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25ᵗʰ Annual Practitioners Conference

District Level Hospital Diabetic Patients Referred to Intermediate Care:
A Descriptive Analysis

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Background / Study setting

Data on adult diabetic patients were collected from existing electronic database created to track and facilitate referrals between Mitchell's Plain Hospital (district level) and Mitchell's Plain Intermediate Care facility (MPIC), also known as Aquarius Health Care, situated in Mitchell's Plain on the Cape Flats of Cape Town

Methods

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- Data collected focused on adult diabetic patients from an existing electronic database referred between 1 November 2020 and 31 August 2021

- Additional data were collected on the standard of primary care prior to hospital admission, investigations performed on admission, and on patient demise within 12 months of the research window. The Standard Treatment Guidelines and Essential Medicine List (STG and EML 2020) was used as a guide.

- Additional data on investigations performed and drugs issued were collected through *Single Patient Viewer*, which allows access to consolidated patient data from multiple sources through a web-based electronic health record or portal

Results 1: Demographic data

Demographic Data (%)
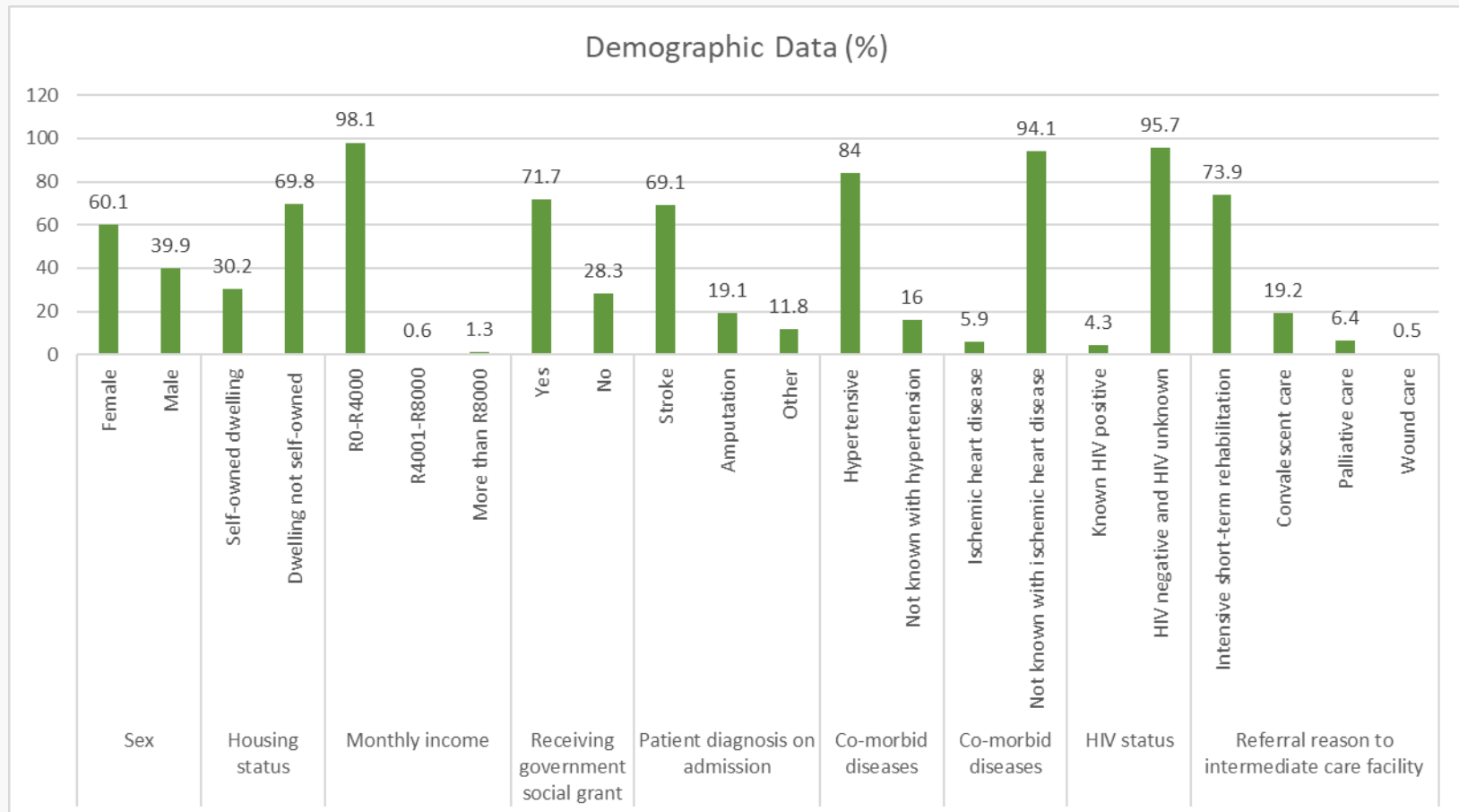
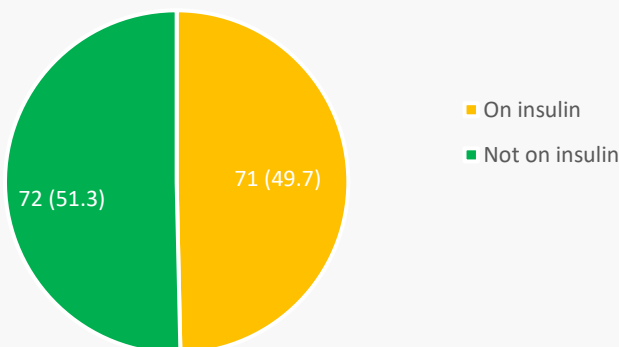# Results 2: Investigations prior to hospital admission

- Of patients known with diabetes, **30.8% had no HbA1c in the preceding two years**

- All patients except one had a baseline creatinine (i.e., earliest creatinine on the system)

- 140 of the 188 patients were known with diabetes for > 1 year and HbA1c coverage data were calculated. (Number of HbA1c's done per year of being known with diabetes)

- The average HbA1c coverage was 61% (median 51%; range: 0%-100%; IQR 43%-83%).

- Only 30 (21.4%) achieved 100% HbA1c coverage.

A quarter of patients were newly diagnosed with diabetes *at admission*
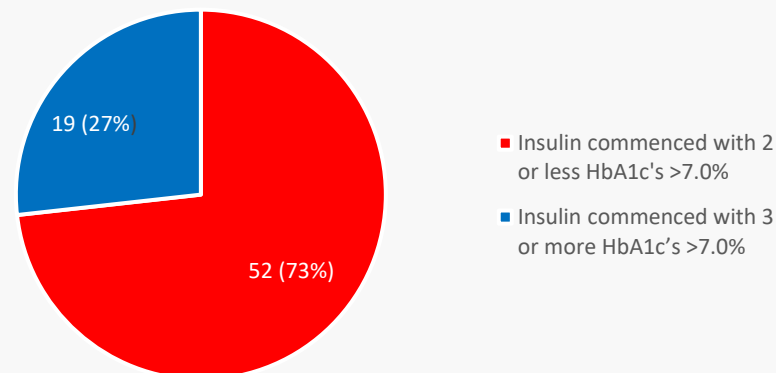
Results 3: Pharmacological measures

Of known patients with DM prior to hospital admission:

- On insulin
- Not on insulin

71 (49.7)

72 (51.3)

HbA1c's >7.0 before insulin initiated

19 (27%)

52 (73%)

- Insulin commenced with 2 or less HbA1c's >7.0%
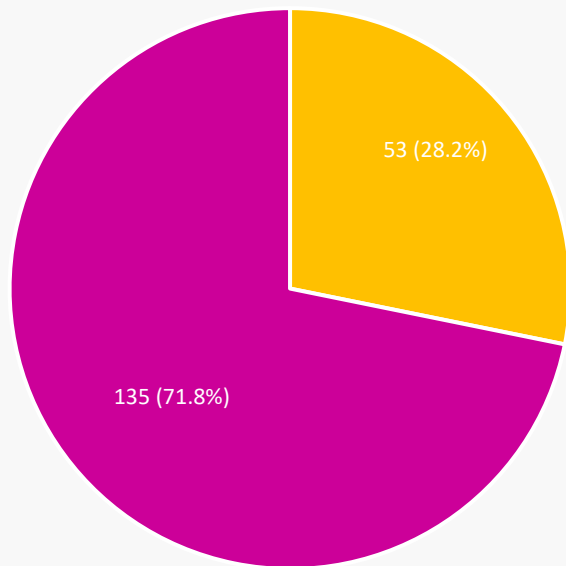- Insulin commenced with 3 or more HbA1c's >7.0%

- Of those on insulin, two (3%) patients had seven HbA1c's >7.0% prior to insulin being initiated

- 59.7% had two or more HbA1c's >7.0% despite medical therapy and therefore insulin was potentially indicated

- For total cohort: 38% of patients were prescribed an ACE-inhibitor prescribed prior to admission

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Results 4: Mortality data

Death within 12 months of review window

- 53 (28.2%)
- 135 (71.8%)

- Data confirming death at 12 months after review window
- No death data at 12 months after review window

Breakdown of death within 12 months of review window

- 15 (28.3%)
- 14 (26.4%)
- 24 (45.3%)
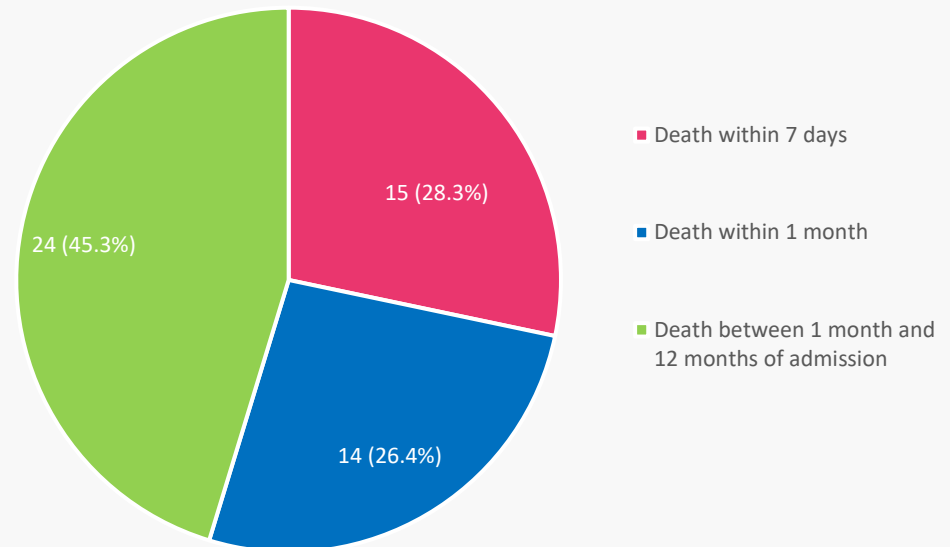
- Death within 7 days
- Death within 1 month
- Death between 1 month and 12 months of admission

Discussion/Recommendations

- Timing of the research window (1 November 2020 to 31 August 2021) was during the COVID-19 pandemic and lockdowns

- Significant failures in DM screening. The National Strategic Plan for The Prevention and Control Of Non-Communicable Diseases (2022 – 2027) proposes a "90-60-50 cascade" for diabetes and hypertension

- Suboptimal adherence to national screening and management guidelines, with delays in insulin initiation

- High mortality rate in the first month after admission which highlights the importance of involving palliative care services for patients and families

- Future research:
  - larger, higher-powered study that could possibly gather correlation data and find associations between certain factors and poor outcomes.
  - No data collected on statin therapy in this study
  - Barriers to adherence to primary care diabetes guidelines could also be explored further

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Conclusion

Diabetic screening and management in primary care need improvement. It appears that available guidelines were not followed adequately and potentially may have contributed to the outcomes experienced by this cohort, as well as subsequent costs to the health system.

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