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Comments
Medical student Paul Daniel participated in this study as part of the Senior Scholars research program at the University of Massachusetts Medical School.

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Purpose Assessment of Patient-Provider Collaboration in Type 2 Diabetics (in Jamaica) and Effects on Glycemic Control

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Background and Purpose

Type 2 diabetes mellitus is a growing health problem worldwide.

Primary pathophysiology of this disease stems from impaired glucose uptake via insulin resistance that results in symptomology ranging from polydipsia and polyphagia to potentially life threatening hyperglycemic episodes.

Major effects on health and healthcare costs are from microvascular complications of diabetic nephropathy, neuropathy and retinopathy, which can lead to end-stage renal disease, extremity amputation, and blindness, respectively.

Timely screening and outpatient referrals, as well as good glycemic control, have been shown to slow the progression of complications.

Recent trend in the United States for management of chronic conditions (such as type 2 diabetes) focuses on patient-centeredness which advocates for increased collaboration between caregivers such as nurses and physicians with patients to produce a management plan that is feasible for the patient.

In Jamaica, the incidence of type 2 diabetes has been steadily increasing since 1960, with current estimates of a diabetic population exceeding 300,000. Some research suggests poor glycemic control in sample population and high rates of complications such as retinopathy.

As a counter measure, organizations such as the Diabetes Association of Jamaica have implemented educational workshops to make the general population more aware of this disease and its complications.

Beyond the education of the public and management by physicians, it would be interesting to assess the perception of patient-centeredness in Jamaicans suffering from type 2 diabetes and determine if there any implications for management of their condition.

Methods

A cross-sectional observational study measuring patient-to-provider collaboration in type 2 diabetes in a sample population in Jamaica.

Subjects were consented, assigned a study number, and self-administered the PACIC in a private exam room.

The investigator (PD) collected additional study data as described above.

Results

Study population was predominantly female (78.9%; 15 women/4 men), had an age range of 33-78 years (mean 55), years diagnosed with diabetes 0.03 – 32 years (mean 14), Hemoglobin A1c values from 5.40% – 15.5% (mean 10.8%), and with a majority (42.1%; 8 participants) receiving a combination of insulin and an oral hypoglycemic agent as a treatment modality. (See Figure 1)

Overall, PACIC scores ranged from 1.85 – 4.80 (mean 3.15).

Main variables of PACIC scores and HbA1c were subject to analysis via the Pearson correlation, but no statistically significant correlation was found (r<.184).

Additionally, HbA1c did not correlate significantly with the other variables of patient age (-.488), and years diagnosed with diabetes (-.244).

These data were also re-computed using non-parametric correlation coefficients to take small sample sizes into account. However, no statistically significant correlations were found.

Likely the study is underpowered to find statistically significant differences between PACIC scores and other key variables.

Correlations between PACIC scores and other key variables. (See Table 2 below)

Conclusions

Implementation, data collection and administration of the questionnaire was straightforward and did not interfere or prolong patient appointments. Thus, testing patient-to-provider collaboration could potentially be a component of visits for patients with chronic illness. However, further studies are needed to evaluate efficiency and cost-effectiveness.

Recruitment was suboptimal with the limiting factor being that most subjects could not afford Hemoglobin a1c testing as part of their diabetic management.

No statistically significant associations between our main variables of patient and provider collaboration (PACIC score) and glycemic control (HbA1c) were found. Analysis of potential confounders also failed to illicit any correlations.

The major limitation in our study stems from our small sample size. An important next step would be to repeat this study with a larger sample and currently, the process of gathering additional subjects is underway.

In summary, it is unclear what impact patient-physician collaboration will have on glycemic control in type 2 diabetes. However, if results are favorable, as suggested by past research, and demonstrate a clinical benefit, the PACIC could potentially be an additional tool for physicians treating type 2 diabetes in controlling this disease and limiting complications.

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References


