

Submitted to the Robert Wood
Date: December 19, 2018



Pre- Med and Diabetic College Student Coalition

A Proposal Seeking \$150,960 for the Creation of an Organization to Improve the Experience of Diabetic and Pre Med Undergraduate Students Nationwide

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Lydia A. Ryba

The Robert Wood Johnson Foundation
50 College Rd E
Princeton, NJ 08540
December 17, 2018

Dear Ms. Ryba,

It is with great pleasure that I submit this proposal for \$150,960 to start and fund a Pre- Med and Diabetic College Student Coalition nationwide. The College Diabetes Network is a community dedicated to helping young adults with type 1 diabetes take ownership of their health and live a life without compromise. The Pre- Med and Diabetic Student Coalition will carry this out by pairing diabetic college students with pre- med students on their campus in order to educate the pre- med students on diabetes management and build a support system for the diabetic students. We believe firmly that this proposed organization will have a profoundly positive impact on the short and long term health of diabetic college students and foster a new generation of compassionate, patient dedicated health care professionals.

The College Diabetes Network is dedicated to helping young diabetics successfully make transition into college life. The first chapter of the CDN was established in 2009, and the organization has been growing rapidly ever since. We now manage 328 chapters across the country. The CDN also runs an Off to College Program, where local clinics and organizations host information sessions regarding the transition to college for high school students and their families. This program also offers "Off to College" booklets for students and parents.

The Robert Wood Johnson Foundation's missions to improve health systems, foster leadership for better health, and build healthy communities meshes perfectly with the College Diabetes Foundation's. The scope and cost of this program matches your grant preferences as well as your ideological inclinations.

The College Diabetes Network would be honored to work with you on this project. Please feel free to contact me with any questions.

Sincerely,
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1.1 Statement of the Problem

1.2 Adjusting to College

While adjusting to college can be a challenge for anyone, this is especially true to students with type 1 diabetes. Diabetes treatment requires routine, and the immense upheaval that often occurs when a student enters college can have detrimental effects on their health. There are existing groups which aim to help with the transition including two programs run by the College Diabetes Network, the campus chapters and the Off to College Program, which provides information and support to students entering college. There is not enough being done to support the diabetes management of students in college however, as evidenced by the rise in A1c that many college diabetics see especially in their first years.

Lifestyle

There are several aspects of the typical college lifestyle that can be problematic for diabetics. These include the drinking culture, lack of healthy food options, and erratic and busy college schedules. Alcohol consumption lowers blood sugar while also masking the symptoms of hypoglycemia, or low blood sugar. Creating groups like the Pre-Med and Diabetic College Student



FIGURE 1 CAMPUS DINING, BARD COLLEGE AT SIMON'S ROCK

[HTTPS://SIMONS-ROCK.EDU/STUDENT-LIFE/LIVING-ON-CAMPUS/DINING.PHP](https://simons-rock.edu/student-life/living-on-campus/dining.php)

Coalition will help to educate people on dangers such as these and provide diabetic students with friends who know what to do in case of an emergency. College food is typically high carb, high fat, and low nutritional value. Consistently eating food like can raise blood sugars. This is especially a danger for new arrivals, who are not yet familiar with their food options or how the food will impact their blood sugars. College schedules pose a risk college diabetics because of how irregular they can be. Meal times will be different depending on the day and the semester. It is nearly impossible to plan a consistent schedule over an entire college career, and the ways

in which schedules can vary significantly and interrupt established patterns in diabetes management.

Support

By the time most diabetics reach college age they are the ones taking care of their own diabetes. This doesn't change the fact that there's a huge gap between what they can expect to rely on at home and what is available to them in college. College diabetics who move to live on campus no longer have guardians or other people familiar with their diabetes management



FIGURE 2 SCHOOL NURSE ASSISTS GLUCOSE CHECK

[HTTPS://WWW.GRANDFORKSHERALD.COM/NEWS/3761111-SCHOOL-NURSES-SEE-JOB-DUTIES-SHIFT-STUDENTS-HEALTH-CONCERNS](https://www.grandforksherald.com/news/3761111-school-nurses-see-job-duties-shift-students-health-concerns)

close at hand. Further, especially if they attended public school until this point, the amount of support they can expect to receive from their school plummets. "As part of providing FAPE, elementary and secondary schools may be required to provide health services. For example, they monitor younger students' blood glucose levels, treat hypoglycemia, help calculate carbohydrate content in foods, and administer insulin. Colleges do not have the same legal obligation to care

for the health needs of their students, and most college students manage their diabetes independently".¹

1.3 Health Concerns

Although diabetes is a manageable disease, it "remains the 7th leading cause of death in the United States in 2015"² While hypoglycemia, or low blood sugar, poses a significant health risk to type 1 diabetics, hyperglycemia, or high blood sugar, can also lead to serious health

¹ Gordon, Katherine, et al. "Going to College with Diabetes A Self Advocacy Guide for Students." *Diabetes.org*, Apr. 2011

² "Statistics About Diabetes." *American Diabetes Association*, 2017

problems. Long term complications associated with high blood sugar include cardiovascular disease, nerve damage, kidney damage, eye damage, foot damage, hearing impairment, digestive problems, sleep apnea, and depression.³ Complications from high blood sugars develop years after the high blood sugars themselves, and so it is important to maintain control at all times to reduce risk. College students are at a higher risk for not reaching their target blood sugars because of lifestyle and lack of support. Their age is also against them. The majority of college students are 18 to 24 years old,⁴ and this same age group has a statistically lower chance of reaching target A1C's. This can be seen more clearly in the graphs below.

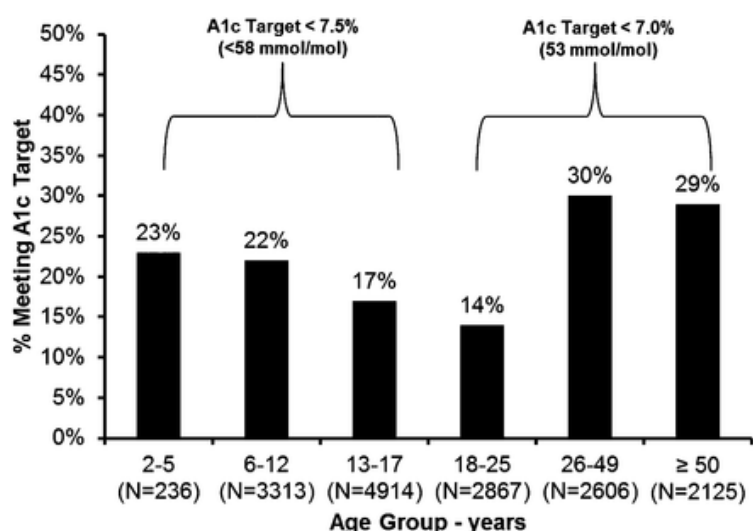


FIGURE 3 TARGET A1C MET BY AGE

[HTTP://CARE.DIABETESJOURNALS.ORG/CONTENT/38/6/971.FIGURES-ONLY](http://care.diabetesjournals.org/content/38/6/971.FIGURES-ONLY)

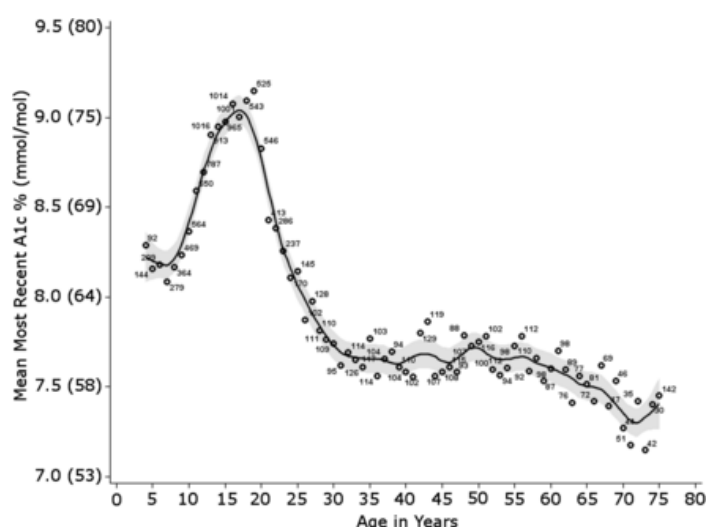


FIGURE 4 A1C BY AGE

[HTTP://CARE.DIABETESJOURNALS.ORG/CONTENT/38/6/971.FIGURES-ONLY](http://care.diabetesjournals.org/content/38/6/971.FIGURES-ONLY)

Mental Health Concerns

Along with physical health concerns, type 1 diabetics “are at a heightened risk for mental health issues, including diabetes distress, depression, anxiety, and disordered eating.”⁵ The most relevant issue here is diabetes distress, also known as burnout, is incredibly common with diabetics. A pamphlet from the American Association of Diabetes Educators describes living with diabetes as “someone handing you four balls and telling you to juggle perfectly. Then telling you that once you acquire that skill you will now juggle every day for the rest of your life

³ “Diabetes Complications.” *International Diabetes Federation - Home*, 2013

⁴ “US College Student Demographics in 2012.” *Marketing Charts*, 12 Sept. 2013

⁵ “Living With Type 1 Diabetes.” *American Diabetes Association*, 2013

and that there are variables that are going to influence your ability to juggle, you just don't know what and when. If you stop doing this, you will get sick and the people who care about you will become upset and tell you to start juggling again.”⁶ People who develop burnout, a sense of being fatigued, anxious, and overwhelmed by the constant vigilance required for diabetes care, may neglect their diabetes management. This increases the risk of long term complications significantly. There is a higher risk of burnout for people in stressful situations, like transitioning to college.

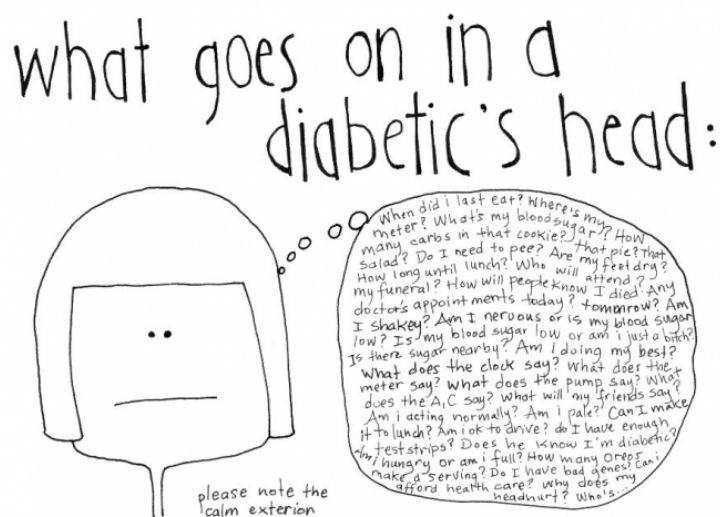


FIGURE 5 WHAT GOES ON IN A DIABETIC'S HEAD

[HTTPS://WEHEARTIT.COM/NILOFER79/COLLECTIONS/137239815-DIABETES](https://weheartit.com/nilofer79/collections/137239815-DIABETES)

1.4 Endocrinologist Shortage

There is currently an endocrinologist shortage in the United States, and this problem is only projected to worsen. Endocrinologists are doctors who specialize in the endocrine system and hormones. These doctors are typically in charge of diabetes care. A study conducted the Endocrine Society predicts that “A significant shortage of endocrinologists will persist for the foreseeable future... The number of endocrinologists who treat adults is not growing nearly fast enough to keep up with the surging demand driven by a growing and aging population compounded by the continuing obesity epidemic.”⁷

⁶ “Diabetes Distress Dealing with the Weight of Diabetes.” *Diabetes Educator*, 2017,

⁷ Seaborg, Eric. “Is There an Endocrinologist in the House: The Manpower Shortage.” *Endocrine News*, 1 Sept. 2015

2.1 Statement of Request

The College Diabetes Network works for the day when all young adults with diabetes are motivated and equipped to live a healthy life, so they can pursue their dreams without compromise. Our mission is focused on providing young adults with T1D the peer connections they value, and expert resources they need, to successfully manage the challenging transition to independence at college and beyond. Our goals for the Pre- Med and Diabetic College Student Coalition align with the Robert Wood Johnson Foundation's missions to build healthier communities, improve overall health in America, and pursue innovative methods of improving the health care industry.

Through the Pre- Med and Diabetic College Student Coalition we are attempting to create a completely dedicated support network for diabetic college students. Groups where diabetics meet, such as campus chapters of the College Diabetes Network, provide some degree of support. However, this coalition between diabetic and nondiabetic students will ensure that each diabetic student has a person they can turn to for help specifically with their diabetes management. We are using this opportunity to grow medical leaders as well, hopefully inspiring interest in endocrinology in the process.

We are requesting \$150,960 for the implementation and first three years of operation of the Pre- Med and Diabetic College Student Coalitions. This will provide funding for 136 of our College Diabetes Network chapters who have expressed interest and been approved to participate. The majority of the funding, \$122,400, will go towards hiring instructors for the pre- med students. The remaining \$28,560 will be used to organize these clubs, advertise to recruit potential members, and cover any miscellaneous costs.

3.1 Description of Proposed Work

3.2 Objectives

Each chapter of the Pre- Med and Diabetic College Student Coalition will be working to:

- Improve A1c's
- Provide a strong support network throughout college
- Reduce the risk of long term complications
- Educate non- diabetics on diabetes management
- Create empathetic and innovative future leaders in the health care system

A1c's, a type of blood sugar measurement, will be improved thanks to support systems set up by PDCSC's. These support systems will ideally last through the entirety of a student's college education. A1c's brought closer to target by these support systems will significantly reduce the risk of complications. Pre- med students will gain experience in an informal type of doctor patient consultations through this club. By exposing these students to the realities of a person living with a chronic conditions we hope to create compassionate health care professionals.

3.3 Description of Club

To begin, PDCSC will function as an off branch of College Diabetes Network chapters. New pre- med students will attend classes organized by the PDCSC's intern and taught by a medical professional during the fall semester. These classes will go over what diabetes is, how it works, and the intricacies of diabetes management. After one semester of lessons pre-med students will be paired with diabetic students, either in partners or groups. Diabetic students will educate their pre- med students on the specifics of their own diabetes management (how do they administer insulin? How much and when? What is the impact of certain foods/ activities? What would be the best method of support?) For the rest of the time these students are involved in the PDCSC, groups will meet at least once a week and work towards tighter control over blood sugar. Students who successfully complete at least one concurrent academic year will be logged so that pre- med students may use this group on medical school applications.

3.4 Schedule

While the specifics of each college are different, the typical academic year consists of two fifteen week long semesters. Based on that, this is the recommended schedule for each group.

TABLE 1 SCHEDULE- SEMESTER 1

SEMESTER 1

WEEKS 1-2	Recruitment. Advertisements will be installed and students will work with advising centers and list-serve e-mails to attract potentially interested students. Members will host 1-2 meetings to explain PDCSC to new students and register members. Returning members will review specifics of diabetes management with their partners/ groups.
WEEKS 3-13	Education. Pre- med students will attend a total of 10 hours of required classes organized by the PDCSC intern. These classes may be scheduled in whichever manner is most accommodating to students. During the first year only pre- med students will be involved during these weeks. In successive years there will be students available who have already taken these classes and so partner/ group work will occur between returning members.
WEEKS 14-15	Report. Students who have been involved in classes will fill out a survey indicating what they have learned and how they think the process could be improved. Students who have been involved in partner/ group work will report most recent A1c, what work they have done, and how they think the process helped/ can be improved. First year students will begin organizing groups/ partnerships.

TABLE 2 SCHEDULE SEMESTER 2

SEMESTER 2	
WEEKS 1-12	Organization. Students who have just completed classes will be assigned to a partner/ group. A meeting will be held to address expectations.
WEEKS 3-13	Partner/ group work. Partners and groups will meet at least once a week. It is recommended that these meetings be during meal times, and the pre-med students count carbs and calculate the required insulin bolus. Diabetic students should be prepared to share log books (blood sugars, insulin dosages, carbs per meal, activities) to analyze with the pre-med students. Students should exchange contact information and communicate periodically about issues related to diabetes or diabetes management.
WEEKS 14-15	Report. Students will fill out a survey stating their most recent A1c, what work they have done with their partner/ group, and how they think the process helped/ can be improved.

As college schedules can be busy and irregular, this timeline has been created with flexibility in mind. This has also been designed to accommodate busy times in the semester, such as the first two weeks (move in and classes start) and the last two weeks (finals).

3.5 Looking Forwards

PDCSC will continually strive to improve itself, improve the college experience for undergrad diabetic and pre-med students, and generate reports on the college diabetes experience. Chapters should strive to become self-sufficient through fundraising and partnerships with the organizations they draw instructors from. Changes should be made based on suggestions given by end of semester surveys.

These end of semester and end of year surveys will provide invaluable information about the college diabetes experience in regards to A1c and support preferences. The College Diabetes Network will compile a report at the end of each academic year with this information.

In schools with a large population of interested pre- med students other organizations similar to this one but connected to different conditions should be encouraged to form.



FIGURE 6 OHIO STATE UNIVERSITY CDN 2016 INAUGURAL MEETING

[HTTP://OSUCDN.BLOGSPOT.COM/](http://osucdn.blogspot.com/)

4.1 Description of Available Facilities

The college diabetes network has 328 chapters nationwide. Of these 136 chapters have expressed interest in this program. These chapters have been approved because they are strong and established groups who have demonstrated the ability to recruit members

4.2 Locations

TABLE 3 PARTICIPATING CDN CHAPTER CAMPUSES

<u>Alabama</u> Auburn,UA, UAB	<u>Indiana</u> BSU,IUB, Purdue, Wabash	<u>Missouri</u> SLU	<u>South Dakota</u> SDSU
<u>Arizona</u> NAU	<u>Iowa</u> UI	<u>Nebraska</u> UNKearney,UNL	<u>Tennessee</u> UTC,Vanderbilt
<u>Arkansas</u> UARK	<u>Kansas</u> KSU	<u>New Hampshire</u> UNH	<u>Texas</u> Rice,SFA, A&M,Texas Tech,UT Rio Grande,UT Austin
<u>California</u> CSU LA, SCU, Stanford, UCD, UCM, UCR, UCSD, UCSB, UCSC, USD	<u>Kentucky</u> KU,WKU	<u>New Jersey</u> Rowan,TCNJ	<u>Utah</u> Brigham Young,SUU, UU
<u>Colorado</u> DU	<u>Louisiana</u> Louisiana Tech	<u>New York</u> SUNY A, Binghamton, Brockport, Buffalo;Hamilton,HCC,NYU,SU, Rochester	<u>Vermont</u> Saint Michael's,UVM
<u>Connecticut</u> Trinity,UConn, Wesleyan	<u>Maryland</u> Johns Hopkins, Loyola Maryland	<u>North Carolina</u> ASU,Duke, ECU,Elon,NCSU,UNC Chapel Hill	<u>Virginia</u> WM,GMU,HU,Liberty,ODU,Randolph Macon,UVA,VT,W&M
<u>Delaware</u> UDEL	<u>Massachusetts</u> BC,MHC,NU,Regis,Simmons,Stonehill Suffolk,Tufts,UMASS Amherst	<u>Ohio</u> CSU,KSU,Miami,OSU,Ohio,UC,UD,UT	<u>Washington</u> SU,UW,WWU,Whitman
<u>Florida</u> FGCU,FSC,FSU,UCF,UFL,UT	<u>Michigan</u> GVSU, MSU, SWMich, UMich	<u>Oregon</u> PSU,UO	<u>West Virginia</u> Marshall
<u>Georgia</u> GCSU,GA TECH,KSU,Mercer,UGA	<u>Minnesota</u> UMN Twin Cities	<u>Pennsylvania</u> ESU,Mercyhurst,Penn State,UPenn,Ursinus,Villanova	<u>Wisconsin</u> St. Norbert,UW Oshkosh,UW Madison
<u>Illinois</u> Bradley,IWU,SLU,UIUC	<u>Mississippi</u> MSU	<u>Rhode Island</u> Bryant,Providence,Salve Regina	<u>Washington D.C.</u> American,GWU,Georgetown,Howard



FIGURE 7 CDN CHAPTER LOCATIONS

These are the 136 colleges who we will be funding. They represent 40 out of the 50 states. Each college has either a pre- med program or offers requisite courses and advising to students looking to go to medical school.

4.3 Meeting Areas

Each chapter of the College Diabetes Network has a designated space to meet on campus. This will be where the Pre- Med and Diabetic College Student Coalitions meet as well. If the area is deemed unsuitable for whatever reason by any chapter, they are encouraged to work with their campus authorities to find better arrangements.

5.1 Personnel

5.2 College Diabetes Network Staff



FIGURE 8 CHRISTINA ROTH

[HTTPS://COLLEGEDIABETESNETWORK.ORG/NODE/36161](https://collegediabetesnetwork.org/node/36161)

Christina Roth- CEO & Founder. Christina established the first chapter of the College Diabetes Network in 2009 as a student at UMASS Amherst. She later expanded it into a national non-profit organization. She has worked at the Joslin Diabetes Center and the T1d Exchange. She is a member of the board of directors for the Diabetes Patient Advocacy Coalition (DPAC).



FIGURE 9 ANNA FLOREEN, MSW, CDE

[HTTPS://COLLEGEDIABETESNETWORK.ORG/NODE/36164](https://collegediabetesnetwork.org/node/36164)

Anna Floreen, MSW, CDE- Program Director. Anna joined the College Diabetes Network after 5 years as the Associate Director for Patient Engagement at the T1D Exchange where she focused on maintaining connectivity between clinics and patient-centered research opportunities for people affected by type 1 diabetes. She has served on multiple national and international committees for non-profit organizations and spoken worldwide. She serves on her local board of AADE, as well as the JDRF Psychosocial Speaker's Bureau. As Program Director she will oversee this project along with Dan Browne, Program Manager, Malissa McQuillan, Zach Hall, and Emily Cook, Program Assistants.



FIGURE 10 SARAH TWOMEY

[HTTPS://COLLEGEDIABETESNETWORK.ORG/NODE/36163](https://collegediabetesnetwork.org/node/36163)

Sarah Twomey- Operations and Communications Manager. Sarah joined the College Diabetes Network after receiving her Master's in Public Administration. She has served as an AmeriCorps VISTA, and worked in its non-profit. As Communications Manager she will be responsible for collecting and conveying information between chapters. She will work with Katie Redmond, Membership and Alliances Coordinator, Stacey Cunningham, Communications and Operations Assistant, and Emily Ike, Campus and Clinical Outreach Coordinator.

5.3 Medical Professionals

Each of the 136 chapters of the College Diabetes Network will be responsible for hiring an instructor for the pre- med students. This instructor will preferably be a medical professional working in a field closely associated with diabetes, such as an endocrinologist or a diabetes

nurse educator. Supplemental instructors, such as nutritionists or sports and exercise medicine doctors, may be contracted by chapters who choose. We recognize that it may be easier for chapters in metropolitan or urban areas to find medical professionals, and so campuses without access to people with these qualifications may hire a qualified professor instead. These instructors will teach informal classes for a total of 10 hours over the first half of the school's academic year. The exact curriculum will be determined by each chapter, but all chapters will include lessons on what diabetes is and the different methods of management. These instructors will be compensated \$30 an hour for their expertise.

5.4 Interns

Each chapter will have an intern, chosen via application or appointment, in charge of managing this group. The intern may be a member of the campus' CDN chapter, a pre- med student involved in the group, or an interested student from the chapter's campus. It is recommended that each chapter set up a small group for planning and implementation, but the interns will be the ones responsible. Interns will hire instructors, organize classes for pre- med students, organize partnerships or groups between pre- med and diabetic members, collect and report information about the group, and problem solve as needed. This will be an unpaid internship, but interns will be given \$20 in compensation for each segment of the program they serve for. An intern who works the full academic year will receive \$40.

5.5 Participants

The purpose of this group is for pre- med and diabetic student to work together, and so each group will have certain responsibilities. They will meet at a minimum of once a week and fill in a survey at the end of each academic year.

Pre- Med Students

Pre- med students will be recruited originally by members of the CDN who know about this group. Pre- med students new to the program will be required to attend classes during the first half of the academic year. After they complete these classes, they will be assigned to a diabetic partner or a group consisting of both diabetic and pre- med students. Pre- med students will be educated on specifics of diabetes management of the diabetics they are working with. They will meet at a minimum of once a week. We recommend that these

meetings be meals, and that the pre- med student be responsible for counting the carbs and calculating the amount of insulin necessary for the diabetic student. In the end of year survey, pre- med students will report on what they've done in their groups or partnerships, and how they feel this can be improved on.

Diabetic Students

These students can be any type one diabetic student on campus, though most will likely come from the campus' College Diabetes Network chapter. These students will be responsible for educating the pre- med students they are paired with about the specifics of their diabetes management. They will meet with their groups/ partners at least once a week and help their pre- med students with their calculations. If requested, they should provide comprehensive reports of blood sugars and related materials for their pre- med students to analyze. At the end of each academic year, these students will complete a survey and report on what they've done in their groups or partnerships, and how they feel this can be improved on.



FIGURE 11 CDN RECRUITMENT TABLE ST. NORBERT COLLEGE

[HTTPS://501PARTNERS.COM/PORTFOLIO/COLLEGE-DIABETES-NETWORK/](https://501PARTNERS.COM/PORTFOLIO/COLLEGE-DIABETES-NETWORK/)

6.1 Budget

This grant is asking for a total of \$150,960 to fund the creation and upkeep of 136 groups over the course of three years. The most significant amount of money is devoted to hiring instructors. Compensation for the interns in charge of running the individual clubs is the next largest expense. Funds allotted for advertisement will be used to create flyers, posters, and social media pages. For the first few years the College Diabetes Network recommends that the funds labeled “miscellaneous” also be used for advertisement. In the future, these funds will be used as the group sees fit- to buy logbooks, practice supplies such as pump sites or needles, or other items the group finds it needs. These funds may also be used for any potential costs of distributing and collecting the end of the year surveys.

TABLE 4 BUDGET/ CHAPTER

ITEM	COST/ 1 YEAR	COST/ 3 YEARS
TEACHER	\$300	\$900
INTERN	\$40	\$120
MISCELLANEOUS	\$20	\$60
ADVERTISING	\$10	\$30
TOTAL COST	\$505	\$1,515

The table above shows the distribution of expenses for a single chapter over the course of three years. After this time each chapter will report back the specific amounts they need individually. There is room to reduce costs after this period.

TABLE 5 TOTAL BUDGET

ITEM	COST/ 1 YEAR	COST/ 3 YEARS
TEACHER	\$40,800	\$122,400
INTERN	\$5,440	\$16,320
MISCELLANEOUS	\$2,720	\$8,160
ADVERTISING	\$1,360	\$4,080
TOTAL COST	\$50,320	\$150,960

This table displays the breakdown of expenses for all 136 participating chapters. Total costs will decrease once the organization is firmly established in each of these chapters. Costs for advertisement and instructors will decrease once the club is known and has a chance to build a working relationship with local medical centers. Internal fundraising will begin raising more money. Bake sales and the like will be used by clubs to supplement funding for their own chapters, while there will be a betting pool type effort between chapters to raise money for the organization as a whole. Individual chapters will be asked to donate money over the course of the academic year. After information is collected from each chapter from the end of the academic year survey, groups who had the most improved or closest to target A1c's will receive double their money. The remaining funds will be retained for distribution across all chapters. Once there is a vested interest in these groups, many campuses will have the opportunity to request additional funding from their colleges. The only potential to increase cost is in the creation of more chapters.



FIGURE 12 2017 CDN CHAPTER OF UCSC

[HTTPS://WWW.GOFUNDME.COM/CDNUCSC](https://www.gofundme.com/CDNUCSC)

7.1 Summary and Conclusion

Diabetes is difficult to manage at the best of times, and the stressful transition to college can make management incredibly difficult. Existing support groups are not equipped to meet the individualized care needs of many new college students. In order to combat this, the College Diabetes Network is requesting a grant of \$150,960 to create and maintain Pre- Med and Diabetic College Student Coalition over the course of three years. This coalition will pair pre- med and diabetic undergraduate students at 136 colleges nationwide to educate and give pre- med students the opportunity to experience the more personal aspects of medical care while providing a dedicated support network to diabetic students.

Benefits to Diabetic Students

Two of the best things a diabetic can have to help manage their blood sugars are a support system and a consistent schedule. Transitioning to college has the potential to throw both of these out the window. A Pre- Med and Diabetic College Student Coalition is the best way to handle this change. A PDCSC will help make the transition to college much easier. Upper class pre- med students will be assigned to diabetic students. The upperclassmen will be able to help new students navigate things like campus dining and schedule planning. Information that an upperclassman can provide will smooth out many issues that new diabetic students might face due to the different lifestyles mandated by college. Partnerships with non-diabetics will allow all focus surrounding diabetes management to be on the diabetic group member or partner's condition specifically. This individualized concentration is likely the closest approximation of the support system a new diabetic student is leaving behind. Being able to rely on this support system throughout the entirety of a diabetic student's college career will help curb burnout, which will lead directly to better A1c's and overall health.

Benefits to Pre- Med Students

Two of the most common reasons that med students drop out of school according to endocrinologist Dr. Daniel are that they are "unprepared or overconfident" or they realize too late that they have chosen the "wrong career choice".⁸ By giving students the opportunity to

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Daniel. "5 Reasons Why Medical Students Drop Out." *KevinMD*, KevinMD.com, 24 July 2017

experience mock doctor/ patient situations in a casual setting students will be better prepared to decide if they really do want to pursue medicine. Those that do decide to continue will have an incredible volunteer experience/ club to put on their resumes. It is encouraged that pre-med underclassmen be paired with upperclassmen diabetics. This will allow the pre-med students to focus on learning when they start out before assuming more of a leadership role.

Benefits to National Health

A Pre-Med and Diabetic College Student Coalition will expose non-diabetics to aspects of diabetes management. It will also improve the short and long term health of thousands of diabetics.

We hope that by exposing pre-med students to a condition closely tied to endocrinology so early on will encourage them to pursue endocrinology. In this way we hope to address the projected shortage of endocrinologists in America. Regardless of what area of medicine these students might go into, being a part of a Pre-Med and Diabetic College Student Coalition will encourage future physicians to be empathetic and concerned with their patients.

The surveys taken at the end of each semester and academic year will provide valuable information about diabetes management among college students. We hope that this information will be able to provide insight on how to further improve diabetes management among college aged diabetics.

The concept of a college student coalition has the potential to be revolutionary. Depending on success with PMDCDC, similar programs may start between pre-med undergraduates and students with various other conditions. This could be a way of creating a more equitable set of opportunities for college students living with various illnesses or diseases.

As it is, a Pre-Med and Diabetic College Student Coalition has the potential to improve the lives and college experiences of thousands of diabetics and pre-med students.

8.1 Appendix of Figures and Tables

Figures

Figure 1: "Campus Dining, Bard College at Simon's Rock." Simons Rock, Jan. 2013, simons-rock.edu/student-life/living-on-campus/dining.php.

Figure 2: "School Nurse Assists Glucose Check." Grand Forks Herald, 7 June 2015, www.grandforksherald.com/news/3761111-school-nurses-see-job-duties-shift-students-health-concerns.

Figure 3: "% Meeting A1c Target by Age Group- Years." Diabetes Care, June 2015, "Mean Most Recent A1c % (Mmol/Mol) by Age in Years." Diabetes Care, June 2015, care.diabetesjournals.org/content/38/6/971.figures-only.

Figure 4: "Mean Most Recent A1c % (Mmol/Mol) by Age in Years." Diabetes Care, June 2015, care.diabetesjournals.org/content/38/6/971.figures-only.

Figure 5: Merritt, Haidee Soule. "What Goes on in a Diabetic's Head." Huffpost, 17 Mar. 2016, www.huffpost.com/entry/new-years-resolutions-and_b_8908204.

Figure 6: "Ohio State University CDN 2016 Inaugural Meeting." Blog Spot, 2016, osucdn.blogspot.com/.

Figure 7: "CDN Locations." College Diabetes Network, 2018, collegediabetesnetwork.org/find-a-chapter.

Figure 8: "Christina Roth." College Diabetes Network, <https://collegediabetesnetwork.org/node/36161>

Figure 9: "Anna Floreen, MSW, CDE." College Diabetes Network, <https://collegediabetesnetwork.org/node/36164>

Figure 10: "Sarah Twomey." College Diabetes Network, 2015, <https://collegediabetesnetwork.org/node/36163>

Figure 11: "CDN Recruitment Table at St. Norbert College Activities Fair." 501 Partners, 2011, 501partners.com/portfolio/college-diabetes-network/.

Figure 12: “2017 CDN CHAPTER OF UCSC .” Go Fund Me, 3 Dec. 2017,
www.gofundme.com/CDNUCSC.

Tables

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9.1 Bibliography

Daniel. "5 Reasons Why Medical Students Drop Out." KevinMD, KevinMD.com, 24 July 2017

"Diabetes Complications." International Diabetes Federation - Home, 2013, www.idf.org/aboutdiabetes/what-is-diabetes/complications.html.

"Diabetes Distress Dealing with the Weight of Diabetes." Diabetes Educator, 2017, www.diabeteseducator.org/docs/default-source/living-with-diabetes/tip-sheets/healthy-coping/distress_eng.pdf?sfvrsn=6.

Gordon, Katherine, et al. "Going to College with Diabetes A Self Advocacy Guide for Students." Diabetes.org, Apr. 2011, main.diabetes.org/dorg/PDFs/Advocacy/Discrimination/going-to-college-with-diabetes.pdf.

"Living With Type 1 Diabetes." American Diabetes Association, 2013, www.diabetes.org/living-with-diabetes/recently-diagnosed/living-with-type-1-diabetes.html.

Seaborg, Eric. "Is There an Endocrinologist in the House: The Manpower Shortage." Endocrine News, 1 Sept. 2015, endocrinenews.endocrine.org/dec-2014-is-there-an-endocrinologist-in-the-house/.

"Statistics About Diabetes." American Diabetes Association, 2017, www.diabetes.org/diabetes-basics/statistics/.

"US College Student Demographics in 2012." Marketing Charts, 12 Sept. 2013, www.marketingcharts.com/demographics-and-audiences/men-demographics-and-audiences-36555.