proposes that the cosmos is made up of five basic elements – <i>prithvi</i> (earth), <i>jala</i> (water), <i>teja</i> (fire), <i>vayu</i> (air), and <i>akash</i> (space). These essential elements combine to form the <i>tridoshas</i> (humours) of <i>vata</i> (energy of movement), <i>pitta</i> (energy of digestion or metabolism), and <i>kapha</i> (energy of lubrication and structure). All primary psycho-biological functions are governed by these humours. Also, there are seven fundamental tissues (<i>saptha dhatus</i>) and three waste products (<i>mala</i>) – faeces, urine and sweat. A healthy body is a state of optimal balance between the <i>tridoshas</i> . Whenever this equilibrium is disrupted, sickness occurs (Ravishankar & Shukla, 2007).
<i>Siddha</i> (siddha medicine)	One of the ancient Indian medical systems. <i>Siddha</i> explains that in normal balance, the three vital life components, <i>vaadham</i> (space and air), <i>pittham</i> (fire), and <i>kabam</i> (earth and water), are in the ratios of 4:2:1. Diseases occur when this equilibrium is disrupted. Environment, climate circumstances, diet, physical activities, and stress all have an impact on this equilibrium. Diet and lifestyle, according to the <i>Siddha</i> system, have a significant part in preserving physical, mental, and social health (Thyagarajan, 1976 cited in T&CM Division, 2016).
External <i>basti</i>	For external <i>basti</i> therapy, warm medicated oil is kept within a dough boundary and is contained for a specific period of time over the lumbar area (<i>kati basti</i>), cervical region (<i>greeva basti</i>), and/or knee joint (<i>janu basti</i>) (Mangal & Garg, 2014 cited in Traditional and Complementary Medicine Division, 2015b). The therapy is offered to patient suffering lumbago, lumbar spondylosis, inter-vertebral disc prolapsed and sciatica (<i>kati basti</i>). Patients who received <i>greeva basti</i> were typically referred for neck stiffness and pain, or cervical spondylosis. While <i>janu basti</i> is provided to patients

T&CM Service	Description
	who have osteoarthritis or stiffness in the knee joint (T&CM Division, 2015b).
<i>Shirodhara</i>	Used to treat insomnia, stress, mild depression, anxiety, and headaches (T&CM Division, 2021d).
<i>Varmam</i>	The therapy is indicated in patient with cervical spondylosis, lumbar spondylosis, osteoarthritis of knee and adhesive capsulitis (frozen shoulder) (T&CM Division, 2021d).

APPENDIX B 4

Description of T&CM Service: Homeopathy

T&CM Service	Description
Homeopathy	<p data-bbox="568 409 1375 483">Homeopathy was originated more than 200 years ago in Germany, that is based on two unorthodox theories:</p> <ul data-bbox="568 499 1375 757" style="list-style-type: none"><li data-bbox="568 499 1375 573">(i) ‘like cures like’ – a concept that an illness can be healed by a substance that elicits similar symptoms in healthy individual; and<li data-bbox="568 589 1375 757">(ii) (ii) ‘law of minimum dose’ – a concept that the smaller the dose of medicine, the more effective it is. Majority of homeopathic preparations are so diluted that no molecules, or almost none, of the original substance are left behind. <p data-bbox="568 772 671 801">Example:</p> <ul data-bbox="568 817 1375 987" style="list-style-type: none"><li data-bbox="568 817 1375 898">(i) Plants (such as red onion, arnica [mountain herb], poison ivy, belladonna [deadly nightshade], and stinging nettle);<li data-bbox="568 913 1375 987">(ii) Minerals (such as white arsenic) are used to make homoeopathic remedies (such as crushed whole bees). <p data-bbox="568 1003 1375 1359">Homeopathic medications are frequently prepared as sugar pellets to be placed under the tongue, but they can also be in ointments, gels, sprays, lotions, and pills. Treatments are individualised, or adapted to each individual, and it is normal for patients with the same ailment to receive different treatments. Homeopathy assigns treatments to individuals using a separate diagnostic system and detects clinical patterns of signs and symptoms that differ from those used by conventional medicine (National Center for Complementary and Integrative Health, 2021b).</p>

APPENDIX B 5

Description of T&CM Services: Chiropractic and Osteopathy

T&CM Service	Description
Chiropractic	<p>Chiropractic refers to “<i>a healthcare profession concerned with the diagnosis, treatment and prevention of disorders of the neuromusculoskeletal system and the effects of these disorders on general health. There is an emphasis on manual techniques, including joint adjustment and/or manipulation, with a particular focus on subluxations</i>” (WHO, 2005, p. 3) Daniel David Palmer founded chiropractic in the US in 1895, and it gradually gained supporters among doctors and other practitioners (Salehi, Hashemi, Imanieh, & Saber, 2015). Due to its popularity among professionals, the practice rapidly expanded all over the world, including Malaysia. Over 40 international jurisdictions, including the US, the UK, Australia, New Zealand, South Africa, Hong Kong, the Philippines, and Thailand, have well-regulated chiropractic practices (Wong et al., 2020). In order to facilitate qualified and safe chiropractic practice, as well as to safeguard the public and patients, a guideline on basic training and safety in chiropractic was developed by the WHO (2005).</p>
Osteopathy	<p>Osteopathy and chiropractic, both have a shared root, in which their origins can be traced back to the ‘bone setting’ practices. Daniel David Palmer, the father of chiropractic was reported to have met Andrew Taylor Still, the founder of osteopathy before establishing his own osteopathic school in the late 1800s. The treatments are almost similar, and many textbooks and periodicals cover both practice. Osteopathy and chiropractic are synonymously described as manipulative therapies (Vickers & Zollman, 1999). Several systemic or Cochrane reviews on the use of osteopathic manipulative treatment in certain conditions revealed:</p> <ul style="list-style-type: none"> (i) moderate-quality evidence to treat acute and chronic nonspecific low back pain among mothers during intrapartum period (Franke, Franke, & Fryer, 2014); (ii) insufficient evidence to effectively treat asthma and musculoskeletal pain (Hondras, Linde, & Jones, 2005; Posadzki & Ernst, 2011); and (iii) unproven effectiveness to treat various paediatric conditions (such as infantile colic, otitis media and asthma) (Posadzki, Lee, & Ernst, 2013).

APPENDIX B 6

Description of T&CM Service: Islamic Medical Practice

T&CM Service	Description
Islamic medical practice	<p>The definition of Islamic medical practice or Islamic medicine may differ depending upon individual's point of view. The context could be historical, cultural, scientific, pharmaceutical, therapeutic, religious or even geopolitical in nature (Nagamia, 2003). Islamic medicine is extensively recognised in Malay communities and is called by several names such as Islamic healing, spiritual healing, or Qur'anic healing (Asman, 2008; Deuraseh & Tohar, 2008; Suhami, Muhamad, & Krauss, 2014). The main approach of therapy, regardless of the term, is to use the Qur'an, in which physical, psychological, and spiritual processes are all involved in this type of healing (Yucel, 2007). In Islamic medical practice, the healing is by <i>ruqyah</i> (incantation), particularly with <i>Qur'anic</i> words, recitation of <i>du'a</i> (prayer), and <i>ruqyah</i> (jampi) with <i>mu'awwidhat</i> verses. They are among the most extensively and widely practiced traditional Malay-Muslim practices designed to provide protection and healing from genie (<i>jinn</i>) and devil (Deuraseh & Tohar, 2008). Misuse of the Qur'an, virtual surgery, the use of amulets (<i>azimat</i>), talismans (<i>tangkal</i>), and charm needles (<i>susuk</i>), and the employment of black magic are not recognised branches of Islamic medical practice (Shah, 2017).</p>

APPENDIX C

Differences Between Lying, Deception, Misrepresentation and Nondisclosure

To illustrate the meaning of each terms, consider a case of a patient who recently being diagnosed of cancer.

Lying

- Refers to statements that the speaker knows are false or believes to be false and that are intended to mislead the listener.
- Example: Doctors might tell the patient that the tests were normal.

Deception

- It is broader than lying, and it includes all statements and actions that are intended to mislead the listener, whether or not they are literally true.
- Example: Doctors telling the patient that she has a 'growth', hoping that she will believe nothing is wrong.

Misrepresentation

- Also a broader category, including unintentional and intentional statements and actions, that might or might not be literally true (unintentional might result from inexperience, poor interpersonal skills, or lack of diligence or knowledge).
- Example: Doctor might not tell the patient she has cancer because the doctor misread the biopsy report.

Non-disclosure

- Means that the doctors does not provide information about the diagnosis, prognosis, or plan of care.
- Example: Doctor might not tell the patient she has cancer unless the patient specifically ask.

Source: (Lo, 2013, p. 52)

APPENDIX D

Example of List of T&CM Resources

International Resources

- i) Systematic Reviews Library: <https://www.cochranelibrary.com/>
- ii) National Center for Complementary and Integrative Health: <https://www.nccih.nih.gov/>
- iii) Publications by the WHO: https://www.who.int/health-topics/traditional-complementary-and-integrative-medicine#tab=tab_1

Local Resources

- i) Information Brief by the Health Technology Assessment Section, MOH Malaysia: https://www.moh.gov.my/index.php/database_stores/store_view/72?mid=1340
- ii) T&CM Practice Guidelines: <https://tcm.moh.gov.my/en/index.php/policy/guideline>
- iii) Global Information Hub on Integrated Medicine by Institute for Medical research: <https://www.globinmed.com/>

AUTHOR'S PROFILE



Helwa Husna Binti Katiman obtained her Medical Degree in 2009 from Universitas Gadjah Mada, Yogyakarta, Indonesia. She completed her housemanship in Hospital Tengku Ampuan Rahimah Klang in 2012. Thereafter, she gained experience as an Orthopaedic Medical Officer in Hospital Port Dickson until 2013, and then as a Paediatric Medical Officer in Hospital Serdang until 2015. Subsequently, she joined Private Medical Practice Control Section, at Medical Practice Division in the Ministry of Health Putrajaya to date. Since her work revolved around regulatory and enforcement activities, she has developed interests in medical law and ethics fields. She enrolled for a Master programme in Medical Ethics and Medical Jurisprudence in Universiti Teknologi MARA from 2020 until 2022.

List of conferences:

- i) Katiman, H. H., Mohd Yunus, A. & Muuti, M. Z. (2021). Promoting Ethical Use of Social Media Among Healthcare Professionals in the Digital Era. The 8th USIM National Health Seminar E-conference. Poster Presentation. Universiti Sains Islam Malaysia, 7 October 2021.
- ii) Mohd Yunus, A., Katiman, H. H. & Muuti M. Z. (2021). Ethical & Legal Issues in Remote Medical Consultation – Advocating Regulatory Oversight on Telemedicine in Malaysia. The 8th USIM National Health Seminar E-conference. Oral Presentation. Universiti Sains Islam Malaysia, 7 October 2021.