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**Title page:**

**Integrated care for chronic diseases: an evolutionary step for emerging primary health care systems.**

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**Abstract**

Globally, people are living longer, and many will have multiple, complex chronic diseases. These chronic diseases are often a leading cause of death and disability particularly in emerging developed countries. For these emerging nations, the current trajectory of gradual health system change is likely to lag changing population needs and escalating cost pressures. Consequently, there is a need for a stepwise evolutionary change in the approach to care delivery in these countries. The integrated care (IC) concept describes a collaborative model for organizing healthcare systems, particularly for chronic disease management that pulls together health systems, social science, managerial and patient-centered perspectives. The IC approach could help drive forward efforts to improve population health outcomes, reduce duplication and inefficiency in health care systems, and could be the solution needed by emerging developed countries.

**Key words: Integrated care, primary care, health services research, chronic diseases**

**Key points**

- The relevance of IC has increased globally due to the increasing ageing population which is associated with high prevalence of chronic diseases.
- Within the IC model the health and social care needs of patients with chronic diseases can be met by integration of multidisciplinary team of experts
- There is a need to identify the potential opportunities and challenges associated with developing the IC model of care for management of chronic diseases by closely examining the lessons learnt globally over the last few decades in the development and implementation of the concept.

Editorial (Main document):

**Integrated care for chronic diseases: an evolutionary step for emerging primary health care systems.**

Globally, more people are living longer and many live with multiple chronic diseases. These chronic diseases are often a leading cause of death and disability, particularly in emerging developed countries. In addition to healthcare, it is well recognized that social factors also have a significant impact on the health and wellbeing of individuals [1]. Individuals with multiple chronic conditions often require long term care and support from a variety of agencies and professionals. However, the care and support delivered are often fragmented and inefficiently coordinated.

The integrated care (IC) concept describes a collaborative model for organizing healthcare systems, particularly for chronic disease management, that pulls together health systems, social science, managerial and patient-centered perspectives[2, 3]. It promotes transparency, accountability, shared responsibility, co-production and overall empowerment of patients and the various stakeholders involved in the delivery of healthcare services[2, 4]. Initially coined in the mid-1980s in the US, IC described integrated care solutions for patients with mental health illness who were more likely to develop chronic physical conditions than the general population[5, 6]. The early IC initiatives focused on coordinated working and care, care programs, care management and shared planning. It evolved in the 2000s into specialized frameworks covering inter-professional working, whole systems working, integrated delivery networks, patient centered care and shared decision making and integrated care pathways[3]. In recent years, IC in developed healthcare systems such as in the US, Europe, Australia and Japan has transitioned towards an ‘inter-organizational systems’ approach[7-11].

The relevance of IC globally has grown in recent times due to the demographic challenge of people living longer with multiple, complex chronic diseases[12]. This is particularly a problem in high income countries[13, 14], but is not limited just to those countries. Issues such as health and social care system fragmentation, spiraling healthcare costs and limited resourcing are

common[14-16]. Individuals with chronic diseases often have multi-morbidity and therefore multiple health and social care needs. The management, delivery, and funding of services to meet these multiple needs is challenging, and siloed disease management programs are ill-suited to this task. The IC approach may be the solution to addressing the complexity of chronic disease management through better coordination, increased efficiency and quality of services, and ultimately better health outcomes[4].

Many emerging and newly developed countries, such as in Southeast Asia and Middle Eastern countries, are experiencing an epidemiological transition from the diseases of poverty common in low-income settings, to the modern diseases of excess such as diabetes and obesity-related conditions more prevalent in high-income settings. These are associated with significant cost implications to health systems[16]. Moreover, the health systems of many countries are configured around costly hospital based vertical disease management programs that are not suited to meet new and future population health needs.

For emerging developed nations at this critical juncture, the current trajectory of gradual health system change is likely to lag behind changing population needs and escalating cost pressures. However, there is an alternative. Rather than follow the painful path of other developed nations, emerging nations could make a radical stepwise change towards a more sustainable, integrated, community-based health system by adopting the IC approach. The challenge for these emerging health systems is to learn from the lessons of the past and make an evolutionary leap.

There will be initial implementation challenges for these emerging health systems adopting the IC approach. These include needing to shift prevailing norms of the medical and social care workforce who will have specific perspectives and biases that reflect their different educational backgrounds and professional cultures[17]. These norms may be barriers to collaborative interprofessional teamworking and communication. Other challenges may be the integration of medical and social data, non-compatible health and social care information technology systems and data sharing issues[18]. The equitable and sufficient allocation of resources between medical and social care providers may also be problematic as the budgets may come via different ministries or funding sources. This will require alignment of health and social care policies and

reimbursement models, and resourcing of workforce training in the IC model. Moreover, policy changes and incentivization will be required to support changes in professional and organizational behaviors [3]. Crucially, the primary aim of IC is to meet patient needs, and this necessarily requires timely and comprehensive assessment of needs, as well as engagement with community organizations who are likely to be key delivery partners. The design and implementation of IC should also consider the local and cultural context. Another vital component is healthcare workforce recruitment, retention, professional training, and development.

IC therefore could play a critical role in driving forward efforts to improve population health outcomes, reduce duplication and inefficiency in emerging developed countries. It must be the centerpiece of health and social care reforms even though its adoption and implementation require significant investment, supportive health policy and potentially legislative changes as well. Change will take time, but the promise of dividends in terms of better patient care and public health outcomes is substantial which in the long term may prove to be cost-effective for these systems.

## **Declarations**

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Dr Muslim Abbas Syed contributed to drafting of manuscript, literature review & conception of idea.

Dr Andrew Lee contributed to review of manuscript.

Dr Mohamed Ahmed Syed contributed to review of manuscript, literature review & conception of idea.

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