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COMMENTARY

Can Adult Care Be Regionalized? An Approach Giving Patients the Best Care While Supporting Community Hospitals

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Regionalization of health care is not a new approach, and it may be a critical tool for the survival of rural community hospitals. Perinatal care regionalization was developed in the 1960s, given its advances in the care of mothers and infants and development of neonatal intensive care units (NICU),[1] after it became clear that the neonatal mortality rate and the infant mortality rates were unacceptable. Perinatal regionalization is generally accepted as being a significant contributor to the decline in neonatal mortality and improving other perinatal statistics.

Although the system has evolved to a degree, the founding principles are still operational: a perinatal center within a NICU would be responsible for providing care not only to patients in its hospital, but in a region. Consultations from regional providers would be quickly answered and assistance provided so that best options for the patient would be determined. When requested by a referring facility, the transfer would take place as quickly as possible. After services were rendered, mother and/or baby would be returned to their home facility as quickly as their condition would allow, so continuing care could be directed by the provider following them post discharge.

Just as not all perinatal services could be provided in every community hospital, today there are specialized life-saving services (such as stroke, cardiovascular, and trauma) available that cannot be fully supported by every rural hospital.[2] However, in an organized system of care, treatment can be initiated in the rural hospital and patients appropriately transferred, insuring universal access to these services and improved patient outcomes.

Numerous services can be provided in their entirety by rural hospitals for the benefit of the community, and these services can be even more robust and broader in scope with a vibrant telehealth connection for consultations and a strong continuing education program. Many primary care physicians in rural community hospitals are concerned that they are practicing outside of their scope of service without subspecialty consultation; hence, the patient is often transferred.[3] If the consult could be obtained via telemedicine, in many cases the patient could be retained in the rural community hospital with continuing support, if necessary.[4] Rural hospitals can serve as the entry point into a coordinated health care system for patients, providing patients with services that can be supported locally and initiating continuing care services to be provided in tertiary facilities. By partnering with an academic medical center or other tertiary facility, rural hospitals may leverage the relationship to provide continuing education services to their providers. Patient care will be enhanced in this system and some of the problems inherent in a fragmented system will also be addressed.

Rural hospital closures are catastrophic to the fiscal and physical health of small communities.[2] Among other problems, the prompt availability of emergency services contributes to a community's reduced morbidity and mortality; if the emergency services are connected to specialized care and continuing treatment, the impact is even greater. Rural hospitals and associated clinics are often

the focal point for health care within the community. Patients transferred to specialized services may not have post-acute services readily available when returning to the community, and continuity of care may be compromised.

Lack of clinical volume is a universal issue causing financial problems for rural hospitals. With sufficient clinical volume, a rural hospital can generally survive[2] and be a resource for community health as well as an economic support. The challenge, then, is to provide services in the rural hospitals that provide sufficient volume, are within the scope of practice of the system, and are financially viable. It is also essential to convince the community to use these expanded services and to demonstrate that the community hospital is part of a larger, comprehensive system.

In this model of emulating perinatal regionalization for adult care regionalization, we are making several assumptions:

1. Systems and protocols can be developed between hospitals and implemented, which will allow patients who need specialized services to be transferred without impediment or delay, and these systems will also support the initiation of diagnostic and/or therapeutic care.
2. The capacity of rural hospitals to provide services to patients can be expanded through the use of telemedicine.
3. Transferred patients can and should be transferred back to the rural community hospital after discharge for the following reasons:
   - Fewer errors in terms of post-discharge medicines, rehabilitation, and follow-up appointments, since the local provider can provide support and answer questions as the primary care physician (PCP). By involving the PCP, there will be improvements in communication with both the patients and family, as well as an increase in adherence to post-discharge care plans.[5]
   - Patients prefer to get as much of their care within their community as possible. Upon demonstration that the rural hospital is part of a larger, integrated system, patients will be more likely to use the community hospital as their gateway to care.[6]
   - Rural community hospitals will continue to be an integral component to the delivery of health care in their communities, enhance patient care, and improve the health of the community in accordance with the triple aim of improving the patient experience, reducing cost, and increasing access.
4. With the increase in organized cooperation in patient care between the tertiary hospital and the rural community hospital, there will be growing respect and trust among the providers, leading to improved patient care and patient satisfaction.

If a patient is transferred to a tertiary facility, we believe every effort possible should be made to return the patient to the community hospital for convalescent care and post-discharge planning. It is easier to do this if the rural hospital has a swing bed program, where rural hospitals may use a bed as either an acute care bed or a skilled nursing bed, but every avenue should be exhausted to make this happen. By returning the patient to the community hospital, the patient's family incurs less expense and travel time. Transferring the patient back to the community hospital demonstrates the tertiary center's confidence in the rural hospital and providers in the community. As a result, clinical volume in the community hospital increases, transferring allows the community hospital to provide post-discharge services, and continuity of care is promoted by providers. Finally, the local hospital is the nexus for the continuing care for the patient; local providers are available to answer questions about medications, rehabilitation, and follow-up care, reducing the chance for error and confusion.

Regionalization frees up the tertiary hospital to use its facilities for care that cannot be provided in other settings and may thus contribute to a reduction in diversion times. A system of regionalization would be instrumental in maintaining rural hospitals, which is critical in caring for the rural population. Data on clinical outcomes for common surgical procedures show no significant difference in cost or outcomes between community hospitals and tertiary facilities.[7]

Some health systems are putting similar models in place using traditional "hub and spoke," particularly with stroke and trauma. These models ensure patients' access to tertiary care while working to maintain the rural base. Although the bulk of care in these models will occur in ambulatory settings, those facilities are stronger if there is support from a rural hospital and strengthened with telemedicine.

The survival of rural hospitals is an essential component in providing health care to a rural community, and rural hospitals are integral to the economic development and future growth of the community. With adult regionalization, patients receive required tertiary care, but the community hospital is supported through its use for rehabilitation and continued wellness.

References

1. Lester BM, Hawes K, Beau A, et al. Single-family room care and neurobehavioral and medical outcomes

in preterm infants. *Pediatrics*. 2014;134(4):754-760. http://pediatrics.aappublications.org/content/134/4/754. Accessed June 2019.
2. Wishner J, Solleveld P, Rudowitz R, Paradise J, Antonisse L. *A Look at Rural Hospital Closures and Implications for Access to Care: Three Case Studies*. San Francisco, CA: The Kaiser Family Foundation; 2016. https://www.kff.org/report-section/a-look-at-rural-hospital-closures-and-implications-for-access-to-care-three-case-studies-issue-br. Accessed July 31, 2019.
3. Daniel HB, Snyder Sulmasy LJ. Policy recommendations to guide the use of telemedicine in primary care settings: an American college of physicians position paper. *Ann Intern Med*. 2015;163(10):787-789.
4. Moffatt J, Eley D. The reported benefits of telehealth for rural Australians. *Aust Health Rev*. 2010;34(3):276-281.
5. West C. Coordinating closings in primary care visits: producing continuity of care. In: Heritage J, Maynard DW, eds. *Communication in Medical Care: Interaction between Primary Care Physicians and Patients*. Studies in Interactional Sociolinguistics. Cambridge, UK: Cambridge University Press; 2006:379-415. https://doi.org/10.1017/CBO9780511607172.01
6. Salisbury C, Purdy S. Providing care closer to home. *BMJ*. 2007;335:838. https://doi.org/10.1136/bmj.39371.523171.80. Accessed July 31, 2019.
7. Ibrahim A, Hughes T, Thumma J, Dimick J. Association of hospital critical access status with surgical outcomes and expenditures among Medicare beneficiaries. *JAMA*. 2016;315(19):2095-2103. https://doi.org/10.1001/jama.2016.5618