

Does utilization of a 3-month **M**ultidisciplinary **S**equential **R**apid Intervention (**MUst SERVE**) Improve Glycemic Control in High-Risk Patients with Diabetes?
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Background

- Elderly patients with diabetes and poor glycemic control are at higher risk of complications and are prone to therapeutic inertia leading to worse outcomes.
- We examined the effects of utilizing a multi-disciplinary team (including an endocrinology provider, clinical diabetes educator, and pharmacist) over 3 months on glycemic control in high-risk elderly patients with diabetes
- The objective was to intensify medical management by extending specialized care and reduce therapeutic inertia in high-risk patients cared for by primary care physicians.

Methods

- Single tertiary care institute quality improvement project
- Out of 176 patients identified with HbA1c $\geq 9\%$, age ≥ 50 years, 22 patients agreeable to intervention.
- Patients had sequential visits with an Endocrinology provider, diabetes educator and clinical pharmacist within 12 weeks.
- Data was compared from baseline (at initial visit with Endocrinology provider) to week 12 (endpoint).
- Primary outcome: Change in HbA1c. Secondary outcome: Change in amount of albuminuria and BMI.
- Paired t-tests used to compare pre- and post-intervention data

176 patients in primary care clinics identified ≥ 50 years old, HbA1c $\geq 9\%$, ≥ 2 co-morbidities



22 patients agreeable to intervention



Seen by an Endocrinology provider at initial visit and baseline data obtained



Seen by a Diabetes Educator & Pharmacist within 4 weeks



At 12 weeks: Seen by an Endocrinology provider and post-intervention data obtained



Follow-up with PCP and/or Endocrinology

Factor	Pre-intervention value	Post-intervention value	Change from pre- to post-intervention values
HbA1c (%)	9.4 \pm 1.4%	7.4 \pm 0.8%	2.1% reduction (95% CI 8.0-9.3, p < 0.01)
Average albumin: creatinine (mg/g)	195.1 \pm 305.4	170.0 \pm 280.8	74.4 reduction (95% CI 61.1-282.4, p = 0.48)
BMI (mean, kg/m ²)	31.0 \pm 5.8	31.7 \pm 4.6	0.5 increase from baseline (95% CI 29.0-33.4, p = 0.76)

Results

- Our study included 22 patients.
- The mean age was 72 \pm 7 years with a HbA1c of 9.6 \pm 1.3%, BMI of 31.0 \pm 5.6 kg/m², average albumin: creatinine of 195.1 \pm 298.3 mg/g.
- At the end of the study, the average HbA1c value was 7.6 \pm 0.9% and represented a 1.9% mean decline (95% CI [-2.8%, -1.0%], p-value < 0.001).
- There was no significant change in BMI or albuminuria.

Discussion

- Using a 3-month multi-disciplinary quality improvement (QI) initiative in high-risk patients with diabetes, we significantly improved glycemic control as measured by HbA1c.
- Implementing our project might assist primary care providers in managing high-risk patients with diabetes and potentially improve outcomes while reducing therapeutic inertia.
- Limitations of our study were the small study size and lack of a control group