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The Genesis of Multidisciplinary Health Professionals Teams for Pain Management. A History from the Hellenic Antiquity to Modern Palliative Medicine

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Abstract
The aim of our article is to highlight the history of pain management. The multidisciplinary team (MDT) concept in confronting pain was first conceptualized by the Hippocratics, and has evolved through time and become a trend in medicine over recent decades. Documentary research was conducted to unveil the story of the evolution of MDTs. From the early 1950's the idea of an MDT approach to deal with various types of pain was sporadically introduced in medicine. Studies encouraged health institutions to support this concept by providing health professionals with training, alongside the necessary facilities and resources. Specialized care programs started with Dame Cicely Mary Strode Saunders as one of the pioneers. **Conclusions.** Team work and continuous interdisciplinary treatment of pain have rendered MDTs essential for health systems. Barriers in flexibility, information flow and personal issues give rise to the need for better organization and training. Pain and terminal disease palliation call for MDTs, and educated leaders to run them. Present and future health MDTs are considered necessary in all medical fields.

Key Words: Interdisciplinary Treatment ▪ Hospice ▪ Pain ▪ History of Medicine.

Introduction

The multidisciplinary team (MDT) concept is defined as a unit of health care professionals who specialize in various different scientific fields and work collaboratively together. This team usually cares for multiple patients. However, each patient receives continuous individualized attention from every team member. The great majority of studies concerning MDTs have demonstrated better results for those patients who use their programs, in contrast to patients under a single physician's care (1).

The MDT concept seems to have originated within the Corpus Hippocraticum, as the Hippocratics advocated a holistic care approach to their patients. Physicians, therapainides (nurses) and psychologists wanted both body and soul homeostasis to be achieved (2). Many centuries later, thousands of warriors and pilgrims were killed during the First Crusade and the Pope issued directives to various Chivalric Orders, such as the Hospitallers and Templars, to create facilities for lodging and medical care, and thereby created the first centers organized for MDT work. One must keep in mind that the term "hospes" originally meant "hospitality" (3). From that time, the MDT concept of caring for the sick and dying took hold, with the formation of various religious orders across Europe, under the patronage of priests and monks in hospitals, churches and monasteries. Meanwhile, charitable institutions also appeared, under municipal jurisdiction (4–5). Modern medicine realized that the MDT concept constitutes a realistic, holistic, applicable and optimum concept.

This narrative review aims to record the history of the creation of MDT care for patients suffering from all kinds of pain.

The Early 20th Century and MDT Origins

From the early 20th century various centers appeared which were specialized in the management of one kind of pain. Thus, headaches, backaches, cancer pain, spinal lesion pains and others were dealt with as separate entities. However, the need for a holistic approach to patients led to a more complete health concept. The Sicilian-American anesthesiologist John Joseph Bonica (1917–1994) was the first to understand that traumas suffered during the Word War II may cause chronic pain of a variety of etiologies, and that veterans could not easily find comfort or organized pain management facilities. Thus, he was the first to propose such activities and is considered as the physician who first introduced pain management as a medical specialty. Also, he published the treatise "The Management of Pain" in 1953, describing pain as "the most complex human experience, in my view." His own MDT Pain Clinic, which included specialists from eight disciplines, was intended to be a model for others. However, he struggled to organize these centers, and only succeeded in establishing pain clinics offering limited options for pain on a form of multidisciplinary basis, known as "Pain Clinics". (6–8).

During the 1950s some health centers appeared worldwide organized at first as anesthesiology centers, and they operated as day-care clinics which had the capacity to care for 8 to10 patients with pain of nonmalignant and malignant origin (9). Nurses, as caregivers demonstrating empathy, soon suggested they should be appointed as members of such teams (10). The idea of a MDT of physicians seems to have been suggested by insurance companies in the 1930s as they required a complete and thorough diagnosis of any health issue, in relation to insurance issues (11).

A National Mental Health grant sponsored five working conferences between 1951–1952 on interdisciplinary teams (12). The word "hospice" was defined as a term in 1951 as an autonomous, centrally administrated, medically directed program, providing a continuum of home, outpatient and homelike inpatient care for terminally ill patients and their families. It employs an interdisciplinary team (13). Nevertheless, we should not forget that the first attempt to comprehend the need for such a team is to be found in psychiatry (13, 14) and pediatric medicine.

The American State Children's Bureau took an initial step towards the development of interdisciplinary teams in 1918. Those teams were supported by pediatricians, appropriate medical specialists, and therapists, nurses and social workers. The team of specialists used techniques originating in psychiatry, psychology and sociology (15). In the late 1950s, pain clinics were included in university facilities, pain specialists were trained, diagnostic tools and scoring scales were created, symptom control teaching methods appeared, and home care was introduced (16). It was the era when MDTs for pain palliation were considered to be in vogue. Their success was both health and socially related, and complete among the health system users (17).

Luski wrote the first book on MDTs in 1959, describing their benefits and limitations, while noting various team training techniques (12). It was the American professor of anesthesiology Henry Knowles Beecher who during 1950's made the strongest claim for anesthesiology as the sole discipline of pain, not only of pain management but of pain research as well. Although he had collaborated with colleagues from internal medicine, pharmacology, and psychology, he had failed to find in the complexity of pain a compelling argument for a multidisciplinary approach and in that way to help the formation of MDTs (8).

At the beginning of the 1960s, various publications appeared in favor of MDTs, encouraging health institutions to support this concept by providing facilities and resources. Specialized care programs and trained health professionals should be included, as most studies of the era noted (18). In 1958, Dame Cicely Saunders, shortly after she qualified, wrote an article arguing for a new approach to end-of-life care and pain. She emphatically wrote, "It appears that many patients feel deserted by their doctors at the end. Ideally the doctor should remain the center of a team of

professionals who work together to relieve where they cannot heal, to keep the patient's own struggle within his compass and to bring hope and consolation to the end" (19). The 1960's were also characterized by the work of the professor in anesthesiology, Bill Fordyce and the professor in anesthesiology and neurological surgery, John Loeser. They embraced a model of treatment focusing on fighting the symptoms and introducing functional restoration techniques (6). Bonica understood the significance of Fordyce's work and invited him to become a participant in the MDT at his Pain Clinic. Fordyce's program remained part of Rehabilitation Medicine and was not incorporated into the pain clinic until 1978. Fordyce believed that pain eradication was a secondary goal and he mainly taught individual patients ways to control and maintain their pain at a tolerable level (8). Nevertheless, the problems of establishing pain clinics continued due to inadequate funding to support the initial high costs, the lack of time to train and improve the skills for the clinic staff, and the absence of a unifying model of pain care. Those factors led to the fact that the initial success was followed by the slow growth of pain clinics (6).

Saunders and MDTs in the Modern Era

Dame Cicely Mary Strode Saunders (1918–2005) was an English nurse, social worker, physician and prolific writer, who changed the medical world's opinion regarding pain and MDT work. She was among the first to realize that the sensation of pain involves both the body and the mind or soul. Nociceptive (visceral and somatic) and neuropathic, acute or chronic, real or phantom, pain needs to be confronted in all its aspects, and requires care for the sick, their relatives, caregivers, and the MDT itself (20). Thus, Saunders introduced the idea of "total pain," which included the physical, emotional, social, and spiritual dimensions of the distress felt (17). In 1967, Saunders founded St Christopher's Hospice in south-west London, and its philosophy soon became the catalyst for the development of MDTs. Soon after St Christopher's Hospice began admitting patients, she wrote in one of her papers, "It became obvious that this new approach to end-of-life care should not be regarded as the model but rather as a demonstration of principles that could be interpreted variously in different cultures and settings" (21, 22).

Magno Josefina Bautista was the next important figure who broke ground in helping medical professionals comprehend the need for pain relief and palliative care for terminally ill patients. She formed the American Academy for Hospice and Palliative Medicine, the National Hospice Foundation, and the International Hospice Institute. Within these organizations she played a critical role during the following decades in educating people and health professionals about the merits and benefits of physician-based MDTs and hospice care. Pain confrontation and MDTs were then related, and palliative medicine changed forever (23).

Modern era MDTs meet regularly to elucidate their course of actions and offer an opportunity to the members to share examples of good practice and share their opinions. Thus scientific communication is considered an essential element of pain palliation and the core of a collective process in relation to the patient (24). The personal, individually tailored, multimodal therapy provided by an MDT is widely suggested to be critical for pain management (25). MDTs, or virtual MTDs networking to achieve results, in the modern era use outsourcing, including private social workers, neighborhood pharmacists and clergy. MDT networking provides opportunities to interact between various MTDs, and even promote the creation of a central team for a 24-hour response (26). This group of specialists, the MDT, is nowadays considered the gold standard worldwide. There are reports connecting MDTs and pain palliation with overall survival, making MDTs an independent prognostic factor (27).

The new millennium started with an emphasis on pain management through MDTs. In the USA the decade 2000-2010 was designated as the "Decade of Pain Control and Research", elevating pain management to the level of one of the most significant causes of health. This action alone

greatly enhanced public awareness of pain, and the related research advanced the understanding of chronic pain mechanisms and improved treatment pathways (6).

Obstacles to MDTs and the Future

The key to the proper functioning of MDTs in the 21st century is to have professionals working together and learning from each other during their practice. Although the interdisciplinary exchange of opinions in creating a care plan is emphasized, patients experience poor communication and interpersonal conflicts as obstacles to medical care (28). Recent studies have shown that MDT reform is acknowledged to be a complex but important medical process. Meanwhile, medical personnel need training and require support during the process (29). Surprisingly, longitudinal care is considered for some an obstacle that needs to be overcome by MDTs, related to the cost of services (30). By definition, MDTs should redeem their human capital in order to produce the best care results (31).

However, during the last decade of the 20th century MDTs faced considerable issues in truly coping with their declining patients' conditions (32). As living "organisms", MDTs should remained active in research, able to conduct clinical trials, and ready to analyze beneficiaries' opinions and emotions in order to improve outcomes for all their patients. Studies have shown that patient-reported outcome measures improve MDTs' insights, to help them confront their patients' problems and symptoms better, and provide improved results. It is essential to encourage patient engagement and empowerment in MDTs, as an interconnection which should improve patient satisfaction and outcomes. The future of personalized medicine most probably belongs to MDTs (33). In the last century, the MDT concept was anthropocentric, based on the most important people involved. Somewhere in this equation lies the key to future good MDT leaders who are essential for maintaining patient safety and the evolution of MDTs (34).

Conclusion

MDTs were introduced during Hellenic antiquity, were used throughout the ages, and formed in modern medicine from the early 1960s. Obstacles do exist, but the function of MDTs represents a natural evolution in medical care, reflecting all the advances made by different disciplines and health professionals, and proposing the use of multiple modalities of treatment, patient palliation and support for caregivers.

What Is Already Known on This Topic:
Pain management is a field of modern medicine, dealt with mainly in palliative care.

What This Study Adds:
This study highlights the historical background of the concept of pain management, especially its roots in ancient times and its diachronic historical root.

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