

## Continued Quality Assurance Utilizing an Electronic Web-Based Database in a Network of Student-Run Diabetes Clinics

*Wesley Nuffer, PharmD, CDE  
Assistant Director of Experiential Programs  
University of Colorado Denver  
School of Pharmacy*

---

---

---

---

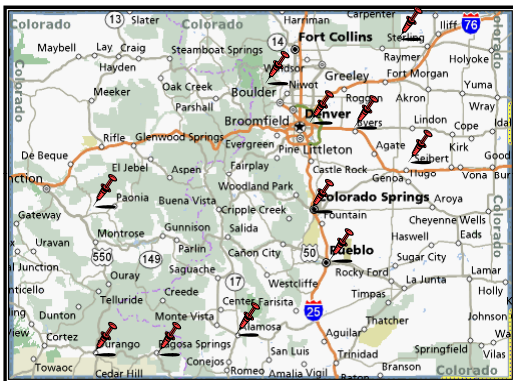
---

---

---

---

### Current Diabetes Clinics



---

---

---

---

---

---

---

---

### Diabetes Education Structure

- ▶ Six one-on-one monthly education visits
  - Students assess patients' needs & understanding
  - Education modules "enrolled" & prioritized
  - Patients charted utilizing web-based database
  
- ▶ Objective measurements & questionnaires administered
  - A1C, lipid panel, blood pressure, weight & waist circumference measured at visits 1 & 6
  - health-related quality of life, functional status, and diabetes self care behaviors

---

---

---

---

---

---

---

---

## Successes

Parameter	Baseline Mean (SD)	Six Month Mean (SD)	p
Hemoglobin A1c (%; n = 173)	7.6 (1.8)	6.7 (1.0)	< 0.001**
Systolic blood pressure (mm Hg; n = 192)	133.6 (15.4)	128.3 (13.8)	< 0.001**
Diastolic blood pressure (mm Hg; n = 192)	78.0 (10.0)	74.6 (9.2)	< 0.001*
Total cholesterol (mg/dL; n = 152)	185.8 (45.8)	170.8 (38.4)	< 0.001**
LDL-cholesterol (mg/dL; n = 135)	106.5 (43.5)	94.5 (33.5)	< 0.001**
HDL-cholesterol (mg/dL; n = 154)	41.4 (11.4)	42.7 (14.3)	0.30**
Triglycerides (mg/dL; n = 158)	203.6 (128.9)	169.7 (86.6)	< 0.001**

alpha = 0.05      \* two tailed t-test      \*\* Wilcoxon Signed-Rank

Data collected for 248 patients at 9 sites

---

---

---

---

---

---

---

---

---

---

---

---

## CQI- Electronic Database

- ▶ **Web-based system designed & maintained by UCD Department of Family Medicine**
  - Web-based format allows nearly universal access
  - Electronic charting overcomes challenge of rotating students
  - Expands capabilities for future data analysis
- ▶ **Addresses goals for standardization of clinics**
  - Missing data flags student, telling them to input
  - Important points are highlighted and “pop-up” when selected in database

---

---

---

---

---

---

---

---

---

---

---

---

## CQI- Electronic Database

- ▶ **Allows for “layers” of precepting**
  - On site preceptors trained to oversee students, review SOAP notes and recommendations
  - UCD-SOP faculty have universal access to database
    - Can review recommendations/SOAP notes in real time
    - Monitor productivity of clinics & students
    - Provide feedback & improvement suggestions to students based on their charting

---

---

---

---

---

---

---

---

---

---

---

---



---

---

---

---

---

---

---

---