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**ABSTRACT**

**The elderly have complex bio-psycho-social needs which are best met by a multidisciplinary team approach. In a multidisciplinary team, diverse perspectives are gathered to make a unified decision to solve a complex problem. Having a clear vision with common goals and ensuring an organised framework with good collaboration among team members are some of many factors needed to build a strong team. Benefits include the ability to provide comprehensive and personalised care to the patient during care transition, henceforth reducing overall hospitalisation and healthcare costs.**

**Keywords:**

**Multidisciplinary, Teamwork, Transitional Care, Elderly, Aging**

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**INTRODUCTION**

Singapore's population is ageing. By the year 2030, the number of elderly will triple to 900,000. From 2012 onwards, Singapore will experience an age shift as more than 900,000 baby boomers retire and enter their aged years.<sup>1</sup> An ageing population with a proportionately shrinking workforce will result in high long-term health care expenditure.<sup>1</sup>

Many elderly have multiple chronic diseases and functional disabilities requiring care over extended periods. Care of the elderly requires an integrated and practical approach. This is quite different from the acute care approach which would work for the average young or middle-aged patient with acute medical problems which can be resolved in a single or a few brief clinic consultations.

An elderly suffering from problems which can range from functional, medical, psychological, and social problems cannot be adequately provided for by multiple subspecialised professionals working in their individual domains.<sup>2</sup> Care fragmentation and duplication arises from (1) absence or lack of communication among fellow colleagues; (2) giving too extensive information to fellow colleagues that cannot be accommodated by certain subspecialty professionals already hampered by demanding work schedules; (3) giving inappropriate information deemed irrelevant or unimportant; (4) not involving the frail elderly and their family in the management plan; (5) not being genuinely interested in the frail elderly; and (6) management by too many subspecialties and absence of coordinated care.<sup>2</sup>

Certain identified behaviours of the elderly further compound the problem. These include: (1) not informing doctors about the state of their health and not asking questions; (2) medication non-adherence due to fixed beliefs, poor insight, and poor health literacy; (3) lack of self-efficacy for self-management; (4) emotional barriers including fear of loss of independence; feelings of helplessness and/ or shame; feelings of hopelessness and resignation; (5) lack of skills further limited by cognitive and functional deficits; (6) lack of social support; (7) financial constraints; and (8) having to manoeuvre through a highly complex medical system in today's world.<sup>3</sup>

Coordination of care across settings and services, by multiple professions sharing information and working in collaboration is needed if holistic care is to be achieved.<sup>2</sup>

**The birth of multidisciplinary teams**

In reality, patients come with complex issues that cannot be confined to any particular subspecialty or discipline. With the advancement of medical science and technology, approaches to address fragmented care arose in health systems.<sup>4</sup> The first approaches to developing teamwork were in the mid-1950s when British health authorities brought district nurses and health visitors into closer working relationships with general practitioners.<sup>5</sup> Soon, more multidisciplinary teams were formed in the 1950s and 1960s to address the need for "holistic care".<sup>6,7</sup> In 1981, the Harding report that established teamwork as the best way to coordinate community care to manage a patient's complex medical, psychological, functional, and social needs was published.<sup>7,8</sup> The objectives—to provide different perspectives of complex problems and resolve "real world" issues often encountered in the care of the elderly.<sup>9</sup> Instead of individuals operating in their individual milieu with little awareness of other disciplines' work, effective team working now became the standard of care for delivering comprehensive, holistic and individualised care. In 1981, a wide range of views about the real meaning and effectiveness of teamwork arose.<sup>5</sup> To measure the effectiveness of multidisciplinary teamwork, the theory of "relational coordination" was introduced.<sup>10</sup> This theory states that the effectiveness of coordination is determined by the quality of communication amongst professionals in a work process.<sup>10</sup> To measure the "team climate", factors including shared perceptions of policies and practices, shared goals, timeliness of gatherings, frequency of interaction, focus on problem solving, etc., have to be taken into consideration.<sup>11</sup> It was found that relational coordination predicted quality and efficiency outcomes for hospitalised patients.<sup>10</sup> With improved communication and coordination among professionals, the team is expected to have increased information-processing capabilities and develop high-quality holistic integrated care.<sup>12</sup> Today, in the United Kingdom, the multidisciplinary team meetings have been endorsed by the

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Department of Health as the core model for managing chronic diseases.<sup>11</sup>

## THE CASE FOR MULTIDISCIPLINARY TEAMS

The multidisciplinary team is made up of members with different educational backgrounds, training, experiences, skills, and practices. The unique feature of multidisciplinary teams is that diverse perspectives are gathered to make a unified decision to solve a complex, real-world problem. This translates to improved discharge planning, shorter hospital stays, lower A&E attendance rates, lower hospital readmission rates, improved patient outcomes, and increased cost effectiveness in health care and less duplication of services.<sup>9, 13</sup> By doing so, it avoids care duplication and fragmentation and is needed to ensure continuity of care.<sup>13</sup>

## FORMING MULTIDISCIPLINARY TEAMS (TEAM MEMBERS AND THEIR ROLES)

The multidisciplinary team usually consists of physicians, specialists, nurses and nurse educators, and allied health professionals which include physiotherapists, occupational therapists, podiatrists, speech therapists, dieticians, psychologists and social workers. Together, they share and exchange information about the elder's health, illness, functioning, social situation to formulate goals and action plans that are tailored to the individual's ideas, concerns, and expectations. The functions of the non-medical team members can broadly be classified into:

(1) supplementary functions (e.g. tasks that can be performed by a doctor but usually inefficiently so); (2) complementary functions (e.g. counselling on behavioral change that doctors can do but often are limited by time and pending responsibilities); and (3) substitute functions (diagnoses of certain conditions, e.g. dysphagia by the speech therapist).<sup>14</sup> Most doctors either lack the time or appropriate training to engage in counselling on self-management of chronic diseases or behavioral change.<sup>14</sup>

### A. Family physician

Family physicians play an important role as they are well trained to take care of chronic medical problems and multiple comorbidities in the elderly. They are often the first point of contact for the elderly who falls ill in the community and are well trained to coordinate care according to the individual's needs. Many elderly patients may already have a good rapport with their general practitioners and Family Physicians and tend to depend on them for medical advice and support. Often the family physician or general practitioner serves not only as the main coordinator of care, but also as the team leader. However, in a recent national survey carried out in the United Kingdom which studies the decision quality of multidisciplinary teams and leadership positions, nearly half of the respondents did not think that the chair needed to be a physician and could be anyone who has received special training in leadership and team skills<sup>15</sup>.

### B. Nurses

Nurses, who tend to have more contact time with patients, are very important team members of the multidisciplinary team.

Nurses play multiple roles in the team. They provide educational and supportive help in getting patients to change behaviour or better manage their chronic conditions.<sup>14</sup> A good example in the polyclinic or hospital setting would be the diabetic nurse educator, asthma control nurse, or heart failure nurse. They are often also the ones who are able to build rapport with the patient over time and know their individual needs pertaining to social status and mental wellbeing. Lack of consideration of the psychosocial aspects of patients is linked to non-implementation and lower efficacy of multidisciplinary decisions.<sup>15</sup> Often, they give reliable and useful feedback to the team doctors to help in clinical decision making as well.

### C. Physiotherapists and occupational therapists

The role of the physiotherapist is to help the patient achieve and maintain mobility and movement. On first contact with patients, they examine the muscle tone, body alignment, and range of joint movement, balance, sensation, safety awareness, and mobility. They have a very important role in care of many elderly patients suffering from end-stage respiratory diseases, stroke, arthritis, cardiac failure, and functional decline. Through interaction with family and caregivers, the physiotherapists and occupational therapists are often the ones providing caregiver training to teach skills needed to help the patient cope at home. Occupational therapists assess skills needed to perform basic activities of daily living and independent activities of daily living, and teach skills needed for self-care, for interacting in a social sphere and eventually in the community. In addition, occupational therapists make home visits to assess the physical environment and modify the environment where necessary. Often, mobility aids, hospital beds and mattresses, ramps for steps within the house and outside the house, and railings are prescribed and installed to help the elderly retain independent living at home. Therapy assistants play a significant role in assisting their physiotherapy and occupational therapy colleagues and should be actively involved as part of the team.

### D. Speech therapists

Swallowing and communication difficulties are a consequence of different conditions and can be of varying severities and present in different ways. Speech and language therapists understand the physical, social, and psychological effects of these impairments. Speech therapists do not just assess and confirm dysphagia, but also educate patients and their caregivers as well as members of the multidisciplinary team to help them find ways to overcome the impairments to cope with activities of daily living.<sup>16</sup> They form support groups and provide caregiver training sessions and offer valuable feedback to the rest of the multidisciplinary team.

### E. Pharmacists

The integration of pharmacists into multidisciplinary teams has traditionally been in the hospital setting. Australia, however, has come up with a General Practitioner super clinic programme in 2007, as a part of a series of reforms in the primary care sector.<sup>17</sup> In this super clinic programme, pharmacists focused on home medications reviews, educated and counselled patients, and provided drug information to

other members of the team as well as audited prescriptions.<sup>17</sup> This effectively improved medication use, optimised treatments that required complex risk vs benefit assessments, and reduced medication errors.<sup>17</sup> Optimisation of drug regimens to reduce adverse effects and increase efficacy, improving self-management and adherence to therapy is one of the biggest roles of pharmacists.<sup>14, 17</sup> An example would be giving training in the use of a metered dose inhaler or spacer in a patient with chronic obstructive pulmonary disease or in an elderly taking warfarin for atrial fibrillation.

#### **F. Medical social workers**

Medical social workers play an integral part in the multidisciplinary team. They have a wide knowledge of resources available in the community and are able to channel the patient and family to the right resources. They are often the ones to establish a good rapport with patients and family members, understand their concerns and expectations, convey this information to the rest of the team, and provide emotional and mental support for patients and caregivers. The medical social worker is adequately equipped with the right skills set to discuss advance care planning, often together with the primary care doctor, and thus can provide invaluable support towards the end of life. After death, the medical social worker may also support the family during their bereavement and help to provide closure.

### **RUNNING MULTIDISCIPLINARY TEAM MEETINGS**

Multidisciplinary team members need allocated protected time for the meetings.<sup>18</sup> The purpose, structure, processes and content of a meeting should be clear. An agenda should be set at the beginning with more time allocated for discussion of complex cases.<sup>18</sup> Information relating to patient care should be presented and made readily available during the meeting.<sup>18</sup> This includes medical reports with investigation results, and updated functional and social reports. Where electronic databases are not available, standard documentation should be used.<sup>18</sup> Standard treatment protocols should be used whenever possible and care plans should be communicated to other health professionals within an agreed time frame.<sup>18</sup> A consensus should be reached before plans are made and team members should be notified if, for whatever reasons, treatment recommendations are not adopted.<sup>18</sup> Patients should be notified that a multidisciplinary team approach was used to decide on their treatment plan and their views should always be considered in the decision-making process. These views should be presented during the meetings and psychosocial issues must always be considered. A multidisciplinary team meeting, well run, serves as a good training ground for junior members. Last but not least, the running of the multidisciplinary team should be audited regularly to ensure good quality and internal audits may be conducted to ensure that treatment decisions match current best practice.<sup>18</sup>

#### **Difficulties within multidisciplinary teams (and how to resolve them)**

Multidisciplinary teams may not always deliver what they promise to deliver in the beginning. After all, teams are not built overnight. To ensure effective results, needs of the population they are designed to serve need to be set clearly. Determining factors of an effective team are as follows.<sup>19</sup>

#### **(1) Structure and organisation of team**

Team leadership and the hierarchical framework of teams can be a determining factor of how well a multidisciplinary team can function. High-status members of a team may tend to adopt a more dominant position with power and status differentials causing limitations in involvement of other “weaker” members of the team. In a systematic review done by a group of surgeons in Imperial College, London in 2011 to study the quality of management decisions by multidisciplinary cancer teams, it was found that multidisciplinary team decisions are often driven by physicians based almost exclusively on biomedical information.<sup>15</sup> The other team members had little role to play. Nurses’ views, which often included the psychosocial aspects of care, were often ignored, resulting in the nurses not wanting to speak up at the meetings.<sup>15</sup> A system of rotating leadership of the team has been shown to reduce conflicts, enhance team relationships and boost morale.<sup>15</sup> In a national survey in the United Kingdom, it was found that 50% of the respondents felt that a good chairperson need not always be a physician, but someone who is trained in leadership and team skills.<sup>15</sup> Even within the same discipline, there may be unequal participation and a good team leader should be aware of this occurrence.

#### **(2) Synergy of team or team “climate”**

Having proper channels or means to improve communication between team members, having trust and respect for each other within the team and having common goals for patient care are some ways of creating synergy within the team.<sup>19</sup> Team members should find themselves motivated and inspired by one another. Team members should come together to develop shared values and a common vision. The response of higher authority to the needs of team members will help build confidence and trust between superiors and subordinates. How disagreements between team members are handled and whether or not there is open and honest communication is important for synergy within the team. It is important to understand what motivates each other and remain receptive to the views and perspectives of other team members at all times.

#### **(3) Roles and responsibilities of team members**

There should not be confusion or overlap of roles and responsibilities. Having “undefined roles” is one of the main reasons for an unsuccessful team.<sup>6</sup> Where confusion exists, effort must be made to clarify things, or this may result in tension for team members. The boundaries of each individual team member should be made clear and each team member should assume responsibility for his/her decisions and actions.<sup>6, 19</sup>



#### (4) Competency and training

In order for a team to work effectively, team members should have an adequate level of competency to collaborate.<sup>6</sup> Adequate training with continuing medical education and “best practices” exchanges and appropriate supervision help ensure that team members are competent in managing elderly with complex needs. Effective training programmes and collection of feedback from participants help ensure continuous improvement. Other competencies include the use of technology, including “teleconferencing”, and “decision support” tools.<sup>15</sup>

#### (5) Conflict management

In certain cultures, disagreement amongst team members may be avoided for fear of causing damage to the existing working relationships. This in turn, may result in adverse patient outcomes.<sup>6,13</sup> It should be accepted that disagreements are part and parcel of multidisciplinary team meetings. This is not necessarily detrimental to relationships between team members and may in fact be in the patient’s favour. It is important to encourage open communication of feelings and perceptions. When disagreements arise, remain attentive and receptive to other team members’ perspectives and keep an open mind.<sup>6</sup> Do not push the blame when things go wrong but take responsibility as a team and reflect on the failures.<sup>6</sup> It is worse if team members do not voice alternative opinions for which many mistakes can be avoided.

#### (6) Treatment plan and implementation

Determinants of the implementation of a treatment plan can be used as a surrogate measure of the effectiveness of a multidisciplinary team.<sup>11</sup> In a prospective mixed-methods study undertaken in University College London with 12 individual multidisciplinary teams in London and North Thames, it was found that good team “climate” and less diverse members were the most important predictors of plan implementation.<sup>11</sup> Failure to implement plans was often due to contradictory patient or family choices as well as difficulties engaging patients in the process. Contrary to popular belief, this study also found that greater multidisciplinary does not always correlate positively with effective decision making. This is because the greater the diversity of team members, the more the barriers arising from differences in knowledge, skills and ability, and a tendency for members to break into subgroups rather than functioning as a whole. Teams who had better results also tended to be teams with clearer goals and more defined processes. Needless to say, plans that take into account a patient’s and the family’s ideas, concerns and preferences have been shown repeatedly to result in greater patient compliance and satisfaction.<sup>14</sup>

In addition to the above, other reasons for failure to reach a management decision include workload and time constraints, inadequate information at the time of decision making, lack of a proper structure for implementing decisions.<sup>15</sup> To overcome this, shared case management and joint-care planning; single or shared clinical records; use of centralised information; use of decision-making tools, including guidelines and protocols;

agreed systems and protocols for communication and interaction amongst team members; discharge/ transfer agreements; shared accountability for care; and regular peer review are recommended.

#### Example of a model of care involving a multidisciplinary team in care of the elderly

The IMPACT practice model is a model which comprises family physicians, a community nurse, a pharmacist, a physiotherapist, an occupational therapist, a dietician, and a community social worker.<sup>20</sup> This is a practice model set up in Canada in 2008 to address the increasing pressure of meeting the demands of care of the elderly in the primary care setting. It was found that treatment regimens for these elderly patients tended to be complex and required more time and resources from caregivers and healthcare providers. The IMPACT clinic model ran from February 2008 to June 2010. Its multidisciplinary nature gave opportunities for patients and family members to discuss multi-faceted problems that they faced, with members of the team more efficiently. This facilitated questions and answers and reduced the need for multiple visits to multiple care-providers, resulting in greater patient and caregiver convenience and satisfaction.<sup>20</sup>

#### Outcomes of a multidisciplinary team approach in a local setting

In a Singapore study done by Low et al. to find out the effectiveness of a transitional home care programme that utilises a multidisciplinary team framework, it was found that multidisciplinary care rendered to recently discharged elderly had significantly reduced acute visits to the hospital emergency department, hospital readmissions and also shortened length of stay.<sup>21</sup> It was found that with a multidisciplinary team, more comprehensive assessments and individualised care plans can be provided to patients with high disease burden and complex medical issues.<sup>21</sup>

#### CONCLUSION

Fragmentation of care in the current health care system can result in a compromise in the overall quality of health care delivery. By encouraging sharing of information and improving collaboration among professionals from diverse backgrounds and with different training, we can overcome fragmented and duplicated care for our elderly.<sup>11</sup> Multidisciplinary teamwork appears to be of benefit to improve care coordination and treatment planning in transitional care, especially for the elderly patient. However multidisciplinary meetings are also resource-intensive and more research needs to be undertaken for its role and applicability for care in other areas.<sup>15</sup>

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## LEARNING POINTS

- The elderly patient with complex problems and different types of needs benefits from coordinated care rendered by a single multidisciplinary team compared to fragmented care given by different non-related health care providers.
- The family physician, trained in complex care and as the primary care provider for the elderly in the community, is well poised to coordinate care as the leader of a multidisciplinary team.
- An effective team has a "team climate" to give and receive input from each other with a common vision of implementing the best care plan for their patient with complex needs.
- Members of an effective team have clearly defined roles and responsibilities.
- Conflicts are expected to be part of the dynamics in a multidisciplinary team, and when well-managed, can prevent mistakes and be in the patient's favour.