Overcoming barriers to diabetes care in homeless adults through the use of the Environmental Barriers to Adherence Scale (EBAS)

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Disclosures

- Author names: Laura Schipper, April Bigelow, Michelle Pardee

- Learner Objectives
  - Basic understanding of diabetes and homelessness prevalence in the United States
  - Basic understanding of common barriers to diabetes self-care in the literature
  - Basic understanding of how the EBAS tool can be used in a clinic setting for homeless individuals

- I have no conflict of interest

- Employer: Calvin University, Grand Rapids, MI; Spectrum Health, Grand Rapids, MI; University of Michigan, Ann Arbor, MI

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Introduction and Clinical Problem

- Diabetes affects 29.1 million Americans[6]

- Predictions report 1 out of every 3 Americans will have diabetes by 2050[1]

Diabetes as a chronic disease

Diabetes requires self-management

Self-management includes[30]:
- ◦ Healthy eating
- ◦ Physical activity
- ◦ Monitoring blood sugars
- ◦ Medication compliance

Self-care is essential for the avoidance of complications[16]
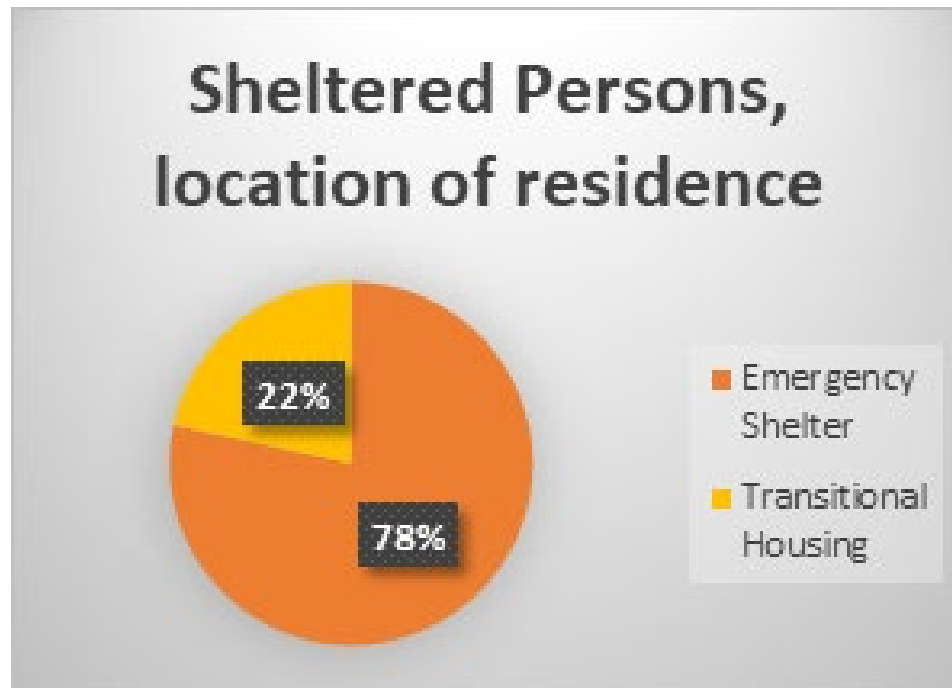
Homelessness in America

In 2015, it was estimated that over 564,000 people in the United States experienced homelessness on a given night[23]

Washtenaw County, Michigan – Homelessness[35]

Total Homeless Persons in Washtenaw County, Michigan

12%   88%

- Sheltered
- Unsheltered

Washtenaw County, Michigan - Homelessness (cont.)[35]

Sheltered Persons, location of residence

- Emergency Shelter: 78%
- Transitional Housing: 22%

Literature Appraisal

- Limited research regarding known barriers to diabetes self-care in the homeless diabetic population
- 2 articles[9,17]
  - Lifestyle
  - Diet/food
  - Access to care
  - Medications

Literature Appraisal (cont.)

3 databases
- CINAHL, PsychINFO, PubMed

Keywords
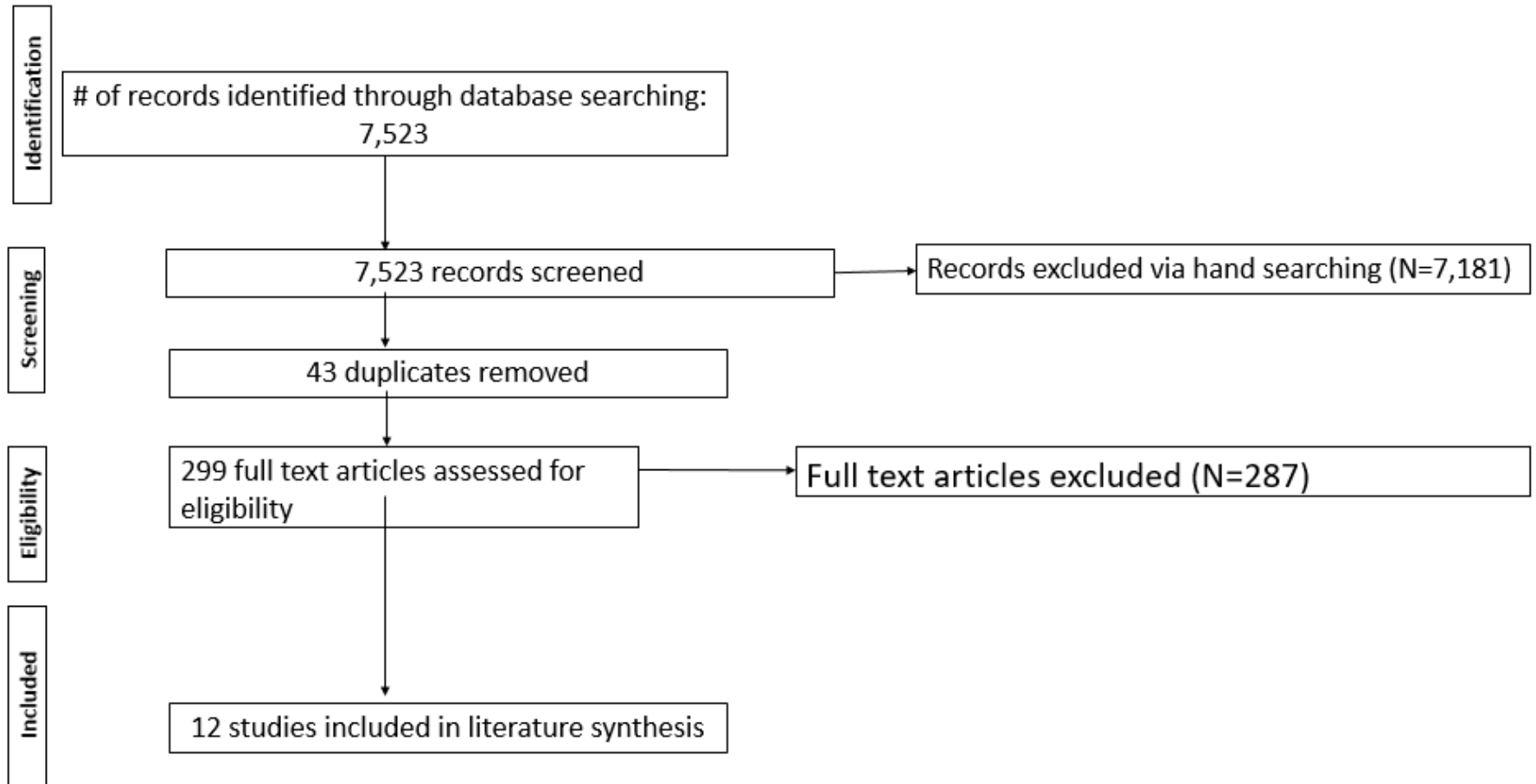- Diabetes, barrier, patient compliance

Literature Appraisal (cont.)

Articles were included based on these criteria:

- Used a validated tool or structured questionnaire
- Conducted with adults
- Conducted in the United States
- Patients diagnosed with diabetes (Type 1 or 2)

12 Articles were selected

Literature Appraisal (cont.)

of records identified through database searching:
7,523

7,523 records screened

Records excluded via hand searching (N=7,181)

43 duplicates removed

299 full text articles assessed for eligibility

Full text articles excluded (N=287)

12 studies included in literature synthesis

Findings from 12 articles

Identified barriers fell into 5 categories:

- Diet[8,27,28]
- Financial barriers[3,24,27,28,33]
- Glucose monitoring[8,26]
- Medication[3,20,21,24,25,31]
- "Other"[8,20,28]

Theoretical Model: Ottawa Model of Research Use (OMRU)[15]

Adapted from Graham and Logan, 2004
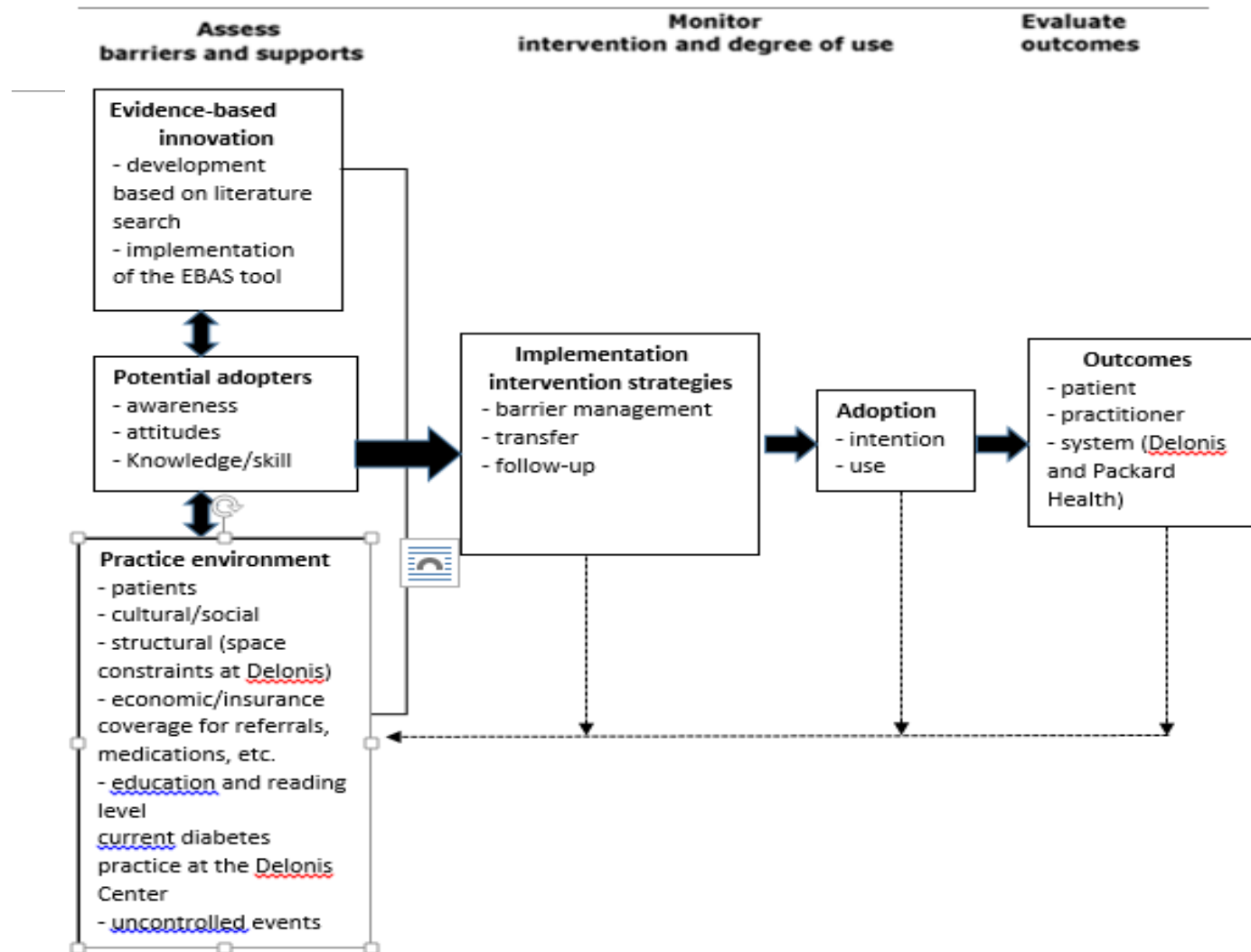
The Role of Nurse Practitioners

- Key members of health care team for diabetic patients[10]
- Critical to management of chronic diseases[11]
- Important role in programs brought to homeless persons[29]
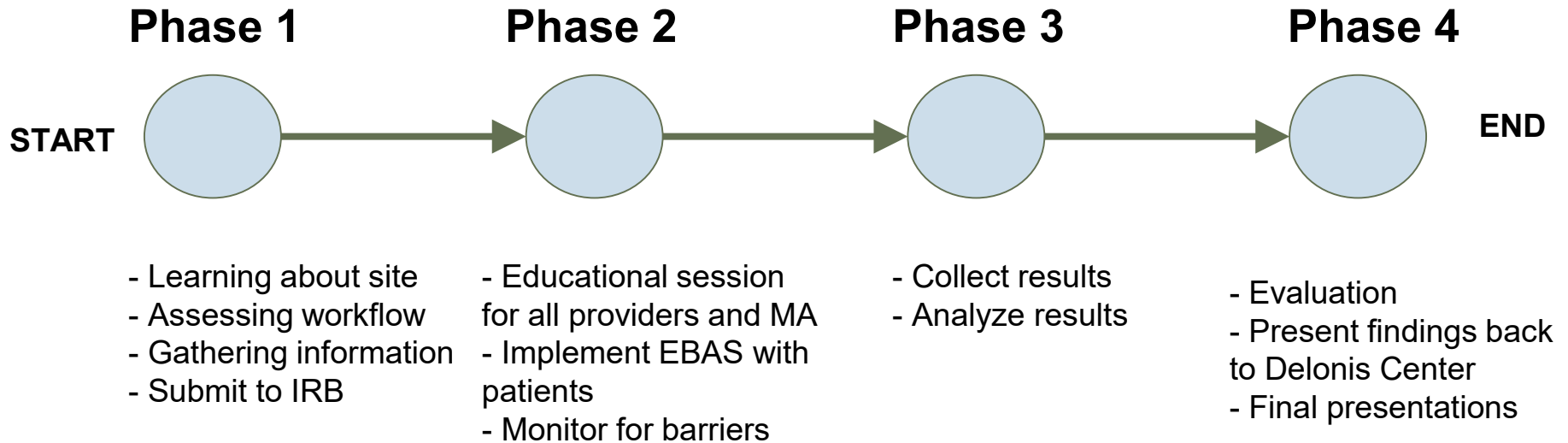- Well-respected by patients and the general public[2]

Project: Setting and Population

- Robert J. Delonis Center
  ◦ Washtenaw Shelter Association of Ann Arbor

- Health Clinic (2nd floor)
  ◦ Packard Health

- Diabetic patients (Type 1 or Type 2)

Purpose of the Project

Improve self-care management of diabetes in homeless adult patients who receive their primary care at the Delonis Center health clinic.

Timeline

Phase 1

Phase 2

Phase 3

Phase 4

START

END

- Learning about site
- Assessing workflow
- Gathering information
- Submit to IRB

- Educational session for all providers and MA
- Implement EBAS with patients
- Monitor for barriers

- Collect results
- Analyze results

- Evaluation
- Present findings back to Delonis Center
- Final presentations

Objectives of the Project

Purpose: Improve self-care management of diabetes in homeless adult patients who receive their primary care at the Delonis Center health clinic.

Objective 1 - Improve assessment of patient identified barriers to diabetes self-care by utilizing the EBAS tool.

Objective 2 – Increase referrals to diabetic patients based on their self-identified perceived barriers to improve care for these diabetic patients.

Objective 3 - Increase recommendations to diabetic patients based on their self-identified perceived barriers to improve care for these diabetic patients.

Environmental Barriers to Adherence Scale (EBAS)

Developed by Irvine, et al. (1990)[18]
60 question assessment tool
Questions divided into 4 categories:

- Medication (including insulin)

- Exercising

- Testing blood sugar

- Eating (diet)

Project Implementation

- MA will give EBAS to patient during check-in

- Completed EBAS will be given to provider

- Provider will conduct PCP visit as normal, and review EBAS results at end of the visit

Data Collection for DNP Scholarly Project at Delonis Center health clinic

Date of visit:

Was the EBAS tool used with this patient? Yes_____   No _____

If no, what was the reason the tool was not used?

What referrals or recommendations did you offer AFTER the EBAS tool was implemented?
Please note: Referrals and recommendations considered STANDARDS OF CARE for diabetes do not count: annual podiatry exam, annual eye exam, BUN, creatinine, and micro albumin.

- [ ] Cost (insurance, supplies, etc.)
- [ ] Diabetic Footwear
- [ ] Medication (getting medications, understanding dose, forgetting)
- [ ] Time (home or work)
- [ ] Complications from other Chronic diseases

- [ ] Transportation
- [ ] Food
- [ ] Exercise/gym
- [ ] Other (please spcify) _____

Comments about referral or recommendation_____

Did you (as the provider) personally order the referral/recommendation? Or did you pass the referral/recommendation on to another member of the health-care team (i.e. social work)?

Measurables/Evaluation Plan

- Objective 1 - Was the EBAS tool used with the diabetic patient? (YES or NO)

- Objective 2 - Did the provider offer any referrals to the patient? (YES or NO)

- Objective 3 – Did the provider offer any recommendations to the patient? (YES or NO)

Results

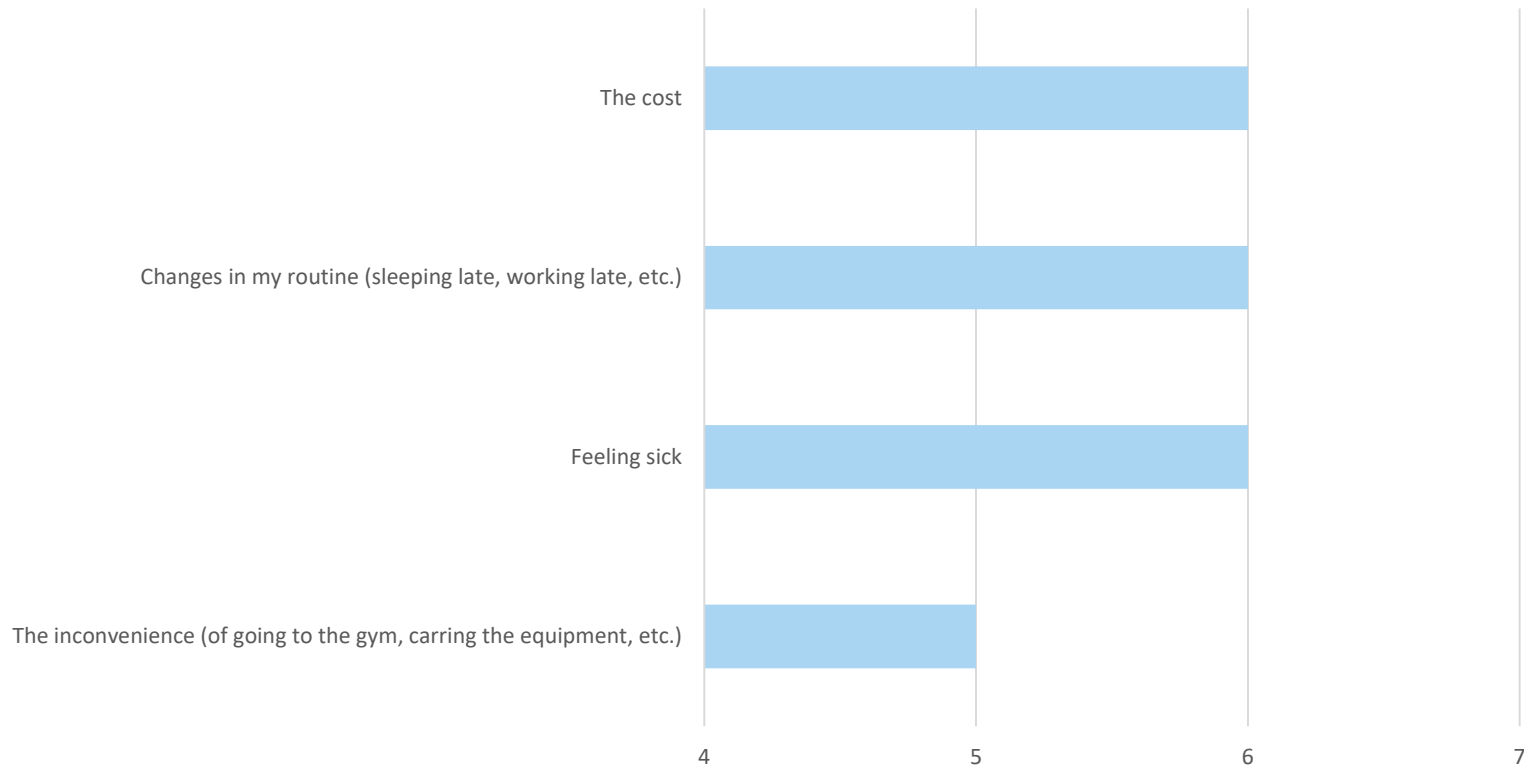12 EBAS tools were completed by diabetic patients (N=12)

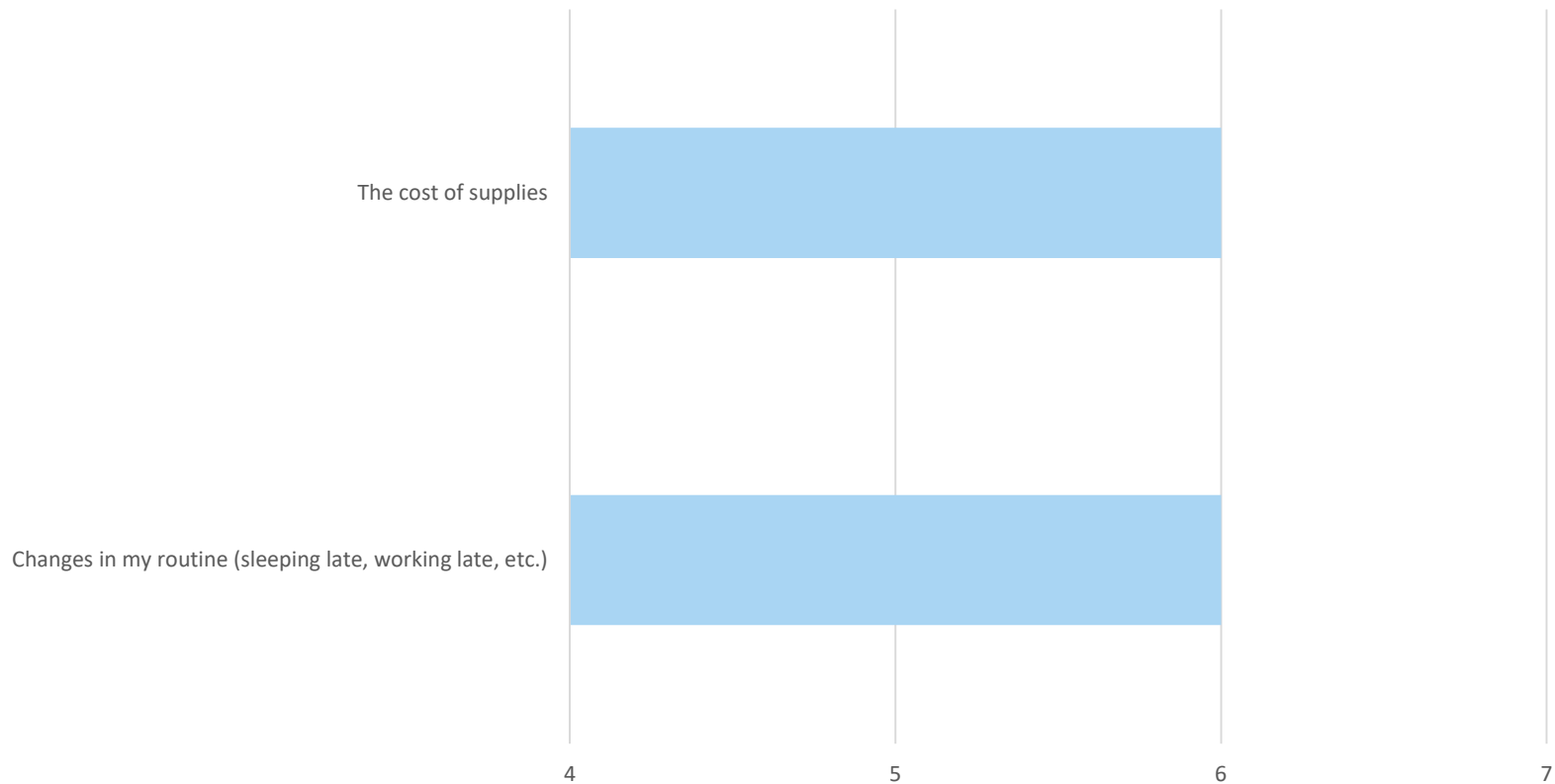# EBAS – most common responses

Medication (or insulin)
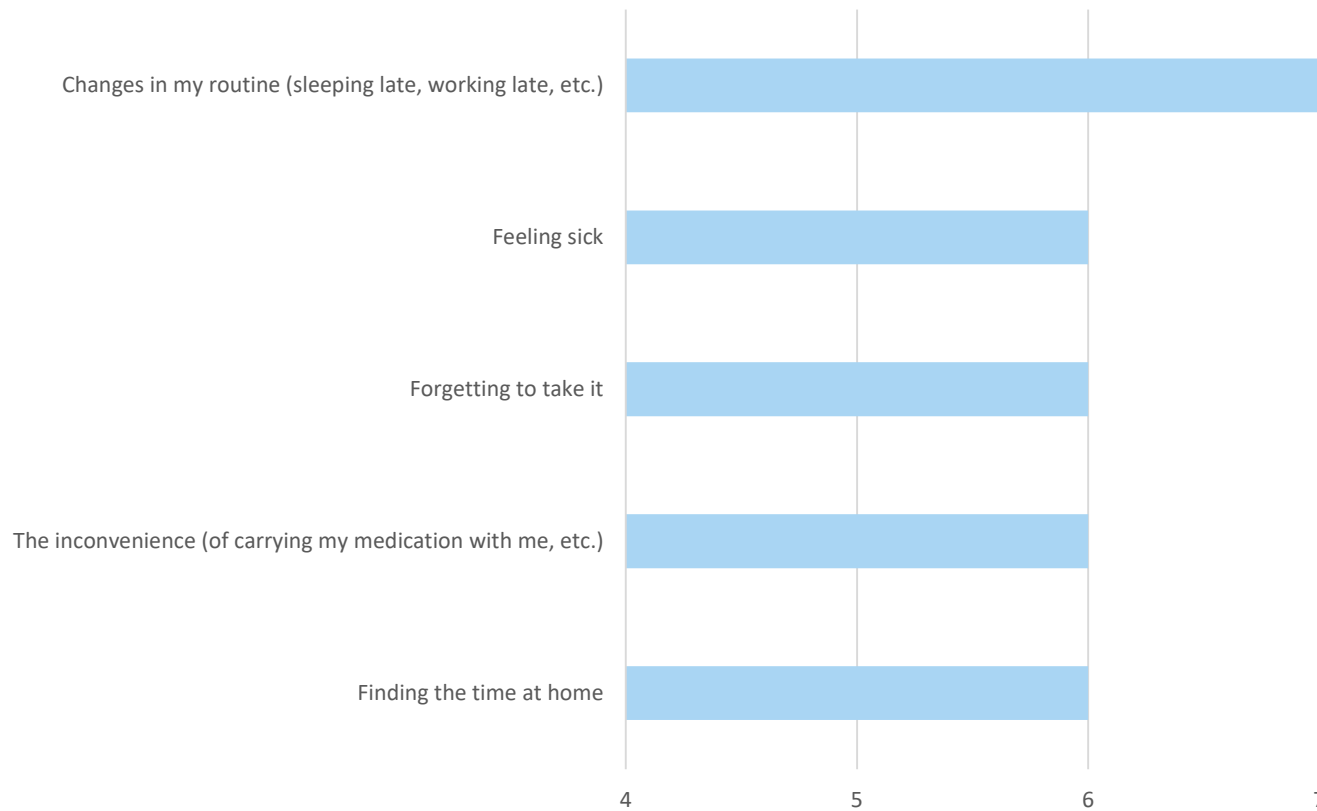
EBAS – most common responses
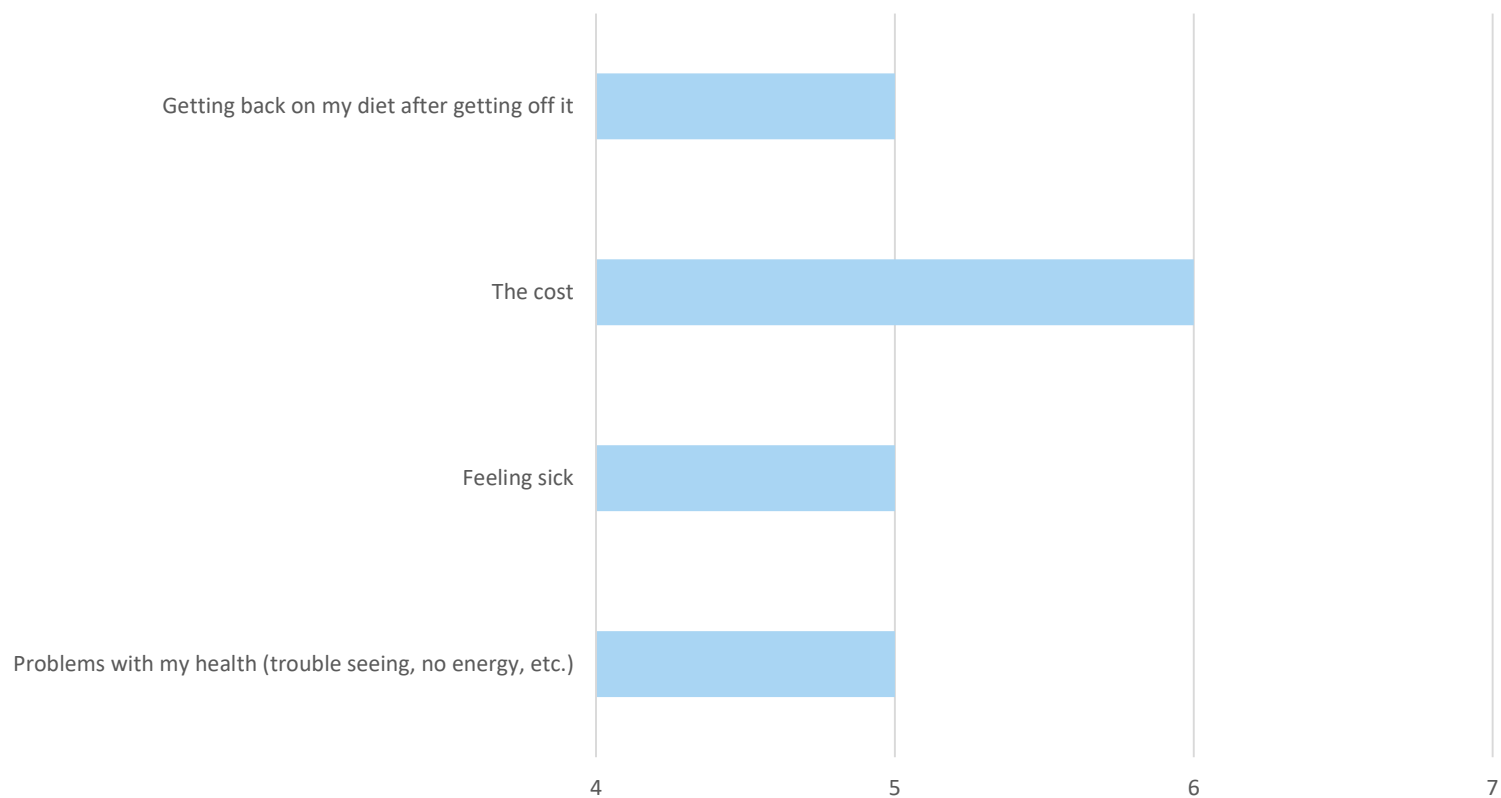
Exercising

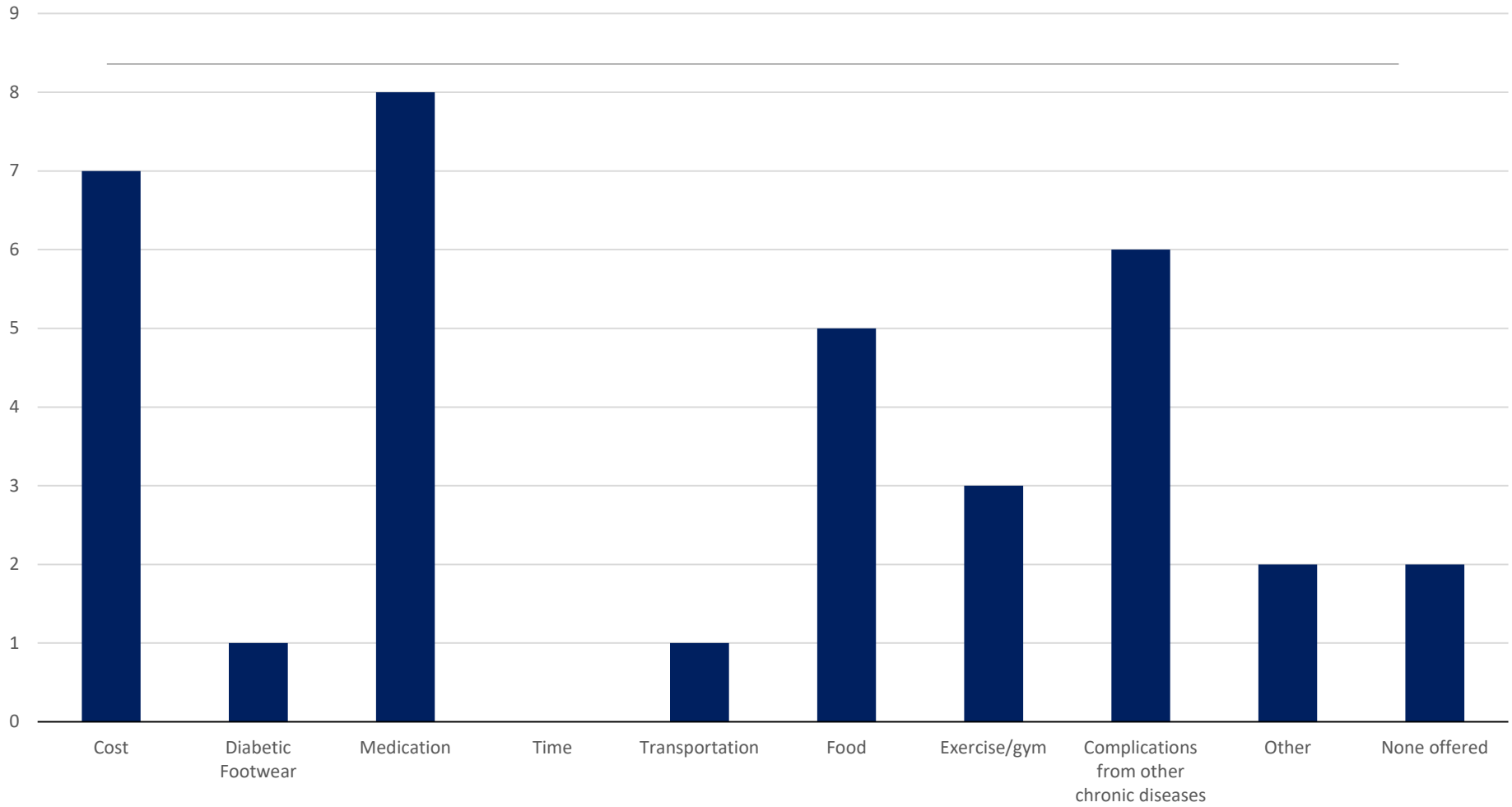# EBAS – most common responses

Testing your blood sugar

EBAS – most common responses

Eating (staying on your diet)

Referrals and Recommendations

Discussion

- 10 out of 12 diabetic patients received a referral or recommendation (83%)

- Reasons referrals or recommendations not offered:
  - Patient not interested
  - Patient primary care patient at another practice

Patient identified barriers

- Length of EBAS tool (60 questions)

- Difficulty understanding the questions

Recommendations for practice

- Continue use of EBAS tool at the Delonis Center health clinic
  - Assessment of barriers to diabetes self-care
  - Continue offering referrals and recommendations

Sustainability

- Length of the EBAS tool

- Project success relies on MA

Future Steps

- Create a condensed/shorter version of the EBAS tool

- Track patients after referrals and recommendations

Thank you

Delonis Center and the health clinic

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April Bigelow, PhD, ANP-BC, AGPCNP-BC

Questions?

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