

Field Report

HomeLink Support Technologies at Community Living Opportunities

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What if your existing home could be made smarter and detect when you need support? What if there was a new way to deliver care to you right when you needed and only for as long as necessary? These questions, and others like them, have guided Community Living Opportunities, Inc. (CLO) in the innovation of service delivery methods. In concert with HomeLink Support Technologies, CLO has pioneered technology that revolutionizes the manner with which services are delivered to adults with disabilities.

Traditional shift service models require the presence of live staff for potentially lengthy periods up to 24 hours per day for 365 days a year. This type of support is costly, restricts privacy, and will not be sustainable with shrinking costs and an increased need for services. An alternative model involves remote monitoring and support using smart home, security, and sensor technologies. Fortunately, this technology and new service model is presently available and feasible.

CLO is a not-for-profit organization founded in 1977 in Kansas. CLO's mission is to make a meaningful difference for adults and children who have developmental disabilities by helping them to achieve personally satisfying and fulfilling lifestyles in the community. Since its inception, CLO has partnered with faculty and graduate students from the Department of Applied Behavioral Science at the University of Kansas, who have been instrumental in creating and developing its service model. The Chief Executive Officer, Dr. Michael C. Strouse, has published articles and chapters on decreasing staff turnover, consultation, developing effective services, and the family teaching model. CLO provides a full spectrum of lifespan services for more than 600 children and adults

with special needs, primarily in eastern Kansas. Services include community living, day services, behavioral consultation, targeted case management, children's services, and health-care supports.

In recent years, CLO has adopted innovative technology adapted by HomeLink Support Technologies to maximize the quality and benefits of the services provided to consumers. "This is an amazing package of technologies that maximizes and preserves independence in ways that will soon change how we provide services and lower costs," said Strouse. The technology allows for personal two-way video and audio interaction, and provides "on-demand" support for individuals with disabilities in their home. That is, support is customized to the needs of consumers through passive (e.g., sensors) and active (e.g., video) monitoring agents. Professionals positioned in a central monitoring suite increase their assistance when a monitoring agent is activated and/or when support is sought by consumers (Figure 1). Assistance may take several forms including, but not limited to, video or audio coaching, remote teaching and prompt fading, deployment of roving staff, and community-based emergency services (Figure 2). Prespecified

individualized privacy protocols dictate the actions of professionals as they proceed through increasingly intensive forms of support. CLO has been the recipient of grants through JFM Foundation and the John W. and Effie E. Speas Memorial Trust that have funded the research and development of this service model. For example, a living laboratory serves as the base for all sensor development and pilot testing. It was built to simulate a home environment and contains a fully furnished living room and bedroom. To fully emulate a typical home, the living lab is connected to the HomeLink monitoring facility exactly like any home would be connected via residential grade cable broadband (there is no direct LAN connection). The lab allows the research team to assess functionality and feasibility of the developed sensors and smart home technology in a controlled and conveniently located setting under a similar set of transmission conditions as any home.

Dr. Strouse believes that adoption of HomeLink Support Technologies can dramatically improve the efficiency of human service delivery while simultaneously protecting consumers' personal liberties. This technology also has potential for substantial cost-savings. "We have combined this technology with a new, highly deployable, community service model across neighborhoods and are offering support when needed and on demand. Imagine the financial and quality of life impact of getting the right support remotely or in person, when you need it, and only pay for what you need," said Strouse.

Figure 1. Close-up view of HomeLink Support Technologies central monitoring suite.



Figure 2. Photograph of HomeLink Support Technologies on-demand services in action.



CLO is collaborating with researchers from the University of Kansas to evaluate and refine various features of the technology and service model. The researchers anticipate that the findings from these projects will serve as a paradigm shift in residential services across the lifespan. Strouse communicated, "The paradigm shift is the creation of a new service model that bundles technology with remote supports, deployable paid supports that live in the community where services are needed, and the rich natural supports of a caring neighborhood—all connected together by social networking and high technology. We call this new neighborhood support model a Virtual Village, and our goal is to provide independent on-demand supports across special need populations, neighborhood by neighborhood." For more information on CLO, please visit <http://www.clokan.org/>. Information on HomeLink Support Technologies may be found at <http://www.homelinksupport.com/>.

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