

**2004 INNOVATIONS AWARDS PROGRAM
Application Form**

1. Program Name:
Florida Initiative in Telehealth & Education (FITE)
2. Administering Agency:
University of Florida
3. Contact Person (Name and Title):
Toree H. Malasanos MD
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9. Please provide a two-sentence description of the program.
The Florida Initiative in Telehealth and Education (FITE) provides integrated services from the University of Florida, Division of Pediatric Endocrinology to Children's Medical Services Network in Daytona Beach.

The use of a four-fold approach of telemedicine clinics for children with diabetes and endocrinopathies resulted in improved metabolic control and decreased ER visits and hospitalizations for children with diabetes (representing cost avoidance) while maintaining a high-level of satisfaction among users.

This four-fold approach included online education about Type I diabetes, telepsychology services for at-risk teenagers with diabetes, and internet communication linking the patient, family, primary and secondary care providers.
10. How long has this program been operational (month and year)? **Note: the program must be between 9 months and 5 years old on May 1, 2004 to be considered.**

The Florida Initiative in Telehealth and Education (FITE) was initiated in January 2001.

11. Why was the program created? (What problem[s] or issue[s] was it designed to address?)

The program was designed to address the needs of children with diabetes and endocrinopathies who had suboptimal access to specialist care. The children with diabetes who were at risk for metabolic complications due to poor adherence to medical regimens and less than the recommended standard of care in terms of visit frequency and education, were more specifically targeted by the online education and the home psychology program (the virtual Diabetes Project Unit or DPU). Type I diabetes is best managed by pediatric endocrinologists, who are in short supply throughout the United States.

Prior to this program, staff members from the University of Florida, Division of Pediatric Endocrinology (including the physician, a nurse educator, a dietician, and other providers) traveled quarterly to provide subspecialty services two hours away at the Children's Medical Services clinic in Daytona Beach, Florida. Children and family members unable to attend this clinic either had to drive to Gainesville to be seen, or had to wait another three months for a follow-up appointment. Owing to the large number of children and their families needing to be seen in a limited amount of time, access to the educator and dietician was limited and there was no immediate access to clinical psychology services.

12. Describe the specific activities and operations of the program in chronological order.

November 2001:

Funding was made available from the State of Florida Department of Health to purchase telemedicine equipment and initiate clinical services.

November 2001:

Work began on text and animations for website.

January 2002:

The first remote clinic was held by teleconference between Daytona and Gainesville. Teleconference clinics continued on a bimonthly schedule.

Feb 2002:

The clinic population doubled as the Orlando endocrinologist withdraws from the CMS service.

March 2002:

The virtual DPU program began. Home POTS-based (plain old telephone system) video systems were installed in patient homes of high-risk adolescents (multiple hospitalizations or A1c >9%) to improve adherence by frequent contact and encouragement by psychology team.

June 2002:

The first group of diabetes camp counselors are trained online with the FITE website streamlining orientation process.

June 2002:

The first onsite clinic for annual in-person exams.

2002:

The project design was reported at the American Telemedicine Association annual meeting.

2002:

The project receives the Davis productivity award.

Jan 2003:

Analysis of first year's data.

Feb 2003:

Narration and music added to animations for online education.

2003:

Data on cost avoidance and first five virtual DPU patients was presented at American Telemedicine Association annual meeting.

July 2003:

Received a grant from the American Diabetes Association to study the efficacy of online education for families of children with newly diagnosed diabetes compared to standard in-person education.

Aug 2003:

Volusia County school nurses enrolled to email school-time blood glucose data to health care team and families.

Aug 2003:

The program's successful outcome data was presented at the *Successes and Failures in Telemedicine Conference* in Australia.

Sept 2003:

The program received the ASTHO vision award.

May 2003:

Second onsite clinic for annual in-person exams.

Oct 2003:

Online education rewritten at 3rd grade level and posted in basic and advanced formats on the website.

Jan 2004:

Analysis of first 2 year's data.

Mar 2004:

Continuing education credits for nurses (3 hours) was made available for completion of online program.

April 2004:

The third onsite clinic for annual in-person exams.

April 2004:

Results to be presented at Pediatric Endocrine Nursing Society annual meeting.

May 2004:

Results to be presented at American Telemedicine Association annual meeting.

June 2004:

Results to be presented at American Diabetes Association annual meeting.

13. Why is the program a new and creative approach or method?

There are currently eight CMS centers in Florida served by remotely located endocrinologists. Patients either travel to the medical center or the physician serves it as a satellite clinic.

For the three years prior to the program, children with diabetes had an average of 45 hospital days per year, and 10 emergency care visits. By improving access to care and education, the FITE program resulted in decreasing hospital days to an average of eight per year and emergency care visits to two per year.

Most telemedicine programs provide only clinical care. The FITE program integrates clinical care, intensive home care for high-risk adolescents (virtual DPU), communication portal and an interactive web-based education program. The web-based program is designed to educate and motivate learners and to extend education to school personnel, babysitters, relatives, and other secondary caregivers interested in learning more about diabetes. The communication system enables nurses at the hub, the remote site, and schools to communicate with one another as well as the patient, family, and physician.

14. What were the program's start-up costs? (Provide details about specific purchases for this program, staffing needs and other financial expenditures, as well as existing materials, technology and staff already in place.)

Teleconferencing equipment:

\$32,000. No significant upgrades have occurred in the 2.5 years of this program and equipment is anticipated to be used for the next 3 years.

Line installation:

\$300 per site (see operation expenses listed below)

Home videophones:

\$1100 x 10 phones

Recycled computers for distribution to patient's homes:

\$40 to install sound card and speakers x 17 computers

Internet service for patient's homes:

\$24 per month x 17 homes x 24 months

15. What are the program's annual operational costs?

Physician	.67 FTE	\$80,000
Nurse	1 FTE	\$52,000
Psychologist	.67 FTE	\$63,000
Technical staff	1.5 FTE	\$51,600
Line charges		\$9000

Approximately 50% of all salaries are used for program analysis, and dissemination of data. Reinvestment will not be required to use the online education statewide, and the virtual DPU is already available statewide. Physician and nurse clinical services were included in budgets before and after the inception of this program.

16. How is the program funded?

It is a contracted service of the Florida Department of Health, Children's Medical Services.

17. Did this program require the passage of legislation, executive order or regulations? If YES, please indicate the citation number.

No.

18. What equipment, technology and software are used to operate and administer this program?

Teleconferencing equipment, ISDN lines for data transfer, POTS-based videophone systems, Database designed for online testing, patient database on Access, Flash Macromedia, and numerous other programs were used to create the animations, soundtracks and text for the online education.

19. To the best of your knowledge, did this program originate in your state? If YES, please indicate the innovator's name, present address, telephone number and e-mail address.

Yes.

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20. Are you aware of similar programs in other states? If YES, which ones and how does this program differ?

We have reviewed literature, searched the web, and attended national meetings about both the topic of our site and the technology used. We have not encountered anything with the same scope and interactivity as our program.

21. Has the program been fully implemented? If NO, what actions remain to be taken?

Yes.

22. Briefly evaluate (pro and con) the program's effectiveness in addressing the defined problem[s] or issue[s]. Provide tangible examples.

Pros:

The pediatric endocrinologist and the diabetes team make more efficient use of their time by seeing patients via teleconference from their office rather than traveling quarterly to a satellite clinic. The patients can be seen more frequently than once a quarter if more attention is necessary. Hospital and ER use is decreased representing cost savings and decreased patient morbidity (see statistics above). Improved access to and familiarity with the health care team has increased the number of "sick day" calls allowing prompt treatment at home and has contributed to the prevention of emergency care.

Patients and their family members have expressed appreciation for the telemedicine program in terms of decreased travel, decreased work and school missed, and more efficient clinic visits.

The education website is available for patients, family members, and caregivers at their convenience to use at their own pace. The physician and nurse at the hub were able to recommend specific units for patients to review as necessary. Time for education during a satellite clinic visit was historically even more limited than local clinics and there was a serious deficit of information for this population. The pre and post testing on the website has shown that the material can increase knowledge of the participant.

High-risk adolescents involved in the virtual diabetes program are benefiting by reduced hospital and ER visits and improved blood glucose regulation as evidenced by reduced A1c values.

The secure email facilitates coordination of care for the patients among the school, the hub, and the remote site.

Cons:

Telemedicine does not provide the opportunity for hands-on examination by the physician. The approach of this program is to see all new patients initially at the University of Florida and then to travel to the remote site annually for an in-person visits with each patient.

The education website is widely accepted and appreciated by patients with newly diagnosed diabetes and their families. It is used with more reluctance by those already familiar with diabetes.

23. How has the program grown and/or changed since its inception?

The Diabetes Project Unit was an ambulatory care center at Shands Gainesville. Shortly after funding the FITE program including a "step-down"

virtual DPU after discharge, the DPU was closed due to space and financial concerns. The virtual DPU was re-designed to adapt to the loss of this successful program.

24. What limitations or obstacles might other states expect to encounter if they attempt to adopt this program?

A health care team willing to adopt their program to a telemedicine program is essential, not only the physicians at the hub, but also the nurses and staff at the remote site. Many state's Medicaid programs do reimburse for telemedicine services which would facilitate the adoption of a telemedicine program.

Cost avoidance by reduced hospitalization and emergency care does not translate into clinical income for the health care team. Provision of income for the intensive management by physicians on the phone and psychologists will need to be considered to facilitate the adoption.

Online education can save costs for the health care system but are expensive to develop independently. Once in place, maintenance costs are minimal.

Add space as appropriate to this form. When complete, return to:

CSG Innovations Awards 2004

The Council of State Governments

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DEADLINE: All original applications must be received by April 20, 2004, to be considered for an Innovations Award for 2004.

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