

Review Article

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Expanding the Framework: The Integral Role of Nurses in Informatics-Driven Telehealth for Addressing Social Determinants of Health

Randy M Pellew EdD, DNP, MPH, FNP-C^{1*} and Marlon Davis MBA, MPM, BS²

¹Molloy University, Rockville Centre, NY, USA

²Chief Executive Officer at Reddie Group Nassau County, New York, USA

*Corresponding author

Randy M Pellew, Associate Professor and Family Nurse Practitioner Program Coordinator, Molloy University, United States.

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As healthcare systems increasingly transition toward digitally mediated models of care, the role of nurses particularly registered nurses (RNs) has evolved beyond traditional bedside functions into dynamic, data-informed, and equity-driven practice. Within a telehealth framework grounded in health informatics, nurses emerge not merely as participants in care delivery but as central agents in identifying, interpreting, and responding to the social determinants of health (SDOH) that shape patient outcomes. Their position at the intersection of clinical care, patient advocacy, and care coordination uniquely situates them to operationalize equity within technologically advanced healthcare systems.

The integration of SDOH into telehealth requires more than technological capability; it demands a workforce capable of translating data into meaningful, patient-centered interventions. Nurses fulfill this role through a relational and holistic approach to care that aligns with both the Social Ecological Model and principles of health equity, which recognize that health outcomes are influenced by multilayered social and structural [1-2]. In practice, this means that nurses are not simply documenting social risks they are interpreting them within the broader context of patients' lived experiences.

Narrative of Practice: Screening as a Moment of Connection

In telehealth encounters, the nurse often serves as the first point of contact, initiating the clinical interaction and setting the tone for engagement. When SDOH screening tools are embedded into Electronic Health Records (EHRs), the process can appear procedural; however, in the hands of a skilled nurse, it becomes something far more profound. Questions about food access, housing stability, or transportation are not asked in isolation they are woven into a narrative of care that communicates empathy, respect, and cultural sensitivity.

Research suggests that patients are more likely to disclose sensitive social needs when approached by providers who demonstrate trust and relational continuity [3]. Nurses, trained in therapeutic communication, are particularly adept at creating these spaces. In

a virtual setting where physical presence is absent this relational skill becomes even more critical. Through tone, pacing, and attentiveness, nurses transform digital interactions into meaningful human connections, thereby increasing the accuracy and depth of SDOH data collection.

Care Coordination as a Digital Bridge

Once social needs are identified, the role of the nurse expands into that of a care coordinator and system navigator. Health informatics platforms enable nurses to move beyond documentation and into action, facilitating real-time referrals to social workers, community-based organizations, and support services. This is particularly significant in telehealth environments, where fragmentation of care is a persistent risk.

Through integrated dashboards and communication systems, nurses can track whether referrals are completed, monitor patient follow-up, and identify gaps in service delivery. This function aligns with the growing emphasis on population health management, where aggregated SDOH data informs both individual and community-level interventions [4]. In this way, nurses act as both micro-level clinicians and macro-level informatics users, bridging individual patient care with broader system-level insights.

Digital Literacy and the Ethics of Access

One of the most pressing challenges in telehealth is the digital divide the gap between those who have access to and can effectively use digital technologies and those who cannot. Nurses play a critical role in mitigating this divide by assessing digital readiness and providing tailored education to patients.

This work is not merely technical; it is deeply ethical. Ensuring that patients can access and navigate telehealth platforms is a matter of justice, particularly for older adults, rural populations, and historically marginalized communities [5]. Nurses often find themselves guiding patients step-by-step through virtual platforms, troubleshooting connectivity issues, and adapting care delivery to meet patients where they are sometimes literally, as telehealth

reaches into homes where traditional healthcare has long struggled to penetrate.

In this sense, nurses become facilitators of access, ensuring that telehealth does not inadvertently reinforce the very inequities it seeks to resolve.

Remote Monitoring: Contextualizing Clinical Data Through Social Insight

The expansion of remote patient monitoring technologies has introduced new possibilities for continuous, real-time assessment of patient health. However, clinical data such as blood pressure readings, glucose levels, or symptom reports cannot be fully understood without context. Nurses provide this context by integrating SDOH data into clinical interpretation.

For example, a pattern of poorly controlled diabetes may initially appear as nonadherence. Yet, when viewed through an SDOH-informed lens, it may reflect food insecurity, financial constraints, or limited access to medications. Nurses, drawing on both informatics tools and patient narratives, are able to identify these underlying factors and advocate for appropriate interventions.

This approach reflects a shift from a biomedical model to a biopsychosocial model of care, where health is understood as the product of complex interactions between biological, social, and environmental factors [6]. Within telehealth, nurses operationalize this model by ensuring that data is not decontextualized but instead interpreted within the realities of patients' lives.

Advocacy in the Digital Age

Perhaps one of the most profound roles nurses play within this framework is that of advocate. Historically, nursing has been rooted in advocacy for vulnerable populations, and this tradition continues within informatics-driven telehealth systems. Nurses are often the first to recognize patterns of inequity whether it be repeated missed appointments due to lack of internet access or disparities in outcomes linked to socioeconomic status.

Through participation in quality improvement initiatives and institutional decision-making, nurses can influence how telehealth systems are designed and implemented. Their insights are critical in ensuring that these systems are not only efficient but equitable. This aligns with calls from the National Academy of Medicine to address SDOH through integrated, data-driven approaches that center equity as a core outcome [7].

Implications for Education and Practice

The expanding role of nurses within this framework necessitates a corresponding shift in education. Nursing curricula must move beyond foundational informatics skills to include competencies in data interpretation, SDOH integration, and telehealth delivery. Interprofessional education is also essential, as effective telehealth care relies on collaboration between nurses, nurse practitioners, physicians, social workers, and community partners.

Simulation-based learning, telehealth practicums, and community-engaged experiences can help prepare nurses to function effectively within this evolving landscape. Importantly, education must also emphasize the ethical dimensions of digital health, ensuring that future nurses are equipped to advocate for equitable access and culturally responsive care.

Conclusion (Expanded Integration Statement)

Informatics-driven telehealth represents a transformative opportunity to address social determinants of health and advance equitable care delivery. However, its success depends not solely on technological innovation but on the human infrastructure that supports it. Nurses, through their roles in screening, coordination, education, monitoring, and advocacy, serve as the connective tissue of this framework translating data into action and technology into meaningful care. As healthcare continues to evolve, the integration of nursing practice within telehealth and informatics systems will be essential in ensuring that progress is not only efficient but just.

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