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AI Innovations for Person-Centered Empowerment in Home and Community-based Services for Individuals with Intellectual and Developmental Disabilities

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Abstract

Support planning for people with intellectual and developmental disabilities receiving home and community-based services takes up considerable time and resources, often producing inadequate results and a shortage of quality resources for implementation. After decades of struggling with the challenges of developing empowering, person-centered support plans and wrestling with implementing those plans, Arkansas Support Network (ASN), in partnership with Awake Labs, developed a planning process that anchors the agency's values and support goals into all aspects of day-to-day services, creating a tool to ensure high-quality plans and practical plan implementation. Visioning an Empowered Life (VEL) overhauls traditional disability support and leverages artificial intelligence (AI) and collaborative planning to create a holistic, person-centered system. Initial feedback suggests VEL enhances service delivery, improves the quality of support plans, and provides more relevant guidance for direct support professionals (DSPs).

Keywords: person-centered planning, disability services, artificial intelligence, strengths-based approach, Visioning an Empowered Life (VEL)

AI Innovations for Person-Centered Empowerment in Home and Community-based Services for Individuals with Intellectual and Developmental Disabilities

The landscape of disability services has long been challenged by systemic issues that can inadvertently limit the autonomy and potential of individuals receiving support. Among these challenges are fragmented information trails that fail to capture a person's wholeness, including history and aspirations, a pervasive deficits-oriented focus that prioritizes limitations over strengths, and significant operational inefficiencies within provider organizations. Arkansas Support Network (ASN), a home and community-based Medicaid waiver service provider committed to person-centered support and rejecting traditional, segregated service models, has consistently sought innovative ways to overcome these barriers. The core philosophy of ASN is not just to be a quality support provider, but to actively empower people by understanding and addressing the systems of oppression that influence their lives.

This drive for better, more empowering support led to the conception of Visioning an Empowered Life (VEL), a system designed to fundamentally reshape the planning process. The aim was to create a platform that not only addresses systemic inefficiencies and fragmented information but also actively mandates a shift toward a strengths-based perspective. This article details the development, core components, functionalities, and initial impact of the VEL system.

The VEL System: Vision and Development

VEL is a planning and framing platform developed to operationalize ASN's commitment to person-centered, empowering support by incorporating established

frameworks and leveraging technology. The vision for VEL was born out of the practical struggles and ethical imperatives faced by ASN in its daily work.

Core Components

The development and functionality of VEL are anchored in five core components:

- **true person-centeredness:** moving beyond superficial applications to genuine empowerment and choice for the individual.
- **equity and inclusion:** prioritizing social justice and accountability in all aspects of service delivery.
- **collaborative empowerment:** ensuring that the individual and everyone involved in their support network can contribute meaningfully.
- **professional excellence:** committing to high standards in service provision.
- **technology innovations:** embracing technological advancements to standardize and improve support services, especially given the challenges of a geographically dispersed and under-resourced workforce.

Core Functions

VEL was designed with three primary functions:

1. **Dynamic exploration:** We utilized tools in the Charting the Life Course, a dynamic, person-centered planning framework designed to empower and support all people to design, plan, and live good lives (LifeCourse Nexus, n.d.) to capture a holistic understanding of the individual receiving services, focusing on who they are as whole persons beyond diagnoses or limitations.
2. **Leveraging AI ethically:** We used AI to generate support strategies but critically trained the AI to counter societal biases often reflected in AI models.

The AI is trained with specific doctrines to ensure outputs align with ASN's core values.

3. **Actionable outcomes:** We created clear, simple resources and materials to guide DSPs and other supporters in their daily work, enabling them to provide empowering support without extensive, complex philosophical training.

Development and Collaboration

The VEL project was funded by an innovations grant made available through the Arkansas Enabling Technology ARPA project. Awake Labs, a technology company with expertise in the disability sector and a philosophy of deep listening and collaboration, became the key technology partner. Awake Labs was instrumental in translating ASN's vision into technical requirements and building the AI component within a challenging timeframe of approximately five months.

A crucial aspect of VEL's AI is its training. The AI model was trained on a comprehensive set of values and frameworks, including:

- **Charting the Life Course** (LifeCourse Nexus, n.d.): for exploring a person's life and structuring information.
- **Council on Quality and Leadership (CQL) Basic Assurances** (CQL, n.d.-a): incorporating basic assurances and their personal outcome measures.
- **The 10 Principles of Disability Justice by Sins Invalid** (Sins Invalid, n.d.): ensuring all outputs align with these principles of social justice.
- **NADSP Code of Ethics** (National Alliance for Direct Support Professionals, n.d.-a) and **Core Competencies** (National Alliance for Direct Support Professionals, n.d.-b) guiding the creation of implementation materials for DSPs.

This training ensures the AI produces content that meets the test of these core doctrines, moving beyond generic or potentially biased outputs. The system was designed to be compliant with the Health Insurance Portability and Accountability Act (HIPAA), with safeguards to protect personal health information and ensure data privacy for everyone, while continuing to maximize access to large language model AI to inform support plans with local community resources and opportunities.

Support Planning Process

The VEL exploration and planning process unfolds in five distinct steps:

1. **Life course exploration:** This is conducted by trained VEL facilitators, who are often Charting the Life Course ambassadors (LifeCourse Nexus, n.d.). The phase focuses on gathering holistic information about the person, their strengths, goals, and vision for a good life. The system uses dynamic forms that can be adapted based on life stage, ensuring relevant questions are asked and offering a significant improvement over previous static assessment processes. Emphasis is placed on capturing celebrations, traditions, and personal preferences to enable meaningful support.
2. **Technology acceptability exploration:** Recognizing that the effective use of enabling technology is influenced more by acceptability than ability, VEL incorporates a survey to explore perceptions and beliefs about technology among the individual and their support network and uses this insight in the goal development process.
3. **Interests and priorities:** Facilitators work to solicit this information comprehensively. The information is then fed into the trained AI tool.
4. **VEL discovery and goal selection:** The AI generates potential goal areas based

on the exploration. Crucially, the individual then chooses which goals they wish to focus on, ensuring and empowering their agency in the process.

5. **Developing actionable resources:** Once the goals are selected, standardized prompts are used to instruct the AI to break the goals down into SMART (specific, measurable, achievable, relevant, time-bound) goals and generate a variety of support and implementation materials.

Role of VEL Facilitators

VEL facilitators are critical to the success of the system. ASN shifted its training focus from attempting to instill a complex philosophy in its workforce to deeply investing in a smaller group of 40–50 facilitators. These individuals lead the exploration conversations, ensuring the capture of high-quality information and appropriate engagement with the system.

Outputs and Impact: The Case of "Sarah"

The output from VEL is comprehensive and practical. "Sarah" (a pseudonym for a person with cerebral palsy who uses assistive technology to communicate and has a college degree), had previous goals that were simplistic, insufficient, and limiting, including vague objectives like "build employment profile" and "drink more water." These goals did not reflect her capabilities or aspirations and offered little guidance to DSPs.

After going through the VEL process, Sarah selected goals focused on attending local art events and volunteering for community projects. From these selections, VEL generated:

- **SMART goals:** clearly defined and measurable objectives.
- **DSP support strategies:** summaries helping DSPs understand their role and how to provide support.
- **Technology recommendations:** based on Sarah's expressed interest in eye-

gaze technology as she aged, VEL provided specific systems to investigate.

- **Community resources:** relevant local resources to support her goals.
- **Shift guides:** specific guidance for DSPs working different shifts, clarifying responsibilities and promoting teamwork.
- **Direct support affirmations:** scripted sentences for DSPs to frame their role positively (e.g., "I support Sarah in achieving her goals and dreams") and affirmations for Sarah herself.

Sarah's feedback was that VEL "strongly enhances ASN service delivery" by providing more personal goals and specific ways for DSPs to assist her, which was particularly helpful as she is "not necessarily a planner." VEL has also been used to create position summaries for DSP recruitment based on the interests and activities of the person being supported.

Discussion

The introduction of the Visioning an Empowered Life (VEL) system has generated positive feedback from various stakeholders within and outside Arkansas Support Network. Individuals receiving services, like Sarah, have highlighted the shift from generic, unhelpful goals to personalized, actionable plans that provide clear direction for their support teams. This underscores VEL's potential to enhance the quality of life and promote self-determination. Behavioral health clinicians at ASN have noted the significant improvement in the quality and comprehensiveness of referral information generated by VEL, contrasting it sharply with previous minimalist referrals. Person-centered planning specialists and life course ambassadors who participated in piloting VEL anticipate that VEL will free up valuable time previously spent on resource research, allowing them to focus more on the direct implementation of supports. The DSP Advisory Council at ASN expressed the view

that VEL provides what they have been asking for, particularly in helping new DSPs understand both the person they support and their role more effectively. Similarly, the ASN Advocate Advisory Council, composed of individuals receiving services, provided positive initial reactions, with one participant calling it a "really good idea."

The development of VEL, although rapid, was meticulously documented, creating a blueprint with the potential for scalability. The system's framework is adaptable; while ASN utilized Charting the Life Course (LifeCourse Nexus, n.d.), CQL Basic Assurances (CQL, n.d.-a), SINS Invalid principles (Sins Invalid, n.d.), and NADSP competencies (National Alliance for Direct Support Professionals, n.d.-b), the AI can be trained on different frameworks or state-mandated requirements, making it potentially applicable to other organizations, state systems, or managed care entities. The goal is to create a system that allows any support team to function as effectively as the very best, most aligned teams by embedding best practices and person-centered values into its core operations.

This project demonstrates that by thoughtfully combining human-led, values-driven exploration with ethically trained AI, it is possible to create planning tools that are not only efficient but also deeply empowering for individuals with disabilities and the professionals who support them. Future research will focus on publishing data on the outcomes and broader implementation of VEL.

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