Editorial

Family Medicine at the Crossroads: Chronic Disease, Neurodegeneration, Tobacco, Artificial Intelligence, and the Expanding Complexity of Modern Care

Family medicine is entering one of the most transformative periods in its history. The modern primary care physician is no longer managing isolated diseases but rather confronting a convergence of chronic illness, behavioral risk factors, neurodegeneration, mental health challenges, technological disruption, and rapidly evolving societal realities. The five papers presented in this issue collectively illustrate the widening scope and complexity of contemporary family medicine across the Middle East and beyond.

Several unifying themes emerge from these contributions. Most importantly, they emphasize that healthcare is increasingly shaped by interconnected biological, behavioral, technological, and psychosocial forces that cannot be adequately addressed through fragmented or disease-centered models of care.

The study examining smoking prevalence among primary healthcare patients highlights a continuing and evolving public health challenge in the region. Tobacco use remains deeply embedded within many societies, yet its forms are rapidly changing. The transition from traditional cigarettes toward vaping devices and medwakh among younger populations reflects not merely a behavioral shift but also the influence of marketing, social perception, and technological modernization. Family physicians now face the challenge of addressing nicotine addiction in forms that many patients mistakenly perceive as safer alternatives. The findings reinforce the essential role of primary care in prevention, counseling, and long-term behavioral intervention.

At the same time, chronic disease management itself is becoming increasingly complex. The "ABCDEF Ultra Violet S" framework represents an important attempt to restore comprehensiveness and structure to primary care practice. Modern family physicians must simultaneously manage diabetes, hypertension, cardiovascular disease, chronic kidney disease, obesity, depression, vaccination gaps, cancer screening, and lifestyle counseling within limited clinical encounters. In many healthcare systems, fragmentation of care has become one of the greatest barriers to effective chronic disease management. Structured frameworks may therefore help reduce omission errors, standardize preventive care, and improve continuity across increasingly complicated patient populations.

The pediatric chronic spontaneous urticaria case report further demonstrates another defining characteristic of family medicine: individualized patient-centered care. Not every clinical challenge can be solved through rigid algorithms alone. While evidence-based medicine remains fundamental, frontline clinicians frequently encounter patients who do not respond predictably to standard pathways. In such circumstances, careful therapeutic trials, close follow-up, and individualized decision-making remain essential clinical skills. The report also reminds us that even seemingly benign therapies may carry important neuropsychiatric implications, underscoring the importance of cautious prescribing and shared decision-making.

Perhaps the most provocative contribution in this issue concerns artificial intelligence and the phenomenon described as "artificial hallucination." Medicine is increasingly entering an era in which patients interact with AI systems not simply as information tools, but as emotional companions, sources of validation, and psychological influences. This development may profoundly reshape patient behavior, mental health dynamics, and healthcare communication. Family physicians are likely to become the first clinicians to observe the psychosocial consequences of excessive digital immersion, AI-mediated misinformation, emotional dependency, and distorted perceptions of reality. The challenge moving forward will not be whether artificial intelligence should be used, but how it can be integrated responsibly while preserving human judgment, empathy, and psychological resilience.

The review on Parkinson's disease dementia highlights another critical demographic reality confronting healthcare systems: population aging and the growing burden of neurodegenerative disease. Family physicians increasingly manage patients with overlapping motor, cognitive, psychiatric, autonomic, and functional impairments that extend far beyond traditional disease categories. Parkinson's disease dementia exemplifies the multidimensional nature of modern chronic illness, where cognition, mobility, caregiver burden, mental health, medication complexity, and quality of life become inseparable components of care. As populations age across the Middle East, healthcare systems will require stronger integration between family medicine, geriatrics, neurology, psychiatry, rehabilitation, and community support services.

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Collectively, these papers demonstrate that family medicine today sits at the intersection of multiple global transitions:

- The epidemiologic transition toward chronic disease
- The demographic transition toward aging populations
- The technological transition driven by artificial intelligence
- The behavioral transition involving new forms of addiction and digital dependency
- The healthcare transition from episodic treatment toward longitudinal integrated care.

Importantly, these transitions are occurring simultaneously in the Middle East, often at accelerated speed. Rapid urbanization, changing lifestyles, digital expansion, increasing life expectancy, and rising chronic disease prevalence are placing substantial pressure on healthcare systems that were historically designed around acute episodic care models.

In this environment, the value of family medicine becomes increasingly evident. No other discipline is positioned as broadly across prevention, chronic disease management, mental health, geriatrics, behavioral medicine, community health, and continuity of care. Yet the expanding scope of primary care also raises important questions regarding workforce capacity, training, burnout, and healthcare system design.

The future family physician will require competencies extending far beyond traditional biomedical expertise alone. Digital literacy, behavioral intervention skills, chronic disease coordination, geriatric care, mental health integration, preventive medicine, and interdisciplinary collaboration will become progressively more important. Equally essential will be the preservation of humanistic medicine—listening, empathy, contextual understanding, and continuity of relationships—in an increasingly technological healthcare environment.

These papers collectively remind us that medicine remains fundamentally about people rather than diseases alone. Whether addressing tobacco addiction, chronic metabolic illness, pediatric urticaria, AI-mediated psychological influence, or neurodegenerative dementia, the central task of family medicine remains unchanged: providing comprehensive, compassionate, patient-centered care across the lifespan.

As healthcare continues evolving, family medicine must not merely adapt to these changes but actively lead them. The future of effective healthcare delivery—particularly in the Middle East—will depend heavily on the ability of family medicine to integrate prevention, technology, chronic disease management, mental health, and aging care into coherent and sustainable models of practice.

Warm regards,
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p-ISSN: 1839-0188; e-ISSN : 1839-0196
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