

Conard family - 2

This is Kansas Profile. I'm Ron Wilson, director of the Huck Boyd National Institute for Rural Development at Kansas State University.

The bow sweeps across the strings of the violin and the sound of the music floats across the room. But this isn't just any violinist. It is a girl originally from China who is missing one hand. She's using an innovative and unique type of device with a prosthesis to play the violin, and she lives in rural Kansas. It's today's Kansas Profile.

Last week we met Shawn and Gayly Conard. Shawn is a family doctor at Minneola District Hospital, south of Dodge City.

Gayly met Shawn while they were students at K-State. She came from a farm near the rural community of Westphalia, population 166 people. Now, that's rural. When she was in junior high, her family hosted a foreign exchange student from China. This exposure helped broaden her horizons about a wider world.

Gayly served as a state FFA officer and later traveled in the mission field. She married Shawn and, while he was in medical school, they spent a couple weeks in China as part of a language program.

Shawn ultimately became a family doctor in Minneola, which suited the small town upbringing of both he and Gayly. They had two kids and decided to adopt additional children. Now they have six children, ages 3 to 13. Four of those were adopted from China. Three of them have special needs.

Their daughter Clara is now six years old. She has congenital limb deficiency, meaning in this case that she has no hand on one arm. But this doesn't seem to slow Clara down. She has become a medal-winning gymnast, for example.

Clara's older siblings play strings so Clara wanted to do the same, but the patented bow adapter did not work well with her prosthesis. Gayly looked online and learned about the Fab Lab at Independence Community College, which we have previously profiled. The Fab Lab had been able to use its 3D printer to create prosthetic hands for other children in southeast Kansas, and is looking for other such clients to serve.

Gayly contacted Jim Correll, Fab Lab director, and ultimately went to Independence. "They were so great," Gayly said. "They welcomed us with open arms." Jim Correll brought in the local orchestra teacher to help advise on how to adapt for the violin. Ultimately, Clara was able to use her device to produce a better musical tone than before, but the device kept slipping off her short forearm.

Next Jim Correll reached out to a leather craftsman in Coffeyville, and he created a custom leather apparatus that used straps to connect the 3D printed device to Clara's upper forearm, with a hinge at the elbow. "It's been really good," Gayly said. "She can put more pressure on the strings and it sounds great. Clara's taking lessons from a wonderful teacher in Dodge City," Gayly said.

How interesting that age-old leathercraft has been connected with modern 3D printing. More importantly, a young girl is overcoming a disability and developing a new artistic form of expression.

As a family doctor, Clara's father Shawn Conard also sees the general benefits of using 3D printing technology. Such technology can create new types of prostheses more quickly and less expensively than before. The process of getting an artificial hand, for

example, has been transformed. “It’s gone from weeks to days, and from thousands of dollars to hundreds,” Shawn said.

Meanwhile, on their most recent adoption trip to China, Gayly reconnected with someone: The foreign exchange student that her family had hosted decades ago. “He is still like a brother,” she said. “He met us in Shanghai and went with us on the bullet train to get our new baby.”

How remarkable that this international connection reaches across the miles and across the decades, and that children’s lives are better as a result.

The bow sweeps across the strings of the violin and the sound of the music floats across the room. This isn’t just any violinist, it is Clara Conard using her innovative device. We salute the Conard family for making a difference by adopting children and the Fab Lab for helping them. It makes beautiful music.

For the Huck Boyd National Institute for Rural Development, this is Ron Wilson with Kansas Profile.