

Opportunities and Challenges in Integrating Smart Healthcare into Taiwan's Long-Term Care System: A Physicians' Perspective

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INTRODUCTION & AIM

Background: The rapidly aging population in Taiwan has sharply increased the demand for long-term care (LTC), requiring physicians to coordinate complex chronic disease management and palliative support across various clinical settings. Smart healthcare technologies, including telemedicine and AI-driven monitoring, offer transformative potential for this system.

Objectives: This study examines how physician leadership can drive the adoption of smart healthcare in Taiwan, focusing on clinical governance and data-driven decision-making.

METHOD

Methods: A mixed-methods approach was applied at a home-based care pilot site in Changhua. A multidisciplinary team identified frail older adults with multimorbidity to participate in a six-month program involving remote IoT monitoring and AI-based risk algorithms. Implementation was evaluated through semi-structured interviews and EHR audits.

RESULTS & DISCUSSION

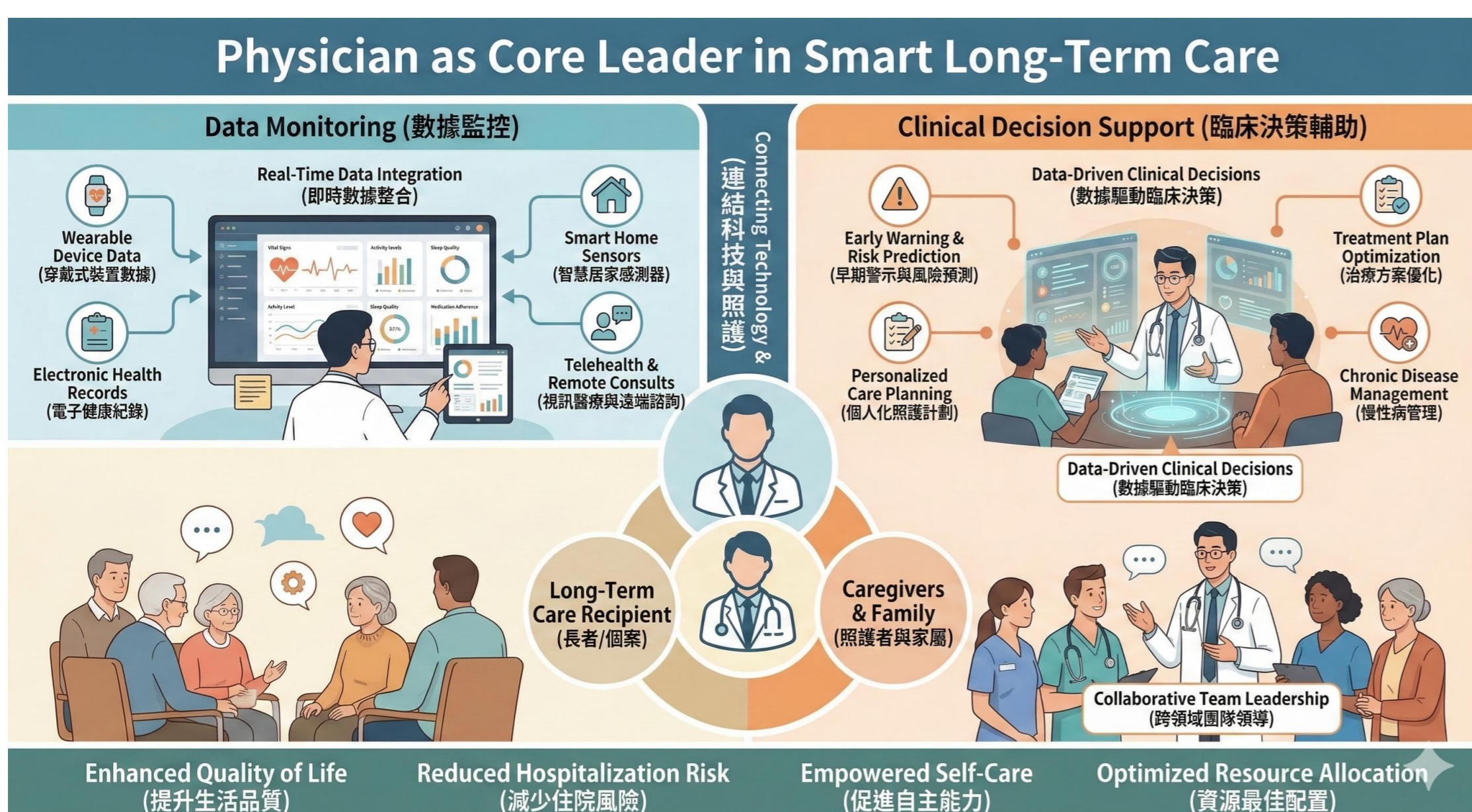
Results: The interventions improved care continuity and reduced avoidable hospitalizations by approximately 15%. While physicians reported higher efficiency in shared decision-making, significant barriers remain, including data interoperability gaps, reimbursement limitations, and a pronounced digital divide among the elderly.

CONCLUSION

Conclusion & Future Work: Physician leadership is essential to align technology with patient-centered goals. Future efforts must prioritize "**Digital Empowerment Initiatives**," focusing on establishing interoperable data standards (e.g., FHIR) and designing age-friendly interfaces. By empowering both providers and patients, smart healthcare can move from a monitoring tool to a sustainable pillar of geriatric care.

FUTURE WORK / REFERENCES

Future Work: Physician-Led Digital Empowerment To address the barriers identified, future efforts should focus on: Standardized Interoperability: Implementing data standards (e.g., FHIR) to bridge the gap between hospital EHRs and community LTC systems. Clinical AI Integration: Developing more precise AI models for early detection of exacerbations, directly integrated into physician workflows. Digital Empowerment Initiative: Patient-Side: Designing age-friendly interfaces to reduce the cognitive load on older adults. Provider-Side: Empowering physicians to lead "digital literacy" teams, ensuring technology builds trust rather than barriers. Policy Advocacy: Driving reimbursement reform to include remote physiological monitoring as a standard, billable service in long-term care.



Keywords

Smart Healthcare; Long-Term Care; Digital Health; Generative Artificial Intelligence; Taiwan; Physician Perspective