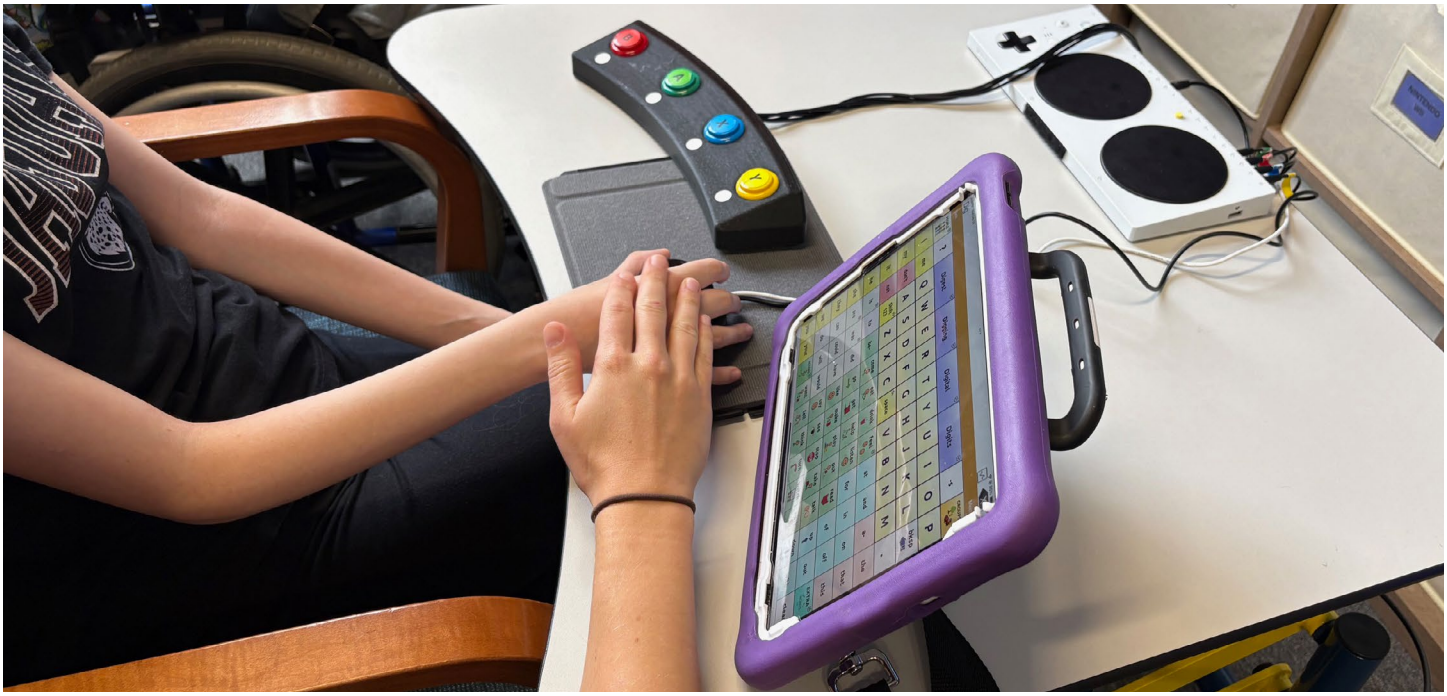
Social gaming:

The intersection between functional communication and adaptive gaming for pediatric clients

Summary: After reading this article, readers will learn about an exciting style of group therapy focusing on functional communication using video gaming as a fun and motivating activity. The "Game n' Gab" group brings a multidisciplinary approach between speech and occupational therapies blending communication and access. Readers will see how gaming can be used as a powerful method for engagement, leading to increased communicative efforts between group members. Readers will receive insight into how to incorporate principles and methods outlined in their own settings.



RILEY HANLINE is an Occupational Therapist with a strong passion for assistive technology and adaptive gaming, dedicated to empowering individuals with disabilities. Currently, Riley works in the Adaptive Computer and Communication Technologies (ACCT) department at AbilityKC, providing innovative assistive tools designed to help clients thrive in education, work, and daily life. In addition, Riley works with ReSpawn Foundation, a nonprofit organization committed to advancing inclusion of adaptive gaming within hospital and rehabilitation settings, providing education and therapist support to those served.

LILY MACHALEK is a Speech-Language Pathologist (SLP) with a specialized focus on Augmentative and Alternative Communication (AAC). With a passion for empowering individuals with communication needs, Lily has built a career dedicated to providing high-quality, individualized treatment and evaluation services to individuals across the lifespan who require alternate methods of communication. Currently, Lily works within the Adaptive Computer and Communication Technologies (ACCT) department at AbilityKC where she primarily focuses on evaluating and providing therapeutic services for individuals who use communication devices, ensuring that each person's needs are met with the most appropriate technology and interventions.

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Increasingly in modern culture, video games have become a ubiquitous medium for leisure activity and engagement, in addition to being an extremely common social pastime for much of the American population. According to the Entertainment Software Association, there are over 205 million Americans playing video games at least an hour each week, with over 85% of Gen Alpha and Gen Z playing. More children than ever are using video games as a primary source of social engagement and connection, as many games are cooperative in nature, and support shared collaboration efforts between players. Close to 80% of Gen Alpha and Gen Z report playing games with friends and being introduced to new friends through video games. With a unique ability to contrive fun, motivating, and rewarding social interactions, video games offer a powerful leisure activity to increase engagement in social situations. However, with many video games requiring precise controls and specific motor skills for success within the game, the activity previously has been a highly inaccessible activity for children with disabilities.

In the last half-decade, there has been an explosion in support for adaptive gaming from large video game companies. There are now more options than ever for children with disabilities to engage with video games previously thought inaccessible due to physical or cognitive barriers. Products like the Xbox adaptive controller, PlayStation access controller, and Hori flex controller have enabled access to gaming otherwise thought impossible. Using this unique and bespoke equipment, playing video games has become accessible to a large audience of people with disabilities, and have been able to engage with their like-minded peers who want to enjoy the occupation of gaming. Disabled siblings, peers, classmates, and more now can socially engage and connect on a level previously thought impossible.

Morghan and Axton work together to play *Paw Patrol.*

As gaming becomes more accessible to a variety of populations with severe physical or intellectual disabilities, there arises a unique opportunity to use gaming as a motivating factor for social engagement with peers. AbilityKC, a comprehensive outpatient rehabilitation facility in Kansas City, offers this opportunity through a group model for clients with both physical access and social communication needs. Group participants are those that require training for functional communication through their speech generating device (SGD), with gaming being a motivating, fun, and rewarding experience for clients to engage with. Through a multidisciplinary approach, clients are evaluated for access needs by an occupational therapist who provides ongoing support for personalized setups to allow engagement with the video game, while a speech therapist encourages communication using cooperative video games as a motivating and engaging stimulus. The result offers clients a sense of empowerment and fulfillment, as they are enabled to access a previously inaccessible activity that many of their peers are engaging in, all while bringing social opportunities to facilitate increased functional communication through use of their SGD. This article seeks to highlight the group that was started and share lived experiences of the children and their families.

THE BEGINNING

The idea for the group started with a medically complex client – Axton – and the journey to provide him with engaging and motivating activities to spark use of his SGD. Axton presents with an anoxic brain injury, which has left him virtually paralyzed with very little movement capabilities in his head and extremities. Switch access was very minimal – with just a little movement at the head – and eyegaze quickly became the necessary and chosen access method. Using TD Snap on his i13 device, he communicates to caregivers his basic needs and an expanding vocabulary as he continues training. His ACCT speech language pathologist, Lily Machalek, would spend sessions trying various activities, such as switch activated toys, music, art, and vestibular input. Axton would then use his device to engage with the activity through decision making or commentary. However, activities quickly became stale, and engagement with his device would decrease session over session. After a while, Lily eventually requested a co-treat with Riley Hanline, the occupational therapist within the ACCT department.

To further explain how the group was able to come into being, it becomes necessary to delineate services offered at the facility where the group takes place. AbilityKC, a large outpatient rehabilitation facility based in Kansas City, MO, offers a comprehensive suite of outpatient services including a unique day program model, in addition to specialty departments. One of the specialty departments at AbilityKC is the Adaptive Com-

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Participants use the 'Xbox Controller Assist' feature to play cooperatively.

puter and Communication Technology (ACCT) program, which provides assistive technology solutions to patients, including augmentative and alternative communication (AAC), and adaptive gaming. The ACCT department hires full-time therapists to work exclusively with assistive technology as their primary job duties. Within the department, Lily, the SLP, and Riley, the OT, are often able to combine areas of expertise resulting in functional outcomes. As such, it was only natural for Lily to pull in Riley to assist with Axton.

During that initial co-treat, Axton was observed to have much more engagement with the activity, as evidenced by more frequent device activations and less closing of his eyes. He was able to engage with his device more often and participate in an activity with an immediate response to an action that he performed, rather than one that was done for him. Lily noted that he had not ever shown as much volition and excitement with an activity prior to trying gaming. From this initial treatment, it became clear that using gaming as an activity could provide clear motivation to utilize a SGD, and continue training and device mastery even past typical speech treatment. It was at this time that Lily produced the idea for a multidisciplinary group, one that melds the expertise of ST and OT, working on distinct goals of communication and access. Both disciplines could each target specific goals tied to their respective areas, but work towards a very functional outcome, one in which the group participant could use their device to communicate in addition to accessing an extremely common pastime that their same-age peers are doing. Now that the idea was formed, it was time to recruit the other group members, and to identify what adaptive gaming equipment was needed to run the group.

EQUIPMENT

The equipment used to make the group work and enable access for the kids is a mix of officially made tools from first party companies such as Microsoft, and third-party adaptive equipment from various other organizations and makers. For Axton, several pieces needed to be sourced for his access. Pretorian Technologies, an AT company that makes several types of equip-

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ment, makes a device called the "Game on 1", an infrared receiver box that works by plugging into an Xbox adaptive controller (XAC). The box accepts infrared signals that an AAC device can send, using a custom page within grid, also made by Pretorian. With this setup, Axton can use his access method of eyegaze to interact and play independently with his peers. Custom gaming page sets for Axton often included large accessible buttons for gameplay engagement, in addition to speech buttons to remark on gameplay and for interactions with peers. For Axton's fellow group members, there was a mix of other types of gaming equipment used.

Other group members, with more available physical moves for access to controllers or equipment, use different types of switches, joysticks, and standard controllers, all made possible with the XAC. As referenced before, the XAC is an adaptive controller which functions as a switch interface for an Xbox console. Most games that were played required 2-4 buttons and one joystick, and each group member would be set up with the relevant number of inputs needed. A common setup could include an 'A' button and a 'B' button, in addition to an external joystick to control character movement, all plugged into the XAC. This could allow a group member to move their character and perform a jump and interact style action. At times, standard controllers could be utilized as well, in addition to use of the 'Xbox controller assist' feature. Xbox controller assist allows two controllers to work together to control one in game character or game piece, allowing for a natural way to spark communication between group members, and account for increased complexity of inputs required from the player. With all these hardware options available to the group members, an equally critical issue needed careful consideration: game selection.

THE GAMES

Game selection from the beginning was an important part of group creation and quickly became a complex issue needing careful thought and consideration. Not only did games need to be physically accessible to all group members, but they also needed to be age appropriate, interesting, provide clear objectives, and foster communication between players. To illustrate the selection process and why certain games were chosen, Paw

Riley double checks to make sure switches are plugged into correct places.

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Patrol: World will be used to frame all considerations in the selection process. In this game, players play as various Paw Patrol characters, being put into a town with clear objectives and missions outlined. Mission examples include saving a bird from a tree using the firefighter character named Marshall or finding a lost cat using the police character Chase. Missions and objectives all follow under a larger objective under the overarching story, to save the annual Paw Patrol Day Festival from the Mayor Humdinger character. As Paw Patrol was an interesting and engaging IP for kids in the group, it seemed a natural fit, especially as the physical and cognitive requirements matched with group member needs.

Physically, this game requires several inputs, with one joystick needed to move characters, and 2-4 buttons to control actions such as jump, interact, and switch characters. For one group member, it may have been challenging to control all inputs with the necessary coordination and cognition required. However, with Xbox controller assist, two group members could be paired, to allow one member to control joystick movement, and one group member to control the jump and interact options. In this manner, peers would receive controls that were conducive to physical access, in addition to requiring communication to proceed in the game and perform successful actions.

For example, a mission within the game required players to clean-up a bridge with scattered treats which blocked the flow of traffic. Players had to direct character movement toward the bridge, switch to the 'Rubble' character, and use his construction bulldozer to clean up the mess. This mission required one player to move the character, and their peer to press the necessary buttons for character switching and vehicle use. Throughout the mission, players would have to communicate to talk about where to go, which character to switch to, and what actions to perform. In this way, simple missions within the game fostered communication, supported physical access, and captured attention and engagement. Other games were likewise chosen for similar reasons. Examples of other games played were Rush: a Disney-Pixar Adventure, Disneyland Adventures, and digital board games like Monopoly and Uno.

FORMAT & PARTICIPANTS

Group formatting was chosen to support communicative efforts throughout and provide opportunities for interaction and engagement. Members were chosen based on age range and general cognitive abilities, communicative goals needing work, and access abilities. The group ran once a week in 1-hour blocks, with multidisciplinary group codes being used to bill insurance. At the start of each group, social greetings were encouraged in addition to introduction of the chosen game and controls needed, along with instructions for how to play. During gameplay, clinicians provided natural models of communication and individualized prompting to each kid based on skill level, method of communication, and learning style. During breaks, clinicians would provide opportunities for communication through answering questions about the game, making group decisions about gameplay, and sharing opinions about game. End of sessions would include closing thoughts about the day, and goodbyes.

Lily supports Morghan's use of a dome style joystick.

To highlight examples of strong candidates for the Game n' Gab group, other group members that played alongside Axton can be highlighted. Morghan is a teenage girl with a diagnosis of selective mutism and TBI, who uses an AAC device to support her language. Physically, she can access a standard controller and utilize spoken language but often benefits from both AAC and adaptive gaming equipment to support her communication and access. Adaptive gaming equipment also simplifies access, enabling her to focus on 1-2 inputs and giving her increased bandwidth to focus on communication and collaborating with peers for in-game success.

Another group member is Jacob. Jacob has a diagnosis of quadriplegic cerebral palsy and presents in a manual wheelchair. He is a very sociable kid and prefers to use his voice to communicate but often needs AAC device assistance due to significant dysarthria. Physically, he has spasticity in all extremities causing increased tone. This tone inhibits his ability to access standard controllers and as a result Jacob needs the use of external joysticks and switches to enable gameplay. He also uses a device called the Lipsync, a sip and puff controller that allows him to

control movements with his head.

The final group member is Sara, with a diagnosis of SCA 19 gene mutation, leading to deficits in upper extremity coordination and strength, fine motor control, and visual perception and motor difficulties. Although she can use her voice to communicate, she has an AAC device to assist with communication breakdowns.

Overall, all group members qualified for inclusion due to being interested and motivated by video games, in addition to benefitting from gaming as a central activity to spark communication and collaboration.

POSITIVE OUTCOMES

Over the course of the latter half of 2025 and into 2026, there have been many noted benefits from group delivery. In the larger picture, many subjective benefits were observed from group members and their families. Parents have reported the group being the highlight of their week, with kids not wanting to miss group time even when not feeling well. Parents have made comments that they never thought their child could participate in an activity like this, noting the physical and communicative barriers present. Families even report carryover to the home environment, with several kids playing with family members after being shown how to set up controls.

Relating to individual outcomes, Morghan was noted to increase spontaneous remarks, in addition to general fading of prompting to initiate social interaction. Full verbal models and prompts were introduced and used with new games, and over time Morghan was able to interact with fading of prompts first to cloze phrases and finally to light verbal hints. For Jacob and Sara, the group provided a natural and real-life setting for AAC device use and implementation, in addition to participating in a same age peer activity not normally available. Axton benefited from volitional and independent access to an activity never thought possible due to enablement using adaptive gaming equipment. In the end, the group has provided numerous benefits for all individuals involved, providing tangible opportunities for social engagement sorely lacking for these types of populations.

CHALLENGES

The group was not without its challenges, especially a new group without much precedent. Taking structured group data for interactions was a challenge, as much time of the therapists was spent encouraging and assisting with communication, or supporting physical access to games. Game selection was an ever-evolving struggle, as games had to work on numerous levels, including being fun, offering an accessible experience, and age-appropriate. For other facilities, a dedicated space and the time allotted to therapists may not be within the scope of treatment delivery. In addition, knowledge of video games and adaptive gaming equipment may be required for initial setup. Billing may be an issue as the financials of each facility can vary, in addition to finding group members with billable insurance.

Riley adjusts Jacob's joystick positioning.

NEXT STEPS

Despite these challenges, the Game n' Gab group presents a unique and interesting style of treatment that may warrant further iteration and evolution. One hope from this article being written is that other therapists will see the value of a social gaming group and offer their own versions with their own improvements and enhancements. For AbilityKC, future offerings may benefit from more structured programming and activities, with fleshed out lesson plans and data sheets to further show objective improvements in communication and access. It is the hope that this group continues to grow and iterate, increasing access and social opportunities for a population that sorely needs it.

PRODUCT INFORMATION

- AAC Device with mount
- Xbox Adaptive Controller ($100) - https://www.xbox.com/en-US/accessories/controllers/xbox-adaptive-controller
- Logitech adaptive gaming kit ($100) - https://www.logitechg.com/en-us/shop/p/adaptive-gaming-kit-accessories.943-000318?utm_source=-Google&utm_medium=Paid-Search&utm_campaign=DEPT_FY26_Q3_USA_GA_B2C_Always-on-Gaming-Base-Plan_Google_CVR_na&gclsrc=aw.ds&gad_source=1&gad_campaignid=21344440017&gbraid=0AAAADDQ2OxKUMfjWHwak2ObLfy-QORr8K&gclid=Cj0KCQiA18DMBhDeARIsABtYwT1gln9WOI-9RiWUYDQQ-ZvO5rLLYNohhBregvttLM7mTKecTA1CH9iQaAl-8JEALw_wcB
- External joystick – Various Sellers, no official 'best-in-class'. Example Etsy seller: https://www.etsy.com/shop/SevenMileMountain?ref=shop-header-name&listing_id=1688829136&from_page=listing&section_id=37784302
- Praetorian IR box ($435) - https://www.inclusivetlc.com/shop/game-on-1/
- Lipsync ($325) - https://www.makersmakingchange.com/product/lipsync/01tJR000000698fYAA ■

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