

TeenCope



Using Technology to Help Teens Cope with Chronic Illness

Thanks to a grant of more than \$3.4 million from the National Institute of Nursing Research, Yale University School of Nursing is using the internet to help teens cope with type 1 diabetes.

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In early March, YSN launched an internet-based coping skills training program for adolescents ages 11-14 aimed at addressing some of the daily challenges of living with type 1 diabetes. The website, titled “TeenCope,” will provide information on coping skills to help teenagers learn how to deal with certain social situations and will allow them to interact with other teens with the illness.

“It helps teens to not feel so alone and helps them to know that there are other teens out there that feel the same way and are dealing with the same things,” said Robin Whittemore, PhD, APRN, an associate professor at YSN and the program’s co-principal investigator with Dean Margaret Grey. “It’s not just the interaction with the other teens, but it’s hearing that their feelings are normal since they may not have someone else in their school who they can share that with. They just need to have their own feelings validated by another voice.”



Phillip Simon (Project Manager, ITS), Robin Whittemore (Co-Principal Investigator, YSN), and Lisa McNellis (Art Director, ITS) review designs for the “TeenCope” characters.

The TeenCope website is divided into five weekly programs, and each session has a different focus or “coping skill of the week.” The skills range from managing stress to conflict resolution. The teens will be able to create their own profiles and join discussion groups with others on the site. Everything will be monitored by a health care professional to ensure the safety of the users.

The YSN researchers worked collaboratively with Yale University’s Information Technology Services (ITS) team and teenagers with type 1 diabetes to develop the site, which features a cast of diverse characters who suffer from the disease. A graphic novel format with animation is used and characters are placed in scenarios where they encounter problems and come up with solutions.

“Scenarios are presented on some of the common problems teenagers would come across,” Whittemore said. “Children, and teenagers in particular, with type 1 diabetes have a lot of challenges on a daily basis. They need to monitor their blood glucose and insulin dose daily; by the time they reach adolescence, some social situations get in the way. They may not want to tell their friends they have diabetes or they don’t want to take out their equipment in a group.”

Grey has developed and tested the

coping skills training program at YSN for the past 10 years. When provided in-person, Whittemore said the program demonstrated a significant improvement in metabolic control and overall quality of life in adolescents with type 1 diabetes.

“Now we are seeking an alternate way to provide the program beyond our geographical area,” Whittemore continued. “We have found it challenging for teens to meet in a group setting because of increasingly busy schedules, and the internet program greatly helps with this.”

“By using internet-based coping skills training, adolescents are much more likely to get online on their own time than go to a clinic for a meeting,”



Dean Margaret Grey’s initial research on coping skills training for adolescents with type 1 diabetes was recently identified as one of the top 10 Landmark Studies by the National Institute of Nursing Research.

Grey said. “We have found that 40–50% of kids could not meet with a group due to their activities. Now we are able to connect with them on their own time, and we now reach 90% of the eligible children.”

“We thought it would be great to see if we can translate this to the internet,” Whittemore said. “Adolescents are particularly technology savvy, so a program provided over the internet may be appealing and effective in this population.”

In order to determine if the TeenCope program is helpful to teens with type 1 diabetes, it will be compared with an internet-based education program, called *Managing Diabetes*. The *Managing Diabetes* program was also developed by the Yale ITS team, in collaboration with Grey and Whittemore’s research team. This program provides age-appropriate education content on nutrition, exercise, glucose control, and new technology. The teens will spend one year in their respective program before switching to the other program for six months, which means the entire research period will last 18 months. Important health outcomes such as metabolic control, psychosocial adjustment, and quality of life will be evaluated.

The study is evaluating the internet programs in a multi-site clinical trial involving 300 adolescents from different areas in the United States, including Yale’s Pediatric Diabetes Program, the Children’s Hospital of Philadelphia, the University of Miami, and the University of Arizona.

“It is exciting for us to connect adolescents with type 1 diabetes from all around the country, and we hope teens think so too,” added Whittemore. “Adolescents with type 1 diabetes are at risk for deteriorating metabolic control as well as psychosocial issues. Providing the TeenCope program over the internet is an innovative medium to engage and connect adolescents, and most important, has the potential to improve their physical and emotional health.”