Scripps Diabetes Care and Prevention Programs, provided through the Scripps Whittier Diabetes Institute, continue to grow as well as create new opportunities to serve our patients and community. Our programs range from prevention, early intervention, education, treatment, and use of technology to personalized care delivery. We are starting new studies, including “Dulce Digital-Me,” which sends text messages and adaptive personalized feedback to high-risk Hispanic patients with type 2 diabetes. Additionally, we are initiating a real-world research study with Glooko, Inc., to test a digital approach to automating basal insulin titration.

In addition, we continue our “boots on the ground” efforts to provide people with prediabetes the evidence-based Diabetes Prevention Program. We are holding sessions in English and Spanish throughout the county, and new groups of 12 to 20 participants are being formed every few weeks to embark upon the year-long intensive lifestyle intervention.

We are continuing to educate thousands of people with diabetes in the ambulatory and inpatient setting, our staff is developing the skills and flexibility to provide care in diverse environments, and we are becoming more “nimble” as the healthcare system continues to evolve. We have developed strong partnerships with Federally Qualified Health Centers across San Diego County and California to improve diabetes care in high-risk populations. We have also initiated a Diabetes Behavioral Integration program — the “BeHIP” program provides a critically important resource for behavioral and mental health support for patients with type 1 and type 2 diabetes.

We are also leading a Scripps initiative to standardize diabetes care across the system by facilitating the Scripps Diabetes Clinical Care Line Council, a group of Scripps professionals from diverse environments and departments that focuses on improving the quality of diabetes care at Scripps.

Our dedication to diabetes care has earned Scripps Memorial Hospital La Jolla and Scripps Green Hospital recognition as San Diego’s best hospitals for diabetes and endocrinology medicine — and number 16 nationwide — by U.S. News and World Report for 2017-18. Our hard work, patient-centered programs, talented staff, and collaborations within the organization and in the community are continuing to support Scripps’ efforts to lower the cost of care while delivering high-quality outcomes.

With sincere thanks,

Athena Philis-Tsimikas, MD, Medical Director
Corporate Vice President
Scripps Whittier Diabetes Institute
Medical Directors
Athena Philis-Tsimikas, MD
George Dailey, MD
Daniel Einhorn, MD
Alberto Hayek, MD
Jeffrey Sandler, MD

Steering Committee Members
Aakif Ahmad, DO
Alberto Hayek, MD
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Barbara Price
Rosario Rosal
Monica Ruiz
Jeffrey Sandler, MD
Wesley Shih, MD
Maida Soghikian, MD
Laura Talavera
Chris Walker
Kimberly Wright
By the Numbers 2016 – Patient Visits

- **GDM patients**
  - 2014: 7,117
  - 2015: 7,613
  - 2016: 8,185
  - Total: 17,360

- **Inpatient visits**
  - 2014: 5,881
  - 2015: 5,979
  - 2016: 6,319
  - Total: 16,400

- **Ambulatory visits**
  - 2014: 2,447
  - 2015: 2,470
  - 2016: 2,471
  - Total: 15,735

- **Project Dulce RN visits and Group Classes**
  - 2014: 290
  - 2015: 338
  - 2016: 384
  - Total: 912
Scripps provides care in the hospital, clinic and community

Managing Diabetes in the Hospital
When patients with diabetes are admitted to Scripps hospitals, they receive the support of a multidisciplinary team that includes their physician, bedside nurse, an advanced practice nurse/diabetes specialist, and a diabetes educator. In addition to ensuring the highest quality care, the Diabetes Care Line also works to standardize diabetes care across the Scripps system to reflect the most current, evidence-based best practices. Some of the protocols that have been standardized and implemented at all Scripps hospital sites over the last few years include:

- Transition from intravenous to subcutaneous insulin
- Insulin infusion protocol and algorithm
- Use of insulin pumps
- Glucose management before, during and after surgery
- Management of diabetic ketoacidosis (DKA)
- Glucose management during labor and delivery

Scripps Presents Studies at 2017 American Diabetes Association Annual Scientific Sessions
In April, our diabetes inpatient team presented a poster outlining efforts at one Scripps hospital to develop and implement glucose management procedures before, during and after surgery. The new protocol, together with provider education and the support of the diabetes care team, resulted in successful management of perioperative glucose levels in 84 percent of patients and no incidents of hypoglycemia.¹

Clinicians for the Scripps Whittier Diabetes Institute also presented a study piloting an innovative approach to monitoring glucose in hospitalized patients remotely to prevent adverse events. By using Dexcom Share continuous glucose monitoring technology that wirelessly transmitted glucose values to specially trained teams, our team found that remote monitoring was feasible, safe, and acceptable, and demonstrated trends for reduced hypo- and hyperglycemia in hospitalized patients.²


Providing Care in the Community

Scripps Whittier Diabetes Institute provides education and counseling to thousands of people each year in both individual and group settings. People with newly diagnosed diabetes learn how to adapt their daily routine to manage their diabetes effectively. Nurses and dietitians with expertise in diabetes support patients who are starting insulin or becoming familiar with a new technology, such as a continuous glucose monitor or insulin pump. Individualized nutrition consultation and meal planning also are available for people with diabetes and prediabetes as well as other conditions, such as kidney disease and cancer.

In addition, the Scripps Diabetes Care Line has addressed diabetes management in the outpatient environment over the last few years, including:

- Guidelines for managing hypoglycemia in the ambulatory care setting
- Algorithm for the management of patients with gestational diabetes
- Ambulatory care order sets for management of glucose, lipids and blood pressure
Providing Care in the Community

Integrated Care for Diabetes in Pregnancy
At Scripps, women with diabetes in pregnancy are now getting coordinated, collaborative care from certified diabetes educators (both registered nurses and registered dieticians) and their obstetricians, with Scripps Clinic endocrinologists available for consults and medication management. Patients with type 1, type 2 and gestational diabetes are referred by their obstetrician, nurse practitioner, or midwife. After an initial visit with the nurse care manager, a dietician works with the women to develop an individualized nutrition program.

The nurse care manager maintains frequent contact with each patient to report blood glucose levels. Women who are not at their goal receive more intensified nutritional guidance or are referred to a Scripps Clinic endocrinologist for medication management. The nurse care manager regularly shares the woman’s progress with her obstetrician or primary provider. Hundreds of women have gone through the program to date, resulting in many healthy babies and happy parents. Scripps is an affiliate of the California Diabetes and Pregnancy Program (CDAPP) Sweet Success program.

Woltman Family Diabetes Care and Prevention Center in Chula Vista
The Woltman Family Diabetes Care and Prevention Center in Chula Vista serves one of San Diego’s communities hit hardest by the diabetes epidemic. Nearly 40 percent of patients admitted to Scripps Memorial Hospital Chula Vista, and nearly 32 percent of patients in the heart catheterization lab, have diabetes. County statistics tell us that the rates of death, hospitalizations and emergency room visits are twice as high in Chula Vista compared to all of San Diego County.

With the generous support of philanthropist Dick Woltman, the Center added critical classroom space in 2017 to meet the high demand for services. The center offers a full range of wellness, prevention, diabetes education and nutrition services in English and Spanish.
Managing diabetes can be stressful and challenging at times. In response, Scripps Whittier Diabetes Institute has integrated a critical component into our diabetes management programs: behavioral health. Psychologists with expertise in helping people manage the stress that often accompanies diabetes are available for individual visits and group sessions. Since we implemented this service in early 2016 through a generous philanthropic gift, we have found that people struggling with “diabetes distress” appreciate being part of a group with others who share similar experiences. Initial results of the program, presented in a poster session at the American Diabetes Association’s Scientific Sessions in June 2017, found that program participants demonstrated a significantly greater improvement in their HbA1c than a comparison group of non-participants.3


San Diego County Credit Union Provides Support for Project Dulce
San Diego County Credit Union® (SDCCU®), San Diego’s largest locally owned financial institution, partnered with Scripps Health Foundation to sponsor the Scripps Whittier Diabetes Institute’s (SWDI) Project Dulce diabetes care and education program.

“As a longtime partner of Scripps Health Foundation, SDCCU is proud to sponsor this much-needed community program that benefits thousands of people with diabetes,” said Teresa Halleck, SDCCU President and CEO. “SDCCU is an engaged community partner and our philanthropic activities are aimed at promoting a vibrant, healthy and sustainable community. We are grateful for the good work Project Dulce is doing to achieve this aim.”

New Behavioral Health Program Offers Mind/Body Support
Managing diabetes can be stressful and challenging at times. In response, Scripps Whittier Diabetes Institute has integrated a critical component into our diabetes management programs: behavioral health. Psychologists with expertise in helping people manage the stress that often accompanies diabetes are available for individual visits and group sessions. Since we implemented this service in early 2016 through a generous philanthropic gift, we have found that people struggling with “diabetes distress” appreciate being part of a group with others who share similar experiences. Initial results of the program, presented in a poster session at the American Diabetes Association’s Scientific Sessions in June 2017, found that program participants demonstrated a significantly greater improvement in their HbA1c than a comparison group of non-participants.3
Clinical and Community Care Line Research

Scripps Whittier Diabetes Institute receives a number of grants to support our research. In 2015 and 2016, in partnership with San Diego State University, the National Institutes of Health (NIH) awarded the following grants:

MAC Trial: Medical Assistant Health Coaching for Diabetes in Diverse Primary Care Settings
In 2015, the National Institute of Diabetes and Digestive and Kidney Diseases (NIH/NIDDK) granted Scripps Whittier Diabetes Institute $2.1 million to fund the MAC Trial, which is studying an innovative team care approach that trains medical assistants (MAs) to provide health coaching in the primary care setting to patients with poorly controlled type 2 diabetes, help them problem solve, and improve their diabetes-related health outcomes. The goals include improving diabetes self-management and clinical outcomes, such as blood glucose levels, cholesterol and blood pressure. The study is being conducted in two diverse settings: a Scripps Health primary care practice, and a community health center, Neighborhood Healthcare.

Mi Puente: “My Bridge” to Better Cardiometabolic Health and Well-Being
Scripps Whittier Diabetes Institute also received a $2.4 million study grant from the NIH’s National Institute of Nursing Research in 2015 to evaluate Mi Puente, a program at Scripps Mercy Chula Vista hospital that uses a “nurse + volunteer” team approach to help hospitalized Hispanic patients with multiple chronic diseases reduce their hospitalizations and improve their day-to-day health and quality of life. A behavioral health nurse provides in-hospital coaching to patients, who are then followed after discharge by a volunteer community peer mentor to assist them in overcoming barriers that may interfere with achieving and maintaining good health.
Clinical Research and Education Has a New Home
Scripps Whittier Diabetes Institute’s N. Paul Whittier Diabetes Clinical Research Center and The Charna and Sanford Sugar Diabetes Education Center has a new home at the Anderson Medical Pavilion.

Patients with type 1 or type 2 diabetes can enroll in studies at the Diabetes Clinical Research Center that investigate the effectiveness of new medications, equipment and technologies. The Center conducts an average of 10 to 12 studies each year, and has been instrumental in evaluating new medications for diabetes, weight loss and prevention of major cardiovascular events such as heart attacks and strokes, and new monitoring devices for detecting glucose levels continuously in older and younger people with type 1 diabetes. We anticipate more studies with the new hybrid closed loop pumps that will further improve diabetes management with less hypoglycemia.

The Charna and Sanford Sugar Diabetes Education Center features certified diabetes educators who, in partnership with the endocrinologists, provide education and behavior change support on ways to better manage diabetes. Patients also benefit from their expertise in using glucose monitoring tools such as meters and continuous glucose monitors. The Education Center also provides information to patients about nutrition and the latest advances in medications.

Scripps Whittier Diabetes Institute Partners with Glooko on Research Study
The Scripps Whittier Diabetes Institute has begun a real-world research study with Glooko, Inc., to test a digital approach to automating basal insulin titration that can help physicians, together with registered nurse and registered dietician care managers, track patients via a cloud-based dashboard and deliver automated messages on medication adjustment recommendations.
Gloria Favela-Rocha was first diagnosed with diabetes when she was expecting her first child. While developing type 2 diabetes during pregnancy (known as gestational diabetes) isn’t unusual, the disease usually goes away after the baby’s birth. For Gloria, however, this wasn’t the case.

Now having lived with type 2 diabetes for nearly 20 years, she knows the importance of making smart lifestyle choices to manage the disease. She tries to choose healthy foods and exercise regularly. In addition, as a muralist who does large-scale paintings for commercial and residential clients, she spends much of her days climbing up and down ladders, moving equipment and painting.

Reminding patients to test blood sugar
Between long days at work and her family life, Gloria found she often forgot to test her blood sugar levels. So, when she was invited to participate in a new clinical trial that could help her better monitor her glucose, she agreed.

“I said I would give it a try as long as it was simple and wouldn’t take too much of my day,” said Gloria. “The timing was right because I wanted to take better care of myself and I felt that it would help keep me on track.”

Offered through Scripps Whittier Diabetes Institute, the Dulce Digital-Me trial used text messages to remind patients to check their blood glucose levels and send back their results. For six months, Gloria received a text every morning and evening reminding her to check her blood sugars. Since she often left home very early, she began carrying her monitor with her, which she hadn’t done before.

Interactive texts monitor diabetes management
“The text message would come every day at the same time, so I would hear it ring and check my blood sugars and send in my result right away. It would send me back a message according to whatever my result was, like ‘good job’ or ‘maybe you need to eat a little more protein today’,” she said.
Texts also reminded Gloria not to skip meals, which she often did. “I knew when I heard that text come in that I probably needed to grab a meal bar or yogurt,” she said. “It kept me more on a routine.”

“Maintaining a regular schedule of meals and monitoring blood sugar are two of the keys to keeping blood glucose levels under control,” says Athena Philis-Tsimikas, MD, corporate vice president for the Scripps Whittier Diabetes Institute. “A simple text message-based approach like this one can significantly benefit many people who struggle every day to manage their diabetes and maintain their health.”

As the Dulce Digital-Me trial progressed, Gloria was excited to see improvements in her A1c, the primary test used for diabetes management. “Every month I would go in and the nurse would check my blood sugar, and every month my A1c dropped a whole point. At the end of the trial, my A1c was the best it’s ever been.”

**Fighting childhood obesity through art**

Since the trial ended, Gloria has seen her A1c fluctuate, but tries to monitor her sugars regularly and is doing well. Recently, she was commissioned by the City of San Diego to paint a mural as part of a childhood health and wellness initiative. The mural combines elements of nutrition, exercise, and fighting childhood obesity — a major factor in type 2 diabetes and a significant concern in the Hispanic community. Gloria, who is Hispanic, says it feels like a “circle” moment for her.

“I’ve never done a mural about health before, and good health is everything.”

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**Dulce Digital-Me: An Adaptive mHealth Intervention for Underserved Hispanics with Diabetes**

The NIH’s National Institute of Diabetes and Digestive and Kidney Diseases awarded $2.9 million — the largest NIH award to Scripps Whittier Diabetes Institute to date — to study an innovative approach to helping Hispanics with diabetes better manage their disease.

Dulce Digital-Me provides patients with tools to help them manage their diabetes day to day and improve their health, including text messaging, wireless blood glucose and medication monitoring, diet and exercise assessments, and personalized feedback and goal-setting. This study is conducted in collaboration with Neighborhood Healthcare, San Diego State University and the University of California San Diego.
Kristy Castillo never thought she would be able to run, let alone finish, a full marathon. She has type 1 diabetes and her body doesn’t produce the insulin needed to process sugar and produce energy.

“In general — my blood sugars go up and down,” said Kristy. “I’m a classic type one, which has been a roadblock to engaging in intense activity.”

On Sunday, June 4, 2017, Kristy finished the 26.2 mile Rock ‘n’ Roll Marathon in San Diego while wearing the latest technology — a hybrid closed loop insulin pump to control her blood sugar throughout the race.

Dr. Athena Philis-Tsimikas, corporate vice president of the Scripps Whittier Diabetes Institute, said the device is life-changing for patients.

“Previously, patients had to think of everything about how to monitor glucose levels and inject their insulin. Now that process can be automated,” said Dr. Tsimikas.

Therapeutic, yet complicated
A single mother of two, Kristy has been living with diabetes for more than 20 years. After her divorce, she wanted to channel her energy into something therapeutic, so she chose running. She completed a few half marathons, but not without complications.

“I was pushing myself to get to the finish line to get insulin,” Kristy said. “I could get severe hyperglycemia when training and hypoglycemia during long runs.”

Real-time, smart pump
Kristy’s Scripps Clinic endocrinologist, Dr. Megan McGarvey, helped her integrate the new continuous glucose monitoring (CGM) system into her routine. It can measure glucose levels in real-time throughout the day and night.

“While I was training, the device learned the rhythms of my body and began keeping my blood sugar steady during intense runs,” Kristy said. “The longer I wear it the smarter the pump gets.”

Perfect numbers
Kristy started and finished the race with perfect blood sugar numbers, 144 and 158.

“When I set my mind to something, I don’t back down,” said Kristy.

Dr. Tsimikas noted that Kristy’s story is an example of how a motivated patient and dedicated care team can work together to overcome a tough disease.
Healthy Living
In 2015, Scripps began Healthy Living classes, which are open to anyone interested in learning about the benefits of good nutrition, physical activity, and avoiding tobacco. These behaviors can help to prevent the four chronic diseases (lung disease, cancer, type 2 diabetes, and cardiovascular disease) that contribute to 50 percent of all deaths in the US. The three-class series is held at locations throughout the community.

Diabetes Prevention Program (DPP)
Based on a large clinical trial concluding that people with prediabetes could reduce their likelihood of developing diabetes by 58-70 percent if they lost just 5-7 percent of their body weight, the Diabetes Prevention Program (DPP) is a national initiative developed to help prevent diabetes. Scripps is recognized by the Centers for Disease Control as a national DPP provider, and rolled out the program to patients and community members in 2016. Our program uses trained lifestyle coaches and a standardized curriculum; participants meet in groups with a coach for 16 weekly sessions and six to eight monthly follow-up sessions.

Participants must have prediabetes and be overweight to enroll. No physician referral is required, although many physicians do refer their patients to this valuable resource. Orientation sessions are held in Spanish and English throughout the county.

Retinal Screening Program
Detects Vision Problems Early
Every 24 hours, approximately 55 people will lose their vision as a result of diabetes-related eye disease (diabetic retinopathy) — even though 95 percent of diabetic blindness could be prevented with early diagnosis and treatment. For more than a decade, Scripps has been screening people in underserved communities for diabetic retinopathy using a mobile camera. Our free or low-cost eye exams diagnose individuals at high risk for retinal damage and help patients get treatment and referrals to specialists.

In 2016, we screened 622 people, and found 30 percent had some degree of diabetes-related eye disease. We referred 89 people who had advanced disease — 14 percent of all screened or nearly 50 percent of positives — to specialists for further care.
Professional Education and Training

Scripps Whittier Diabetes Institute proactively meets the needs of clinical and non-clinical health professionals by developing and presenting a comprehensive range of education and training courses with topics from basic management of type 1, type 2 and gestational diabetes to complex treatment modalities and emerging technologies.

New training programs are consistently being developed to respond to the needs of health professionals in the quickly changing healthcare landscape. Some of these include:

- Advanced Therapeutic Interventions to Optimize Obesity and Diabetes Care
- Clinical Management for Diabetes Care — New Approaches for Real-World Practice
- Fundamentals of Diabetes Management
- Diabetes Care Coordination and Population Management
- Project Dulce Peer Educator Training Program
- Psycho-social Care for People with Diabetes
- Health Coaching in a Primary Care Environment

Project Dulce

For more than 20 years, Project Dulce has provided diabetes care and education to members of our highest risk and most underserved communities. Our unique model of pairing nurse-led teams with peer educators from our participants’ own cultural/ethnic groups has been exceedingly successful in helping people overcome common barriers—knowledge, access to care, traditional beliefs and practices—that may limit their ability to effectively manage their diabetes. Together with our partners at Neighborhood Healthcare and Family Health Centers of San Diego, we have conducted and published numerous research studies demonstrating the model’s effectiveness in not only improving self-management skills, but in improving clinical outcomes as well.

Our peer educator training programs are spreading the Project Dulce model to community clinics, county health departments, and other health organizations throughout the state, again focusing on the highest-risk populations. Project Dulce has been designated by CMS (Center for Medicare/Medicaid Services) as one of the three models of community-based diabetes education that is evidence-based and can be used in CMS-sponsored initiatives.
EverydayHealth.com Diabetes Blog
Since 2016, Athena Philis-Tsimikas, MD, has contributed a blog to Type 2 and You: Diabetes Up Close and Personal on EverydayHealth.com. The monthly blogs cover a wide range of topics, including clinical research, nutrition, exercise and insulin use to help people better understand and successfully manage type 2 diabetes. EverydayHealth.com reaches approximately 50 million consumers monthly.

PBS NewsHour Features Scripps Project Dulce Diabetes Program
In May 2017, the PBS program “NewsHour” aired a lengthy report about Project Dulce’s ground-breaking efforts to improve diabetes care and outcomes among Hispanic patients in San Diego County. The program praised the innovative use of care teams, peer educators and technologies such as text messaging, smartphone apps and continuous glucose monitors to improve diabetes management. Watch the segment at http://to.pbs.org/2wJb89a.

Dr. Einhorn Named Outstanding Clinical Practitioner
Medical Director Daniel Einhorn, MD, has been named the 2017 Outstanding Clinical Practitioner by the Endocrine Society, the largest international organization representing professionals in the field of endocrinology. The award, which is the highest honor given to a clinical endocrinologist, was presented in April in Orlando during the opening day of ENDO 2017, the society’s annual international conference.

“I am humbled to receive this honor,” Dr. Einhorn said. “I am fortunate to have spent much of my career at the Scripps Whittier Diabetes Institute, which has been my clinical home since 2002. I am blessed to work with and care for the best people I know.”

Diabetes Webinars Offer Additional Education
Medical Director Jeffrey Sandler, MD, who has an active endocrinology practice in central San Diego, is collaborating with Dr. Tsimikas on free webinars for patients of Scripps Affiliated Medical Groups. The webinars cover topics of interest to people with type 1 or type 2 diabetes, including new treatments, blood glucose monitoring, and new technologies and resources for education and prevention.

2. Dailey, G, Ahmad, A, Polsky, S and Shah, V. A Novel Option for Prandial Insulin Therapy, Postgraduate Medicine (Published online September 2016)


10. Einhorn, D, and Mende, C. Cystatic –C vs Creatinine to Assess eGFR. Commentary. Endocrine Practice, 2016


“The most important gift one human being can give to another is, in some way, to make life a little better to live.” — Ellen Browning Scripps