Testing Glycemic Control and Quality of Life at Home and at Camp

By Dr. Amy Daru and Kyle Dinunno, Research Assistant

The Barton Center, in collaboration with Dexcom Inc. and the University of Massachusetts Medical School, is extremely happy to announce that the glycemic control study at camp this summer was a great success. The Barton Center, which remains one of the premier camp environments that promotes both diabetes education and increased comfort with diabetes, was eager to identify differences in glycemic control between the camp and home setting, as well as identify how individuals feel about their diabetes when at camp versus home. Even more excitingly, many campers were exposed to the new Dexcom G6 device for the first time through this study. Dexcom Inc. helped supply the study with the first ever FDA approved continuous glucose monitor that does not require any finger sticks to identify blood glucose levels. Dexcom’s generosity allowed the research team to complete this important and fruitful study. The research team, led by principal investigator Dr. Amy Daru, consisted of Kendra Magyar and Kyle Dinunno.

The overall purpose of this research was to determine the physical and emotional benefits of attending a diabetes camp for individuals with type 1 diabetes. The glycemic benefits were identified by providing a complete Dexcom G6 system (including sensors, a transmitter, and a receiver) to prospective study participants for one week at home (“home-week”) and one week at camp (“camp-week”), with the home-week occurring the week prior to the camp-week. The Dexcom G6 monitors blood sugars every five minutes and calculates the participant’s overall time in range, defined as time spent within a standardized range of blood sugars. This key statistic was calculated during the subject’s home-week and camp-week, and the two values were compared to evaluate in which environment they maintained better glycemic control. Preliminary results from this portion excitingly reveal most subjects showing improved percentage of time in range during their camp-week.

In order to evaluate the emotional benefits of attending diabetes camp, we supplied subjects with a questionnaire to complete at the end of their home-week and the end of their camp-week. (Many thanks to Lori Laffel and Lisa Volkening for preparing the questionnaire.) The questions addressed the emotional and physical burden associated with type 1 diabetes, including the feelings about having type 1 diabetes as well as the aggravation of caring for such a demanding condition. Answers were based on a sliding scale ranging from agree to disagree. Scores were calculated from each questionnaire with a higher score indicating more emotional and physical burden. Initial results for this aspect of the study were also very positive, with approximately 88% of campers indicating less emotional and physical burden with type 1 diabetes in the camp setting.

This study was only possible secondary to the stunning advancements of the Dexcom G6, one of the most accurate and easy to use continuous glucose monitors available. As previously mentioned, it is the first ever FDA approved CGM that not only does not require finger sticks, but it accurately reports both blood sugars and upcoming blood sugar changes every five minutes to both the user and/or any family member or individual involved in the person’s care. The “share” feature of this remarkable device provides an additional level of safety for the person with type 1 diabetes and significant peace of mind for those caring for that individual. It allows for parents, siblings, friends, relatives, endocrinologists, and anybody else to observe, in real-time, these updated glycemic levels. The Dexcom G6 is highly recommended for anyone with type 1 diabetes who wants improved diabetes management, closer monitoring of blood sugars with no finger pricks, and advanced safety features to prevent severe hyper or hypoglycemia.

This study hopes to simultaneously prove that the use of the Dexcom G6 significantly improves life with diabetes and that individuals with type 1 diabetes benefit enormously from attending a diabetes camp. While anecdotaly, the happiness with the Dexcom and attending diabetes camp is well understood, this study hopes to statistically prove the positive impact of these interventions. As of the writing of this article, preliminary results back up anecdotal evidence. The camp setting of companionship and shared experiences with something as difficult as diabetes has enormous effects on the physical and mental well-being of these young individuals. The Barton Center is not simply here to teach campers a few tips on how to treat low and high blood sugars, it is here to show kids and families that they are not alone in this fight.

We want to take time to thank all the campers who participated in this research. We truly could not have done it without you. We would also like to acknowledge all the parents and guardians who helped facilitate this study. Special thanks also to the family of a former camper whose dedication to supporting this endeavor was amazing and very much appreciated. We admire the courage and effort it takes to manage type 1 diabetes on a daily basis, and we hope that promoting devices such as the Dexcom and experiences such as diabetes camp help ease the burden of diabetes. As research works towards a cure, we will continue our efforts together to always be positive, happy, and healthy!

Friendships at Camp Joslin

Closing ceremony at Clara Barton Camp

1st Annual Walk for Barton coming up soon on September 28th!
Don’t miss the fun—see back page for details.
Overall, it was a great summer at Clara Barton Camp! Until Summer 2020, we will miss you all.
The summer of 2019 began just as any other summer had in the past, but this time with a twist. While I had spent the past five summers as a counselor, a new opportunity presented itself in which I would begin this summer as a member of the admin team. I was ecstatic upon receiving the news, but a part of me knew that I would miss being a counselor in a cabin with the campers. I worried that along with these newfound responsibilities would also come a sense of disconnect from the aspects of camp that I have come to love. It is with great pleasure that I can attest to how far from the truth these worries turned out to be!

Although I was no longer in a cabin, the amount of time I was able to spend with the campers was tremendous. As the aquatics director at Camp Joslin, I was blessed with the opportunity to run the waterfront at Putnam Pond. Every general swim period was an absolute joy filled with refreshing cannonballs into pool three as well as some pickup basketball games within pool one. The new addition of the hoop in pool one allowed for some of the best dunks that would have even impressed Vince Carter. The floating dock was again the hot spot in pool three, allowing for some crisp dives to the floor of the pond. A new addition to camp came to us this summer in the form of a new rock wall comparable to the face of Mt. Everest. This state of the art climbing apparatus features cutting-edge holds, allowing for the children to scale the wall at speeds that would stun Spiderman himself. While many campers and staff alike had never climbed a wall before, this was not an issue since our ropes course director provided every climber with the skills needed to conquer the task.

The summer was not without its challenges, however, which certainly tested the campers both physically and mentally. Imagine eating a nice lunch of pulled pork with a side of macaroni and cheese, just to be interrupted by a horde of disgruntled pirates who then steal your junior counselor. Or perhaps you are lining up at the flagpole for evening active when an alarm cuts through the air. An announcement follows exclaiming that the accidental release of the Z virus has already infected several counselors, turning them into the undead. As if the situation wasn’t bad enough already, you would only have an hour to locate the vaccine and save the camp!

Another camp favorite made its reappearance towards the end of the summer for a cross-camp special day. Color Wars 2019 took place at Camp Joslin with the girls from Clara Barton Camp shuttled over to compete for the honor of being crowned champions. The four teams were assigned their respective colors as the camp was flooded with a sea of blue, black, red, and green. Blank flags were distributed and decorated by the four teams to properly represent their colors. The mascots were by far the most creative in Color Wars history, even yielding an appearance from Monsters Inc.’s very own Mike Wazowski on the green team. The first event was camp-wide capture the flag, which left everyone’s scores closely grouped together. The winning team was decided by the outcome of general hunt, in which teams searched the campgrounds for the leaders of the opposing groups. And while every player of each team worked incredibly hard, in the end, the green team emerged victorious to close out the final Color Wars of the summer.

Imagine a magical place where a disease with no known cure virtually disappears each and every day. A place where changing your pump site is a social event where you will meet new friends that you will still talk to ten years down the line. A place where “I AM OUTSTANDING” is yelled with such vigor that the forest has no choice but to send the echo to the outskirts of the woods. Now what if I told you that this place exists outside the realm of imagination, within little old Charlton nonetheless. I certainly did not believe it for myself my first year as a camper, and it would be silly of me to assume that by just reading this article you believe me wholeheartedly. Instead, it is my absolute honor to extend an invitation to see for yourself. I invite you to take that leap of faith, give it a shot, and reap the lifelong rewards and support that the program has to offer. After all, and seven years of camp later, my only regret is that I did not join our family sooner!
Day Camp
By Brent Kalette, Activities Manager

Barton Day Camps kicked off the summer of 2019 in Greenwich, CT, where parents and campers met to begin the season and enjoy a week of camp. Rainbow Club is unique because there are parent sessions happening while camp is in session. The campers had a wonderful time, enjoying special activities such as the much-anticipated shaving cream fight! A staff member also demonstrated some martial arts skills, something that all campers found interesting, new, and engaging. One big event at camp that campers had the opportunity to experience was the sleepover. The campers got to spend the night at camp and away from home to get a little taste of what the resident camp experience may be like.

The parents had a fun-filled, educational time as well. While the kids were playing, the parents were able to attend sessions focused on many different aspects of diabetes and growing up. Parents had the opportunity to listen to guest speakers on topics such as 504 Plans, school nurses and diabetes, and Dexcom overview and troubleshooting. These sessions allow parents to work together and with the guest speakers to learn, grow, and understand more about future care with diabetes. One other parent session was focused on DIY looping, a function working with insulin pumps. This session allowed parents to ask multiple questions and explore the pros and cons regarding DIY looping.

Our next day camp program was Worcester Day Camp. What makes Worcester Day Camp special is that it takes place at Clara Barton Camp, one of our resident camps. The campers were able to spend time at Camp Joslin as well, our boys resident camp. Worcester Day Camp was filled with various activities, ranging from gaga (a classic camp favorite), to arts and crafts, to swimming in the pool! The campers loved creating bracelets and other artwork from fuse beads, and that was the arts and crafts hit of the week. Along with that, campers had the opportunity to spend time learning together and from each other throughout the week. The week finished off with a picnic lunch with parents and the awards ceremony, after which campers said their goodbyes to both new and old camp friends.

The next stop was Danvers Day Camp. This year, each day of the week started off with swimming in the outdoor pool. Campers were able to show up and swim and were able to play fun games in the water such as Marco Polo and had a great time jumping off of the diving board! Throughout the week, campers were able to help decide on some of the games and projects we worked on. One of the favorites for activities was dodgeball. The campers mixed up the rules each game, keeping it fresh and exciting for everyone at camp. The campers also loved playing sardines, a game where one person hides, and when found, the people who found them also hide with them until everyone is hiding in the same spot. For less active fun, the kids turned to bead and bracelet making, with some campers teaching each other how to make bead lizards. At the end of the week, parents arrived for a picnic lunch, and as is tradition, participated in a camper versus parent dodgeball game that was enjoyed by all!

The last stop was our Long Island Day camp located in Old Westbury, NY. At Long Island Day Camp, campers were able to receive a variation of both fun and games as well as education. On Tuesday, Betsy, a friend from the JDRF, came to talk to the campers about their diabetes, as well as events in the community that were coming up that they could get involved in that revolve around raising awareness about diabetes. The campers highly enjoyed the Color Wars day at camp this summer. For this day, campers are assigned to a color team, and throughout the day the teams compete in activities and try to help their colors gather points through wins and sportsmanship alike. This year, the two teams ended in a tie, but fun was had by all. At the end of the week, campers also enjoyed playing a game of Cities, dodging the “wolves” along the way and finding the location of all the cities they needed to visit.

Overall, the day camp program had a wonderful summer. Campers at all camp locations were able to experience something unique and have fun while making lasting friendships as well as gaining knowledge either through formal education or just by talking with others.

Adventure Program
Vermont Overnight Camp
By Annie Stoltie

A few years back, during a chat with my son’s third-grade teacher, she described him as a golden-retriever puppy. She was spot on. He’s even-tempered, quick to love and forgive, and easily excited. Things that make him happy send him pacing around a room, talking too fast. With his blond hair and boundless enthusiasm you can almost imagine him a prancing puppy, tail wagging.

I mention this because he’s also a kid with type 1 diabetes, which means there are moments that aren’t always so happy—feeling rotten when blood sugars are too high, feeling rotten when blood sugars are too low. There’s other stuff that can be unpleasant, too, but the last seven years—he was diagnosed at age four—he’s had a pretty good attitude about dealing with the disease. Still, there are things he hasn’t been able to do because of diabetes, stuff like some sleepovers, because the other kids’ parents were too uncomfortable about taking on the responsibility (or we were too uncomfortable sending him) and day hikes with the local outdoor club because the trip leaders feared the liability. (We live in the mountains. Hiking is part of our culture.)

We’re lucky enough to have an amazing diabetes educator at the hospital where my son receives his medical care. Four years ago she recommended he go to diabetes camp. And there was one in Vermont, she told us, just across the lake! I couldn’t imagine my son away from my husband and me for almost a week. What about nights? Who would check him? How could this possibly work? “Do it,” she said. “Do it for him and do it for you.” She’s never been wrong about anything.

When we dropped our son off that first summer at The Barton Center’s Vermont Overnight Camp on a Lake Champlain island, he was the golden-retriever puppy, ready to make friends—be with “his people”—sleep in a top bunk, and really ready to be away from us. As we approached the camp, driving along the lake’s shoreline, my son’s face pressed to the car window, we saw sprawling green hills, sprays of roadside lilies and, when we reached the campus, tidy cabins and kids milling about, their CGMs and pump tubing visible. It was a dream come true.

The days flew by. The morning I was to pick up my son I couldn’t drive fast enough to camp, to see him, to hear about his experience. But when I got there, arms open for a hug, he walked right past me like he didn’t know me. He was silent in the car, which was so unlike him.

Had something gone wrong? Was he miserable? Had this all been a mistake? By the time we got home I realized it was sadness, an inability to process leaving something so magical. The friends, the fun—gaga, eating without hands, shaving-cream fights, swimming. The friends. The friends. He had loved it. It was his special place, just for people like him.

And so began his relationship with the Vermont Overnight Camp. Through the years I’ve braced myself for pickup, ready to expect anything. One year it was my son, his counselors and friends with tears in their eyes, hugging, so sorry it was over. Another summer it was happy satisfaction after a good week, knowing he’d be back. This summer was his fourth time there. Highlights were gaga, of course, counselor hunt and cabin time with friends, some of whom he now texts with regularly, continuing a game they invented while at camp, sharing pictures of their adventures and their pets. They have their own language, their own jokes. They have something of their own.

Recently, I asked my son if he intended to return to camp next year. He said, “Absolutely.” I also asked if there was anything he’d change about camp. His answer was: “A week isn’t enough. It’s not easy waiting 359 days until I can go back.”

Family Camp 2019
Please register to attend if you want to get a sense of what camp is like before you decide?

Are you thinking about sending your child to summer camp, but worried about their diabetes management while you’re away? Consider diabetes camp! At The Barton Center for Diabetes Education, we understand the challenges of diabetes management away from home, and we’re here to help.

With our diabetes camps, we’ll take care of all the planning and cooking! You can relax knowing your child is in good hands. Registration is open now for dates in March, April, and June.

### March Madness Camp Cleanup Day

**March 21, 2020**

9 a.m. to 2 p.m.

Coed, All Ages

We will be hosting a Camp Cleanup Day at Clara Barton Camp and Camp Joslin. Come spruce up camp and get ready for the summer. This is a great opportunity for campers to raise money for their camp fee by collecting pledges for their hours worked! More information will be available soon on our website.

### Special Events

**Upcoming Events**

For more information or to RSVP for events, please call 508-987-2056 or visit our website at www.bartoncenter.org.

**September 28, 2019**

1st Annual Walk for Barton

**Check-in 10 a.m. at Four Winds Farm**

Walk begins 11 a.m.

Join us for this fun family event and help support The Barton Center. There is no registration fee as we want our participants to focus on fundraising. Walkers will have an opportunity to raise money to support The Barton Center or their camper’s own camp fee for 2020. The walk will be taking place at Four Winds Farm/Clara Barton Camp on Ennis Road in North Oxford and will be about two miles long. Parking and registration will be at Four Winds Farm at 31 Ennis Road (across the street from The Barton Center administrative office).

Come on down and take a nice walk through Clara Barton Camp and beyond. Enjoy some great food from our vendors, face painting, pony rides, music, and more. Come meet Wally from the Boston Red Sox, Jake from the Worcester Bravehearts, and Trax from the Worcester Railers! We can’t wait to see everyone there! Closing ceremonies will take place at noon, and the celebration continues until 2 p.m. *Please note: no pets allowed.

Register for the event at firstgiving.com/event/bartoncenter/Walk19 and set up your fundraising page. You may also visit our website at bartoncenter.org and click on Events for the link to FirstGiving. Every individual who raises at least $100 will receive a Walk for Barton t-shirt! For more information, please call 508-987-2056, Ext. 2011 or email events@bartoncenter.org.

**Annual Auction**

October 26, 2019

6 p.m. to 10 p.m.

Please join us at the Penta Dining Hall at Camp Joslin in Charlton for our annual auction. The evening will feature both silent and live auctions, appetizers, dinner, and desserts. For more information, tickets, or sponsorship opportunities, please call 508-987-2056, Ext. 2011 or email events@bartoncenter.org.

**The Apple Run/Walk for Diabetes**

November 2, 2019

Registration begins at 9:30 a.m. 10:30 a.m. Walkers 11 a.m. Runners

This five-mile road race/walk begins and ends at the Brookfield Apple Orchard, 12 Lincoln Road, North Brookfield, MA. The event is hosted by the Lions Club of the Brookfields. Cash prizes will be awarded to overall 1st and 2nd place male and female finishers, and there will be other prizes for top finishers in each age category. All proceeds will benefit Clara Barton Camp and the Diabetes Research Team at UMass. To register or for more information, please email Jim Buzzell at buzzzjim@yahoo.com or call Jim at 508-344-4141. To register online, please go to http://running4free.com/RaceDetails.aspx?raceid=111.

### Key Dates

- **November 15-17, 2019**
  - Coed, Ages 6-16
  - WINTER CAMP
  - Christmas Camp

- **February 14-16, 2020**
  - Coed, Ages 6-16
  - FEBRUARY WACKY S.T.E.A.M. WEEKEND

- **March 6, 2020**
  - Coed, All Ages
  - March 6, 2020
  - NOVEMBER WACKY SUPERHERO WEEKEND

- **April 24-26, 2020**
  - Coed, All Ages
  - SPRINGTIME FAMILY/CAREGIVER CAMP

- **April 26, 2020**
  - Coed, All Ages
  - BARTON OPEN HOUSE

- **May 12, 2020**
  - Coed, All Ages
  - CLARA BARTON BIRTHPLACE MUSEUM

- **June 20-23, 2020**
  - Coed, All Ages
  - FATHER’S DAY WEEKEND