Advanced Diabetes Care in Primary Care

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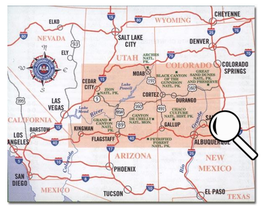
Background

Durango, Colorado is a beautiful mountain town located in the Southwest corner of Colorado. It serves as a hub for patients the Four Corners area, including four tribal nations, who flock to its flagship hospital (Mercy Hospital- 85 beds). The population of the Four Corners region is not specified, but the region is mostly rural, rugged and arid and belongs to semi-autonomous Native American nations.

- The nearest Endocrinology services are available in distant cities: Denver 6 hours, Albuquerque 3.5 hours
- Winter conditions often make high mountain passes inaccessible to patients for half of the year limiting travel
- A significant portion of Four Corners residents do not have internet access to conduct telemedicine appointments (25-90%)
- Over 65% of the population served at our three clinics have Medicare or Medicaid and have a fixed or low income
- According to a 2022 JAMA study, rural counties demonstrated higher diabetes mortality rates compared with other urbanization levels



CHALLENGES:

Chronic Care

Estimates of residents living with diabetes range from 15% to 50% of the population in areas like the Navajo Nation and Southern Ute Nation.

New Diagnoses

Patients who present to the emergency department with diabetic ketoacidosis (DKA) are triaged based on age. While pediatric patients are flown by fixed-wing aircraft to tertiary centers such as the University of Colorado with pediatric endocrinologists and diabetes teams, adult patients are treated Mercy Hospital's eight-bed ICU and discharged to follow up with their PCP. Little diabetic education is available, and primary care providers are often overwhelmed with patient needs for advanced diabetes care upon discharge. No inpatient diabetic education is available.

Pregnancy

Patients with pre-existing Type 1 diabetes are referred to Maternal Fetal Medicine for care. Qualified practices are located in Denver and are not feasible for patients to travel on the monthly basis required in pregnancy.

Purpose

To **IMPROVE** the care provided to patients with diabetes in a rural setting, allow patients with complex diabetes to receive care locally, and to reduce the burden of providing advanced diabetes care on primary care providers.

Acknowledgments

I'd like to thank Kimberly Ayres, RD, CDCES for her vision and partnership in creating the current service offerings, and her unwavering commitment to excellence in diabetes care. I'd also like to thank Bryan Knox, MBA for his support and enthusiasm for the development of this service line, as well as Judy Lewis, PSR lead; Joanna Kriehn, RD, CDCES; Cheyenne Rice, MA; Karen Gerst, RN; Holly McCoy, PA; Shona Jones, NP; Tiffany Jameson, RN and Katie Lee for their support and participation in this project. Lastly, thank you to Drs. Hanah Polotsky and Shauna Gulley for support of this concept.

Methods

Phase I

- Internal Medicine clinic hires RD/CDCES from now closed hospital-based education clinic
- A "Diabetes Day" was identified for each IM PCP; typically one day every 1st and 3rd or 2nd and 4th weeks of the month
- The PCP template on Diabetes Day changed to 20 minute appointments and patients were scheduled for diabetes follow-up in every other slot; general IM acute or follow-ups were scheduled in between
- The CDCES schedule was built to allow their visit to alternate in concert with the PCP; they prepare for visits with pump/CGM downloads and document between visits
- CDCES conducted their visit with the patient; reviewing CGM/pump data, identifying trends, proposing adjustments to pump or medications and suggesting new medications consistent with ADA Standards of Care
- CDCES and PCP held a brief face-to-face check-in about the patient before the PCP went in to see the patient and review CGM
- CDCES does not bill on these days and PCP bills for E/M and CGM review; RVU goes to PCP
- PCP is able to comfortably see 10-12 patients per half day

	Tuesday	
	MD	CDCES
800	other	DE
820	diabetes	prep
840	other	DE
900	diabetes	prep
920	other	DE
940	diabetes	prep
1000	other	DE
1020	diabetes	prep

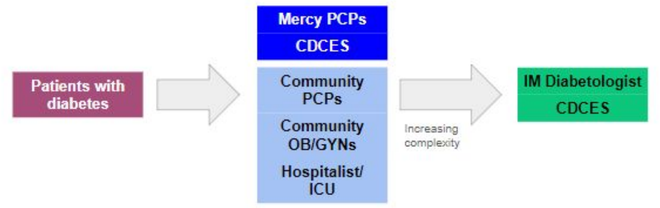
Phase II

- Expand back-to-back (BTB) PCP:CDCES appointments to three additional FM clinics; split CDCES 1.5 FTE among three clinics
- Physician champion and CDCES champion develop business case with Practice Manager to grow the program by an additional CDCES FTE
- Program officially created as the **Diabetes and Nutrition Center in Primary Care** and a core team of champions is established (representative from PSR, MA, RN, CDCES, MD, APP, clinic supervisor, PM) and meet twice monthly to problem solve and optimize the new program
- Practices enroll as sites in the PREPARE4 CGM study with University of Colorado; MA/RN staff trained to order and download CGMs; PCPs are trained to order and interpret CGMs via lunch and learns by CDCES and sample wearing

Phase III

- IM Physician champion certifies with ADCES as BC-ADM (Board Certified Advanced Diabetes Management) and, subsequently, board certification with the American College of Diabetology
- This physician practice focuses on diabetology: closes to new IM patients, but opens to outside consultations for Diabetology
- Diabetologist and CDCES see internal and external patients back-to-back each clinic day
- Additional APPs are trained to support the Diabetology practice by following patients who reach goals and are stable on medication regimens, including MDI or insulin pumps
- PCPs are able to refer their patients with advanced diabetes care needs which alleviates the stress of management, including orders, etc

Outcomes



- Internal PC referrals: patients with HbA1c >8% or new diabetes diagnosis are referred to Diabetic Education and seen BTB; group diabetes education classes are provided on an ongoing basis
- Internal and community clinicians refer to IM Diabetology practice for advanced diabetes care including Type 1, 2 or 3C on MDI, insulin pump start and management, CGM, A1C>9%, optimization, etc.
- Rapid hospital follow-up established: partnership with hospitalists/intensivists and case management to ensure patients with DKA are seen within the week, sometimes same day of discharge; facilitated over a shared google chat group and EPIC referral system
- Established in-office diabetic retinopathy screening with non-mydriatic retinal scanning and remote ophthalmology interpretation
- Enrolled as a site in a national industry CGM study benefitting our patients with Type 2 diabetes *not* on insulin
- Partnered with food prescription program, Fresh to Flourish, for patients expressing food insecurity to access fresh produce via CSA and/or Food vouchers to local farmers market and coops
- Developed relationship with Southern Ute Tribal nation pharm D
- Recognized with Team Innovation Award from our national organization; concept approved for regional expansion
- Annual CME with team at ATDC Conference, Keystone, CO develop camaraderie and shared knowledge

Conclusions/Lessons Learned/Next Steps

We found that 1-2 people with a passion for providing diabetes care were able to then identify other mission-oriented stakeholders, connect with their "why" for advancing diabetes care, and empower each member of the team to contribute to the process. Make it fun!

Our Next Steps

- Develop physically adjacent dedicated diabetology clinic for office visits and group education classes
- Start preconception classes for patients with diabetes of childbearing age
- Grow FTE for both providers and CDCES
- Expand on-site ancillary services including Fibroscan for MASH
- Develop outreach clinic at Indian Health Services in Towaoc, Colorado, capital of the Ute Mountain Ute tribe
- Continue clinical trial participation that will benefit our patient population
- Pursue formal Center for Clinical Excellence in Diabetes designation

References

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