

### Opportunities and Challenges for Telemedicine

The shortage of specialists, intensivists, and on-call physicians, as well as advances in technology, are driving the growth of telemedicine in the delivery of healthcare across the U.S. Telemedicine refers to the transfer of medical information via electronic communication from one location to another to enhance the quality and efficiency of patient comfort and care.<sup>1</sup> The utilization of communication equipment to link healthcare practitioners and patients in different locations will likely help to achieve many of the healthcare reform goals, including: increasing cost efficiency; improving patient access to specialists (especially in physician shortage areas); and, enhancing communication among providers.<sup>2</sup>

The federal government has predicted a healthcare provider shortage of approximately 24,000 physicians and nearly one million nurses by 2020, which is a concern that may be lessened through the implementation of telemedicine.<sup>3</sup> Through telemedicine, companies such as *Night Hospitalist Company, LLC*, expand access to physicians and nurses within a shortage area by providing telephonic medical care to hospitals with ongoing staffing shortages and diagnostic screening via webcams and instant message to virtual clinics.<sup>4</sup> These services allow healthcare professionals to adequately care for individuals even though the provider may not be physically present. Telemedicine also allows hospitals to expand their market service area by connecting hospital employed physicians to populations outside the hospital's main service area via technology at outlying medical clinics and offices.<sup>5</sup> Implementing telemedicine technology in outlying clinics has the following benefits: (1) keeps healthcare spending within a local community; (2) lowers patient travel for healthcare services; (3) aids community development; (4) provides community benefit; and, (5) increases community health.<sup>6</sup>

Despite the potential benefits of telemedicine, several barriers to the uniform implementation of telemedicine across the healthcare industry exist, i.e. cost, regulatory concerns, reimbursement issues, and lack of standardization. As with any form of technology, telemedicine entails significant capital formation and operating expenses. While the price tag for a complete in-hospital telemedicine studio has decreased from \$200,000 at the beginning stages of the telemedicine

movement to approximately \$30,000 today, those capital requirements may still be cost prohibitive for some providers, particularly those in rural areas, who stand to benefit most from the use of telemedicine.<sup>7</sup>

Regulatory concerns, including licensing issues and accreditation requirements, also present obstacles to telemedicine implementation. Depending on state licensing rules, practitioners utilizing interstate telemedicine may have to obtain licenses in each state where they treat patients. However, licensure laws generally have some exceptions for providing interstate telemedicine without multiple state licenses such as reciprocal licensure, which allows for a mutual exchange of privileges between states.<sup>8</sup> Additional regulatory concerns arise as telemedicine falls under the scope of the Joint Commission's accreditation standards and the Centers for Medicare and Medicaid Services (CMS) credentialing requirements.<sup>9</sup>

Additionally, there is significant disagreement surrounding the determination as to which practitioners should be reimbursed for telemedicine services as well as what method of reimbursement is appropriate. While 11 states have implemented legislation mandating some level of private payor telemedicine reimbursement, the mandates are inconsistent and often misunderstood. State reimbursement policies vary in the percent of technological overhead reimbursed and whether the practitioner or healthcare entity is reimbursed for the healthcare service rendered. Significantly, 32 state Medicare pilot programs include some form of telemedicine reimbursement.<sup>10</sup>

Lack of uniformity, underscored by the range of reimbursement and licensure policies currently in place, has kept telemedicine from gaining widespread acceptance. This lack of standardization may mitigate the effect of evidence-based medicine's ability to drive funding and implementation. To overcome this barrier, leaders at Loyola University suggest healthcare entities perform a needs based assessment in addition to a cost benefit analysis of acquiring telemedicine as a way to better predict outcomes.<sup>11</sup> Despite these and other barriers, approximately 200 telemedicine networks currently exist in the U.S., connecting over 3,000 medical and healthcare institutions throughout the country.<sup>12</sup> Particularly in the wake of healthcare reform,

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experts encourage health entities to withstand and adapt to various barriers and implement telemedicine programs now or risk losing market share in the future.<sup>13</sup>

<sup>1</sup> "Telemedicine Defined" American Telemedicine Association, 2011, <http://www.americantelemed.org/i4a/pages/index.cfm?pageid=3333> (Accessed 2/18/11).

<sup>2</sup> "Does E-Health Stand A Remote Chance" By Gienna Shaw, HealthLeaders, February 2011, p.19; "National Telemedicine Initiatives: Essential to Healthcare Reform" By Rashid L. Bashshur and Gary W. Shannon, Telemedicine and E-Health, Vol. 15, No. 6, July/August 2009, p. 601.

<sup>3</sup> "What Works: Healing the Healthcare Staffing Shortage" PricewaterhouseCoopers' By Health Research Institute, 2007, p.iii.

<sup>4</sup> "Who are We?" Night Hospitalist Company, LLC, <http://www.nighthospitalist.com/nhc.php?pageID=1> (Accessed 2/21/11).

<sup>5</sup> "Night-Shift Solutions" By Lisa Ryan, The Hospitalist, April 2009, [http://www.the-hospitalist.org/detains/article/183090/NightShift\\_Solutions.html](http://www.the-hospitalist.org/detains/article/183090/NightShift_Solutions.html) (Accessed 6/20/09).

<sup>6</sup> "Benefits of Telemedicine" Telemedicine Association of Oregon, January 16, 20-4, Accessed at <http://www.ortcc.org/PDF/BenefitsofTelemedicine.pdf>, p. 2-4.

<sup>7</sup> "Does E-Health Stand A Remote Chance" By Gienna Shaw, HealthLeaders, February 2011, p.22.

<sup>8</sup> "Interstate Licensure of Telemedicine Practitioners" By Glenn W. Wachter, Telemedicine Information Exchange, November 15, 2006.

<sup>9</sup> "JCAHO Published New Hospital Credentialing Standards for Telemedicine" Mondaq Business Briefing, Nov. 5 2003, [http://www.thefreelibrary.com/\\_/print/PrintArticle.aspx?id=109771648](http://www.thefreelibrary.com/_/print/PrintArticle.aspx?id=109771648) (Accessed 7/1/09).

<sup>10</sup> "Does E-Health Stand A Remote Chance" By Gienna Shaw, HealthLeaders, February 2011, p.20-21.

<sup>11</sup> "Does E-Health Stand A Remote Chance" By Gienna Shaw, HealthLeaders, February 2011, p.21.

<sup>12</sup> "What is Telemedicine and Telehealth?" American Telemedicine Association, [http://www.americantelemed.org/files/public/abouttelemedicine/What\\_Is\\_Telemedicine.pdf](http://www.americantelemed.org/files/public/abouttelemedicine/What_Is_Telemedicine.pdf) (Accessed 2/21/11).

<sup>13</sup> "Does E-Health Stand A Remote Chance" By Gienna Shaw, HealthLeaders, February 2011, p.24.



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