Poorly controlled diabetes mellitus – the way forward

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Diabetes mellitus in Hong Kong

- Age adjusted prevalence - 7.7% in 1990 to 8.5% in 1995
  - Cockram CS, Woo J, Lau E, et al. The prevalence of diabetes mellitus and impaired glucose tolerance among Hong Kong Chinese adults of working age. Diabetes Res Clin Pract 1993; 21:67-73.
- Elder population (more than 65 years old) have an even higher prevalence
  - Janus ED, Wat MS, Lam SL et al. The prevalence of diabetes, association with cardiovascular risk factors and implications of diagnostic criteria (ADA 1997 and WHO 1998) in a 1996 community-based population study in Hong Kong Chinese. Diabetic Medicine 2000;17:741-745

- Accounts for 30% to 40% of patients receiving renal dialysis in Hong Kong
  - Lui SF et al. Hong Kong renal registry 1995-1999. Hong Kong J Nephrol 1999;1:53-60
- among diabetic patients, 28.4% suffer from baseline diabetic retinopathy, and 5.7% is sight-threatening
  - Tam TKW, Epidemiological study of diabetic retinopathy in a primary care setting in Hong Kong Hong Kong Med J Vol 11 No 6 December 2005

Aims of our study

- To examine the characteristics of poorly controlled DM patients in a general outpatient clinic
- To develop strategies to improve diabetic control in this group of patients

Method

Inclusion criteria:

- DM Patients attending Yan Oi General Outpatient clinic and,
- from *1 November 2006* to *31 October 2007* and,
- *Latest HbA1C > 9*

Exclusion criterion:

- Newly diagnosed DM less than six months

Method (cont'd)

Medical records of individual patients were reviewed for:

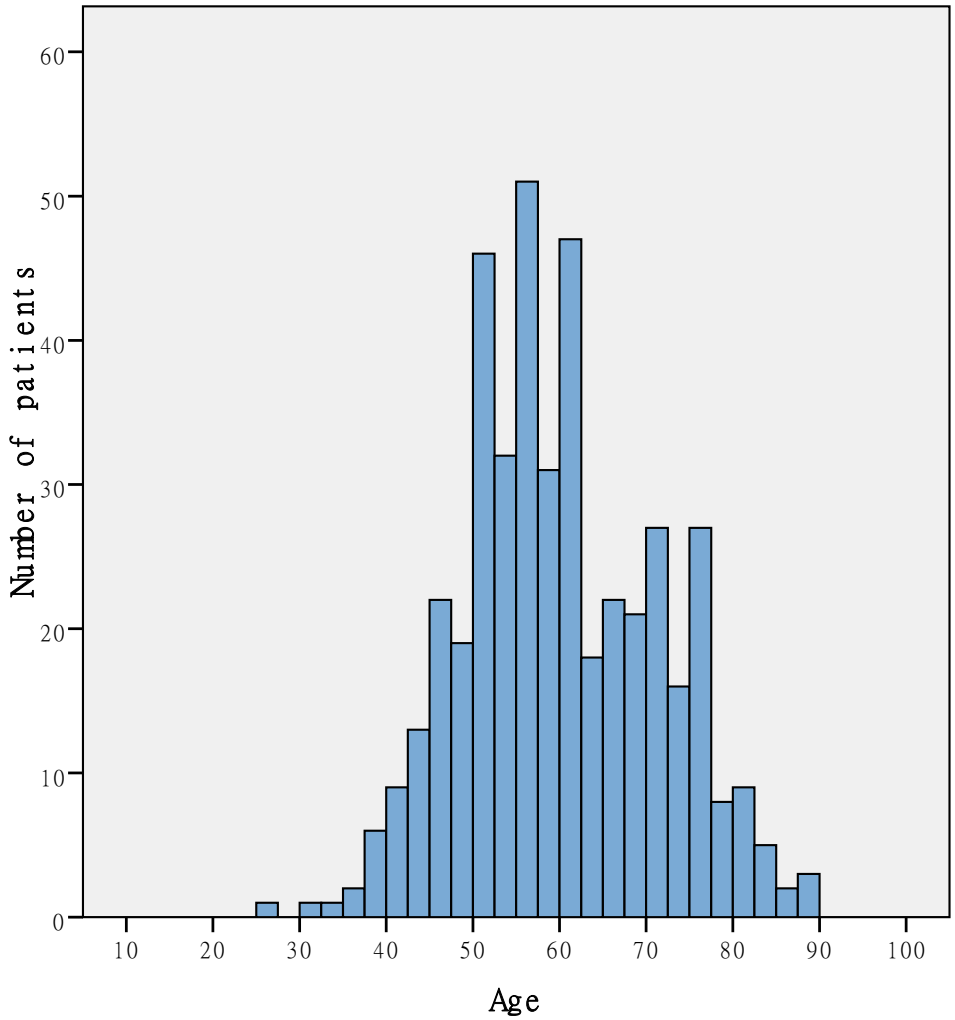
- demographic data
- non-pharmacological intervention received
- medication profile
- doctor's intervention
- patients' attitudes and compliance towards treatment

Results

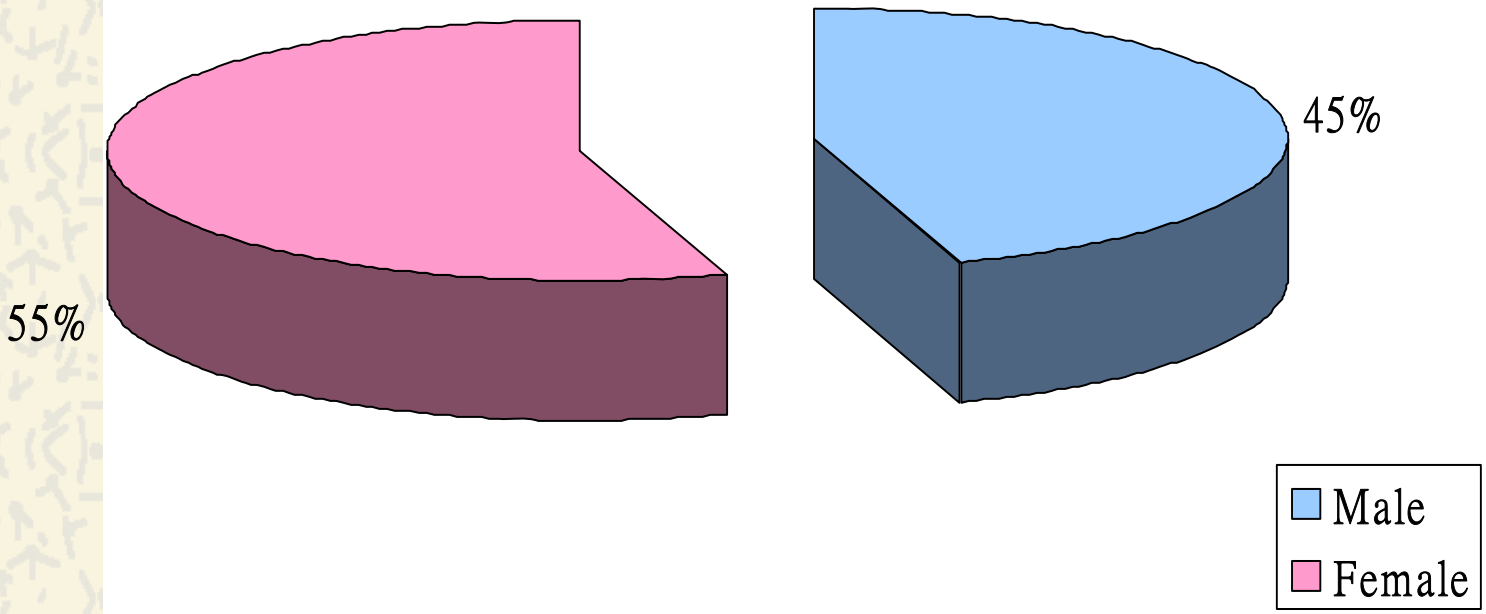
- A total of 439 patients were studied

Demographic Data

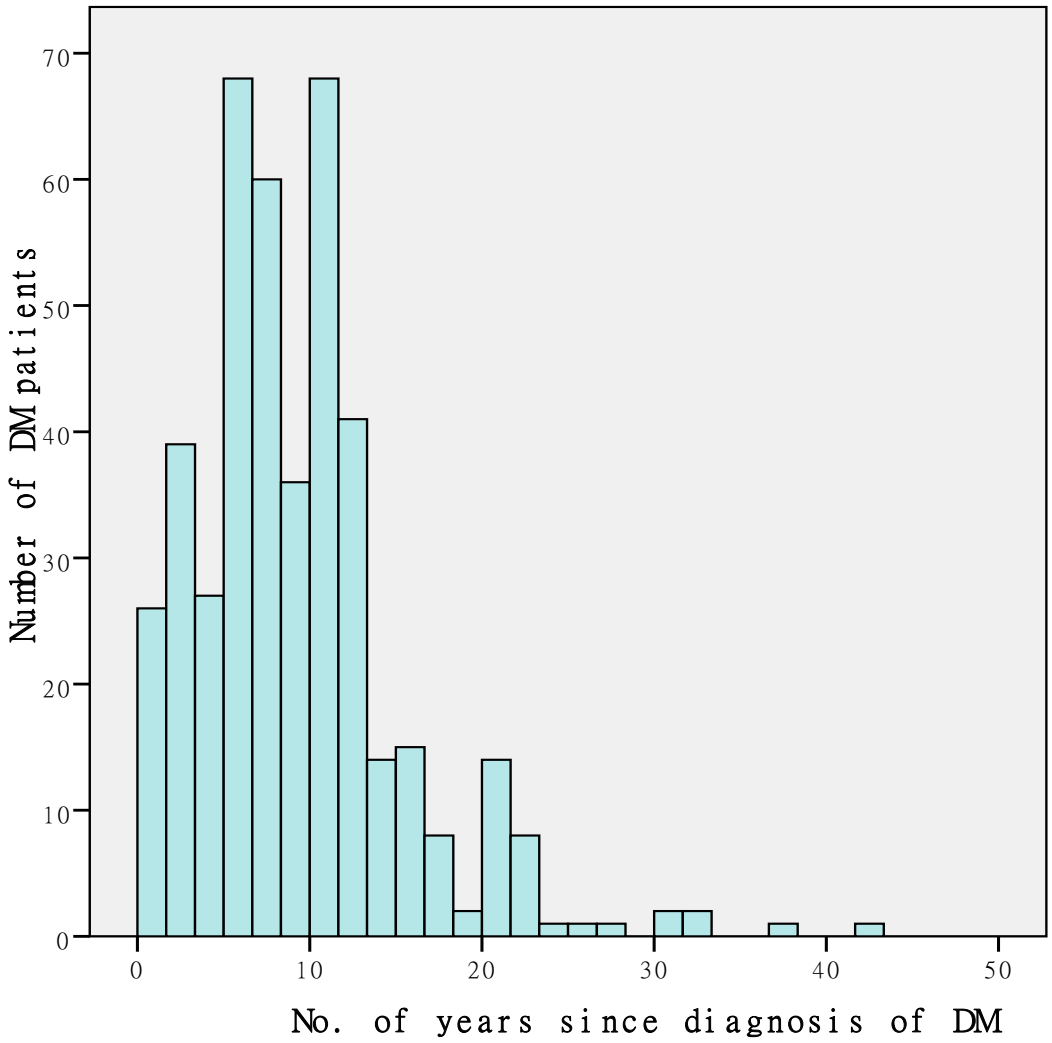
Age distribution of poorly controlled DM patients



Sex distribution of poorly controlled DM patients

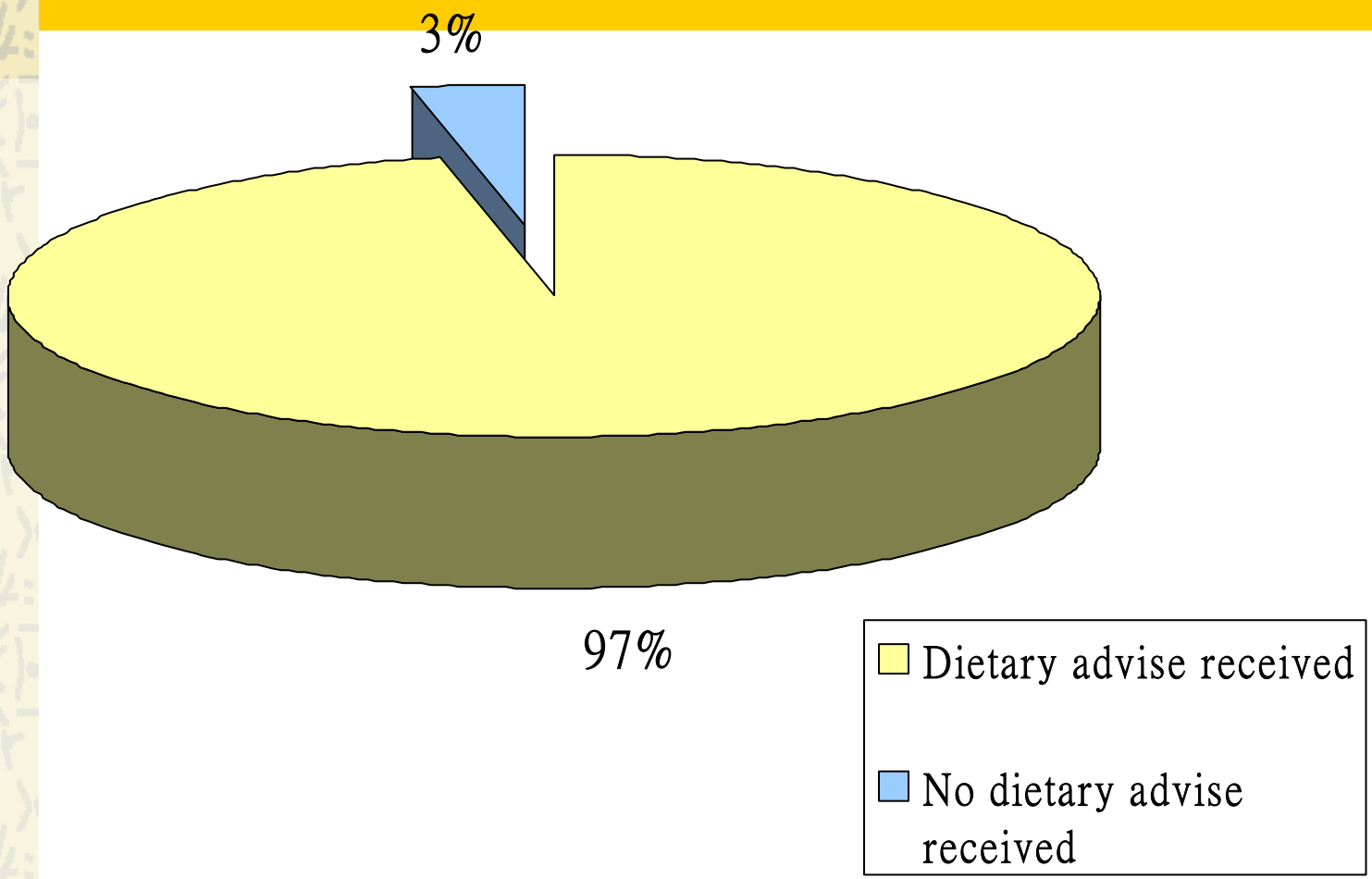


Duration of DM

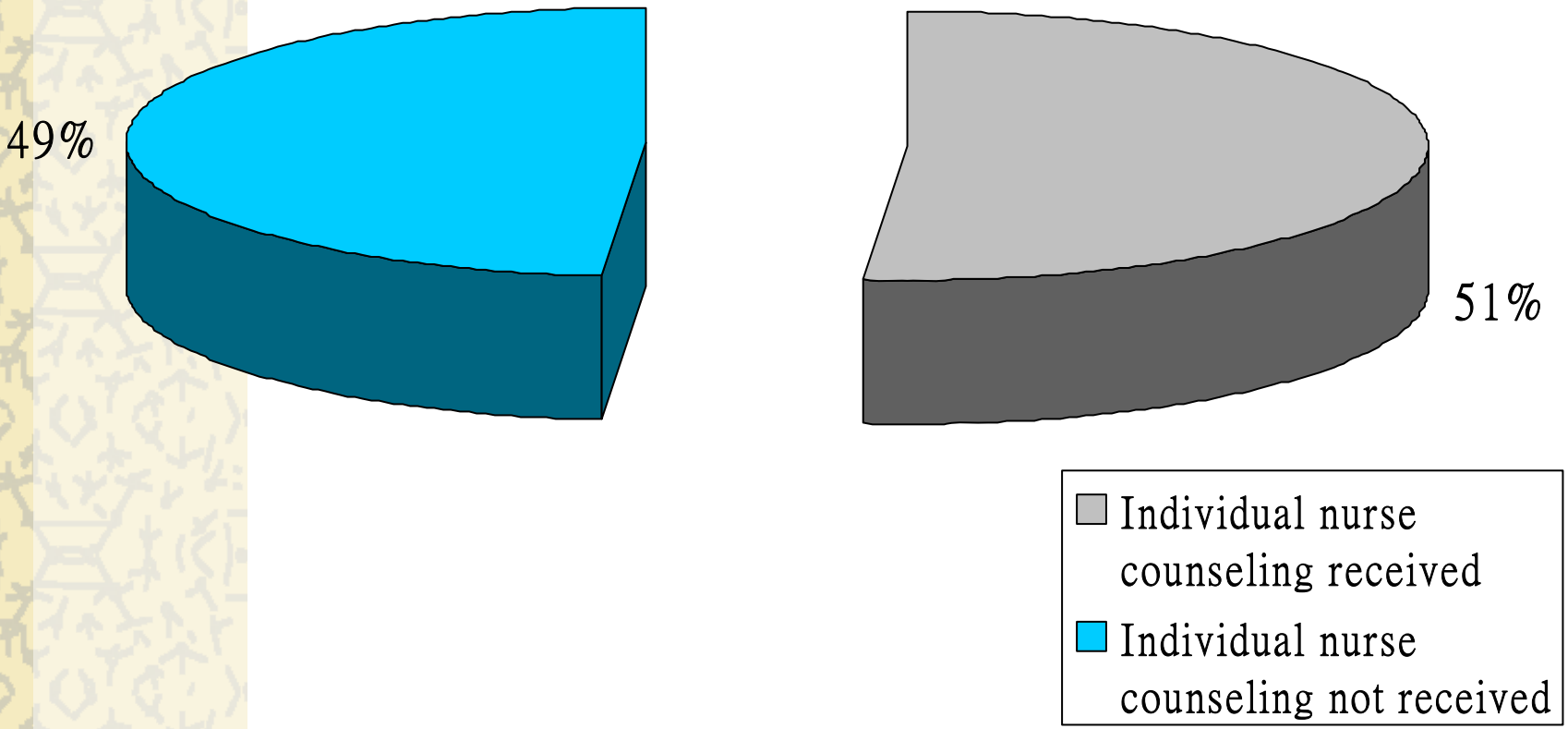


Non-pharmacological Interventions Received

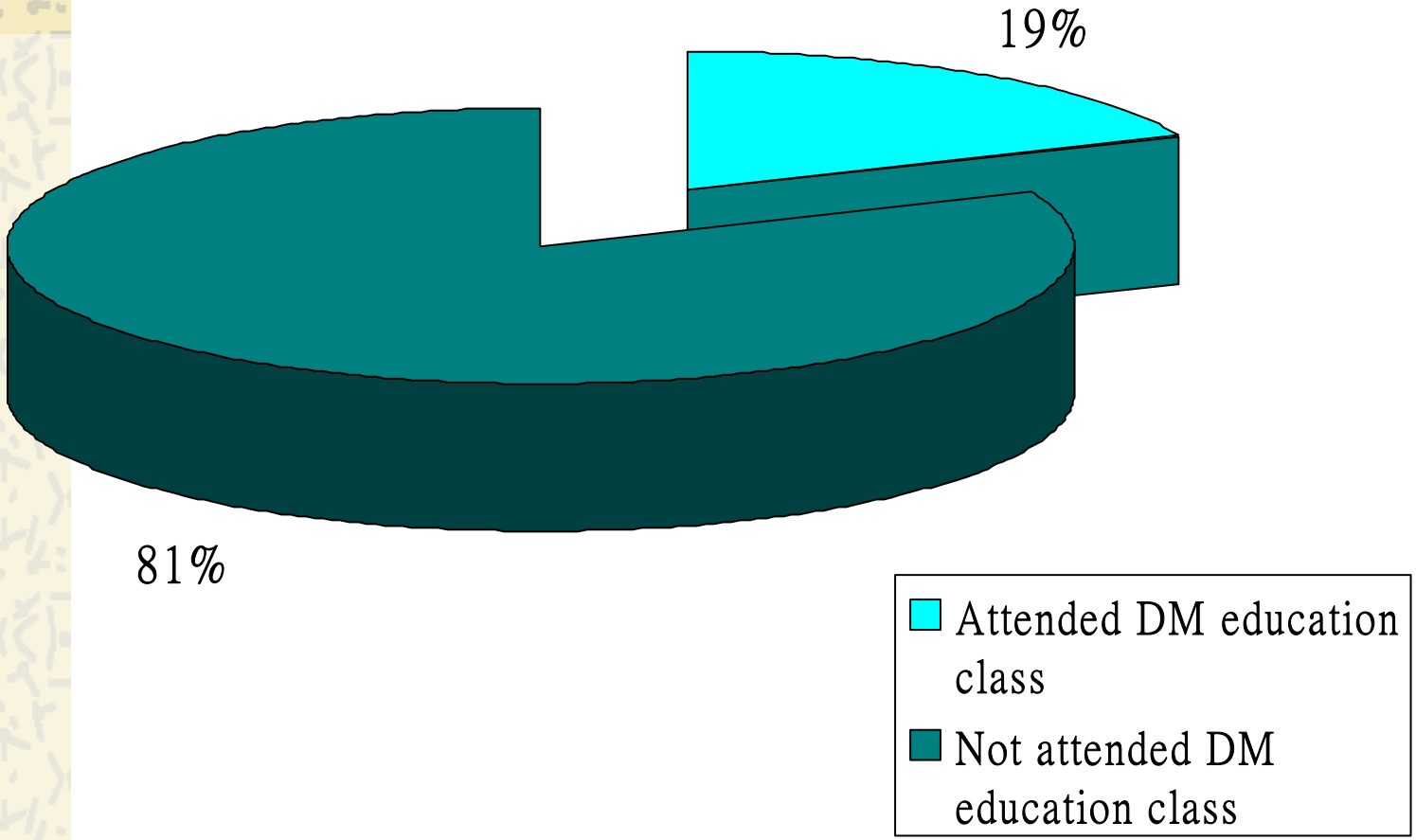
Diet advice



Individual nurse counseling

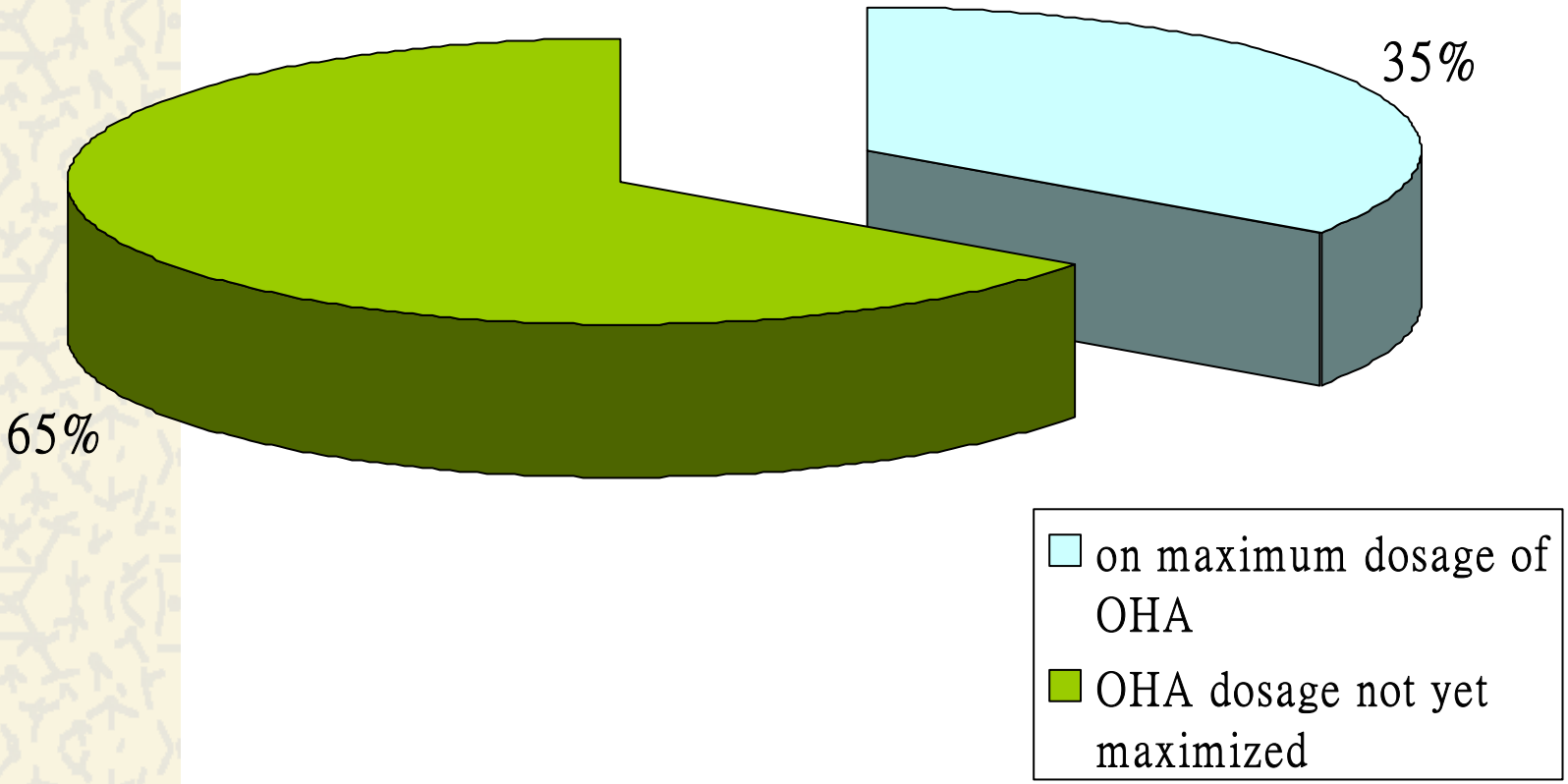


Specially organized DM education class

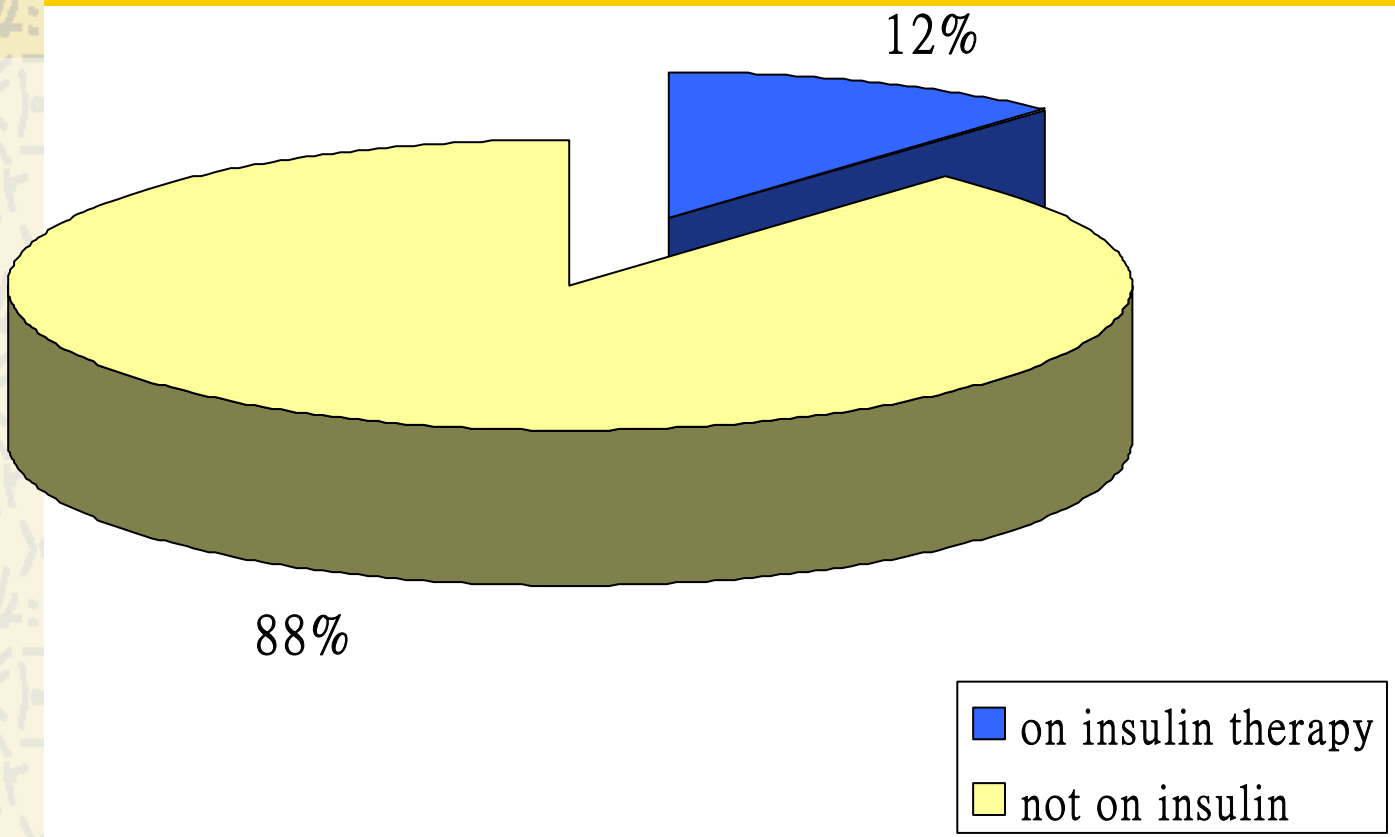


Medication Profile

OHA

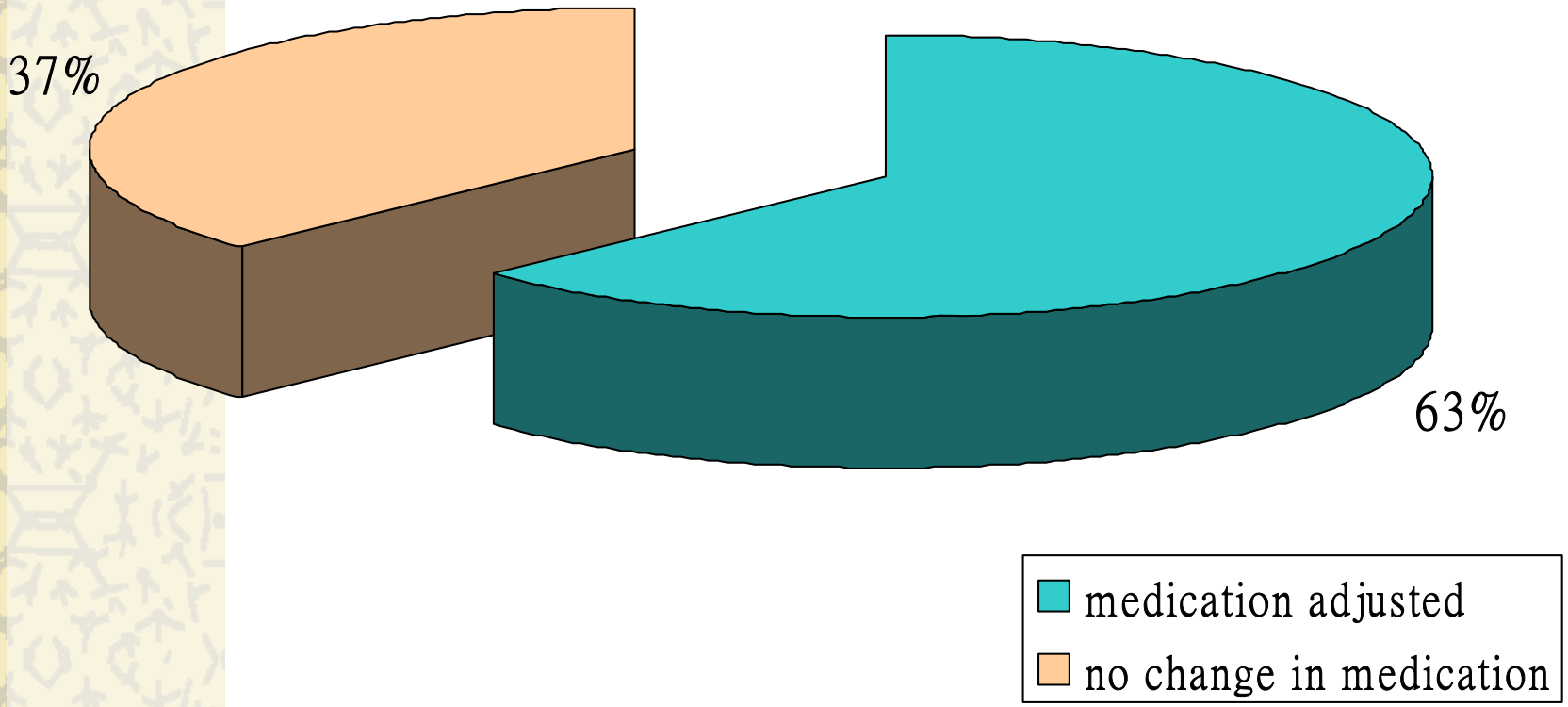


Insulin Therapy

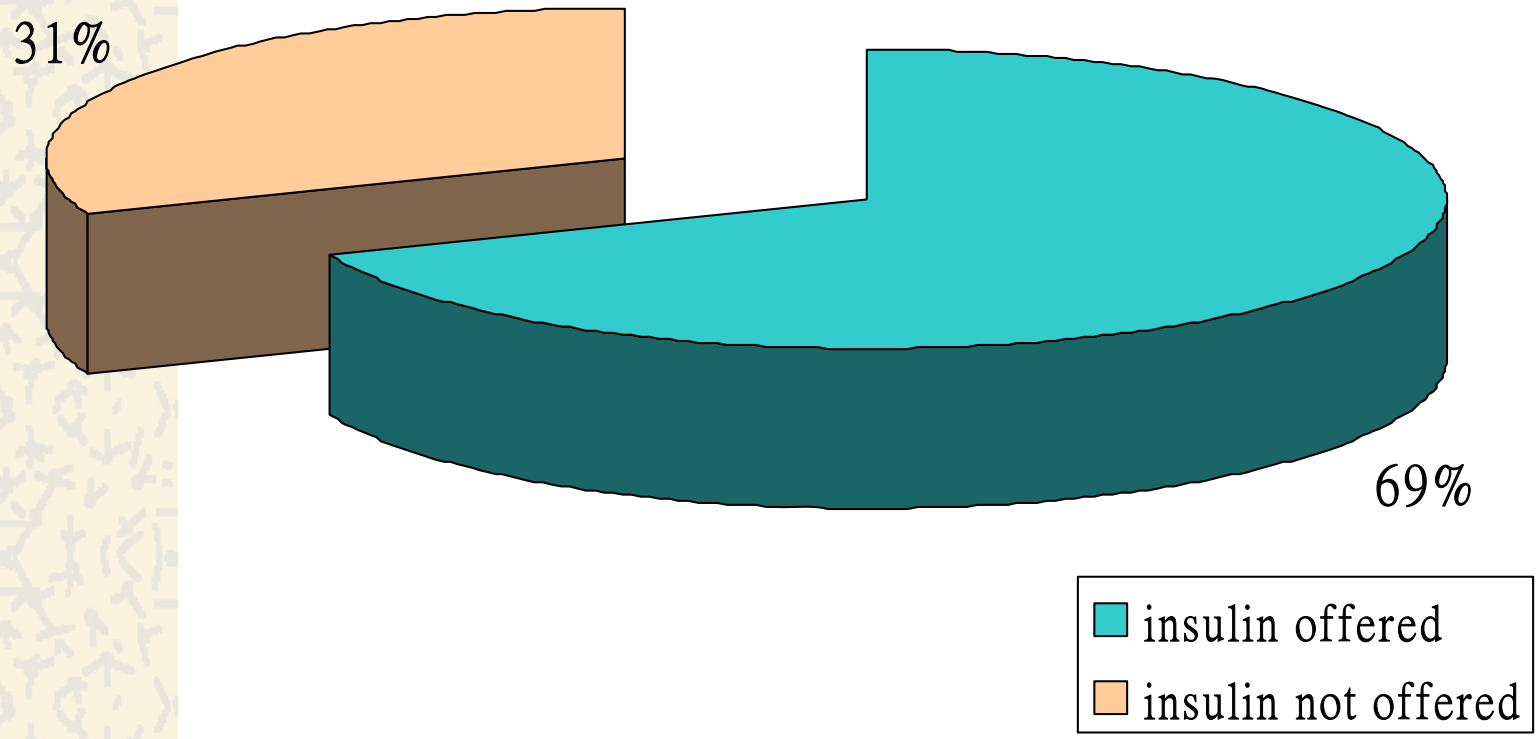


Doctors’ intervention

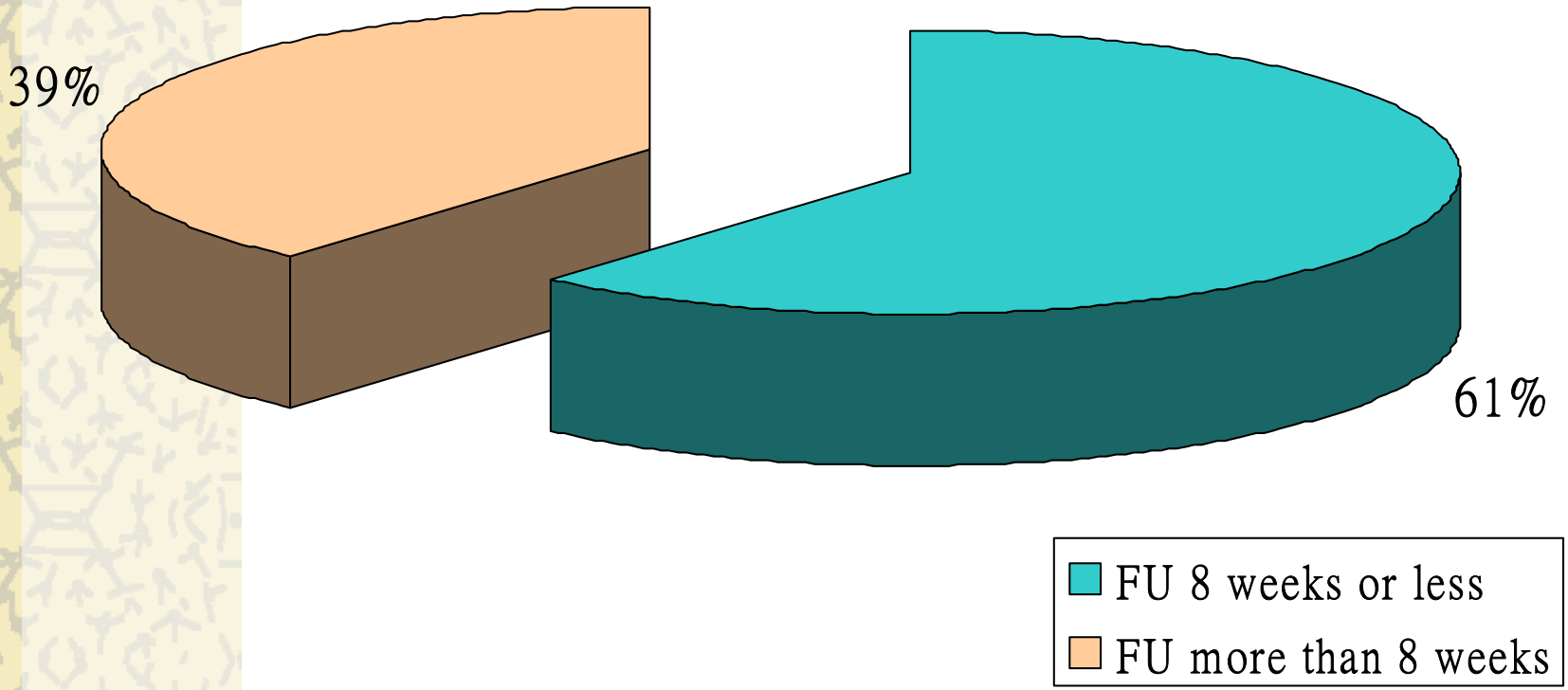
Adjustment of OHA if the patient is not on maximum dose of OHA



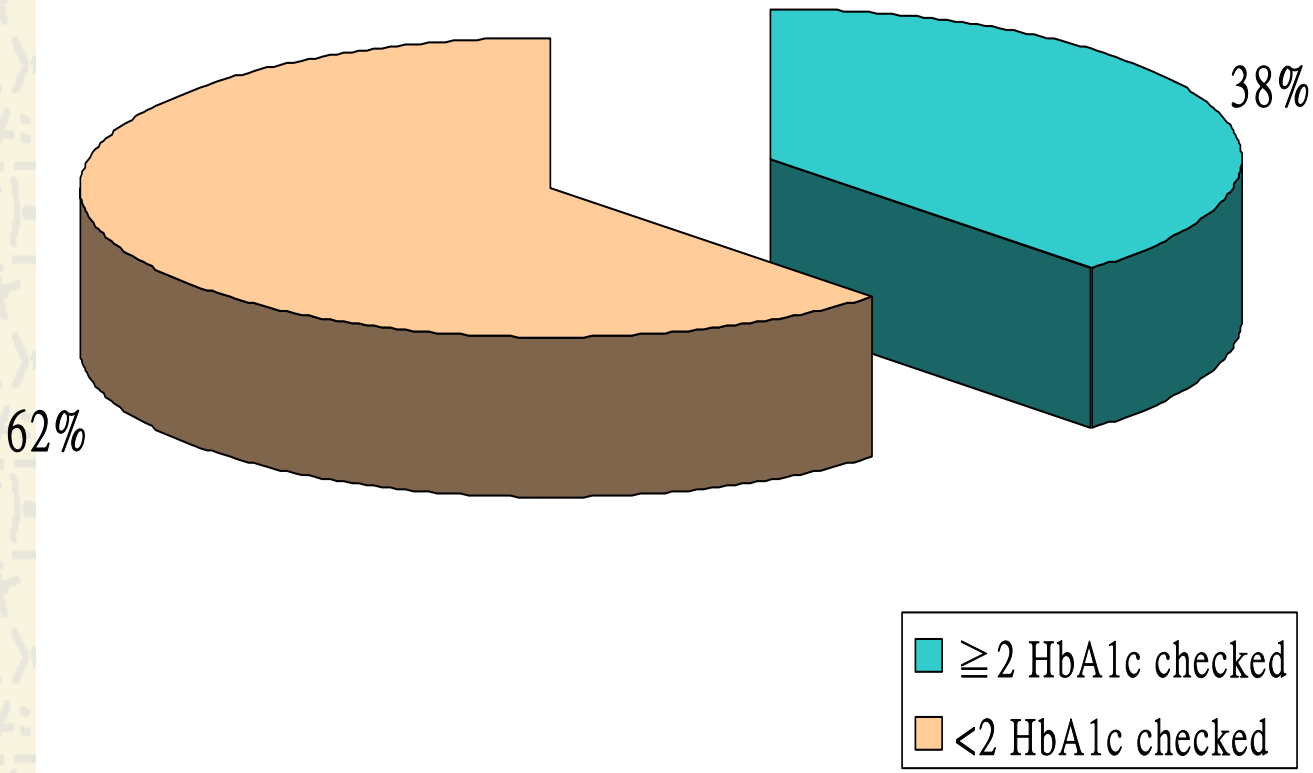
Offer insulin treatment when patient has been on maximum dose of OHA



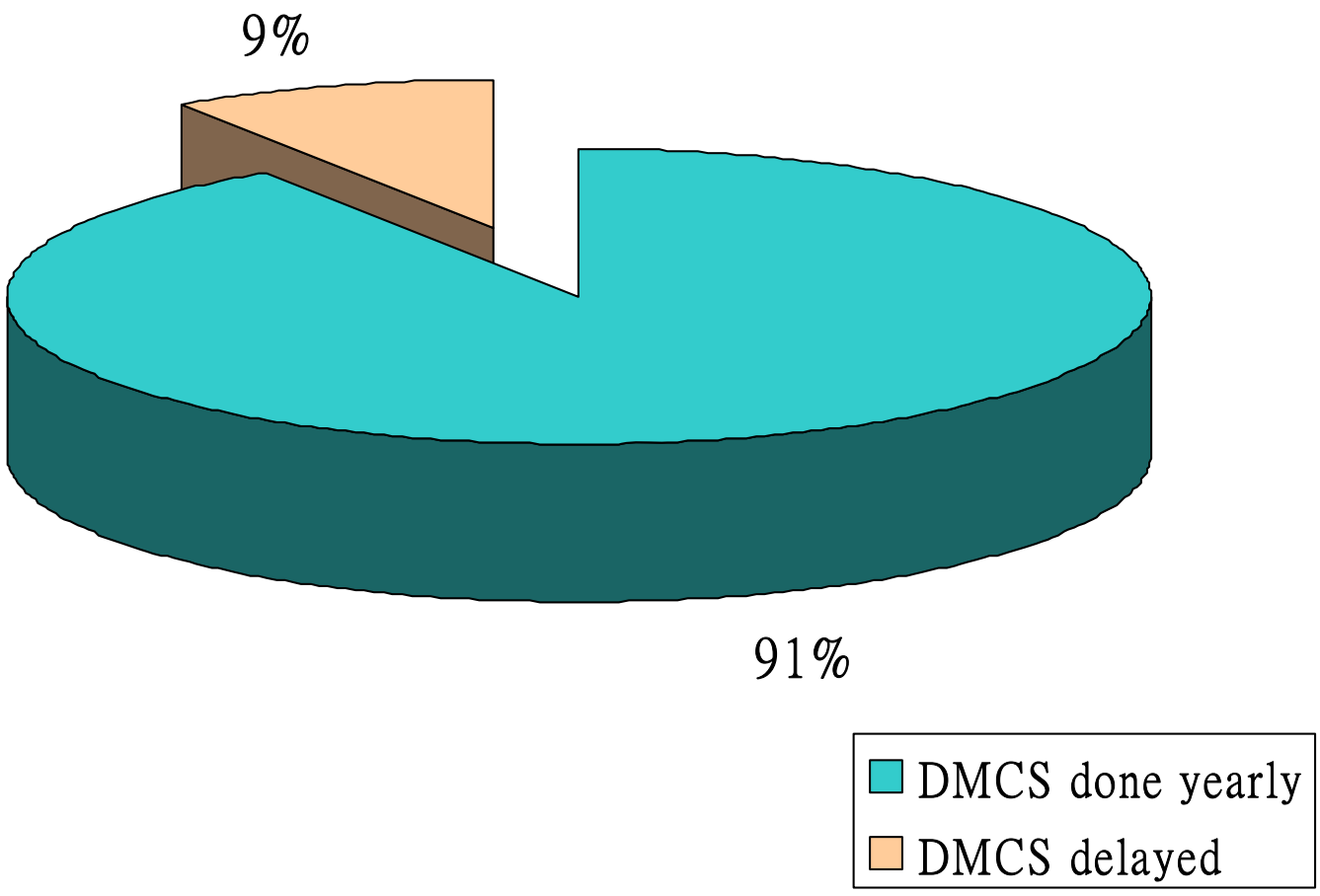
After knowing elevated HbA1C, follow up duration ≦ 8 weeks



HbA1C checked for 2 or more times in the past 12 months

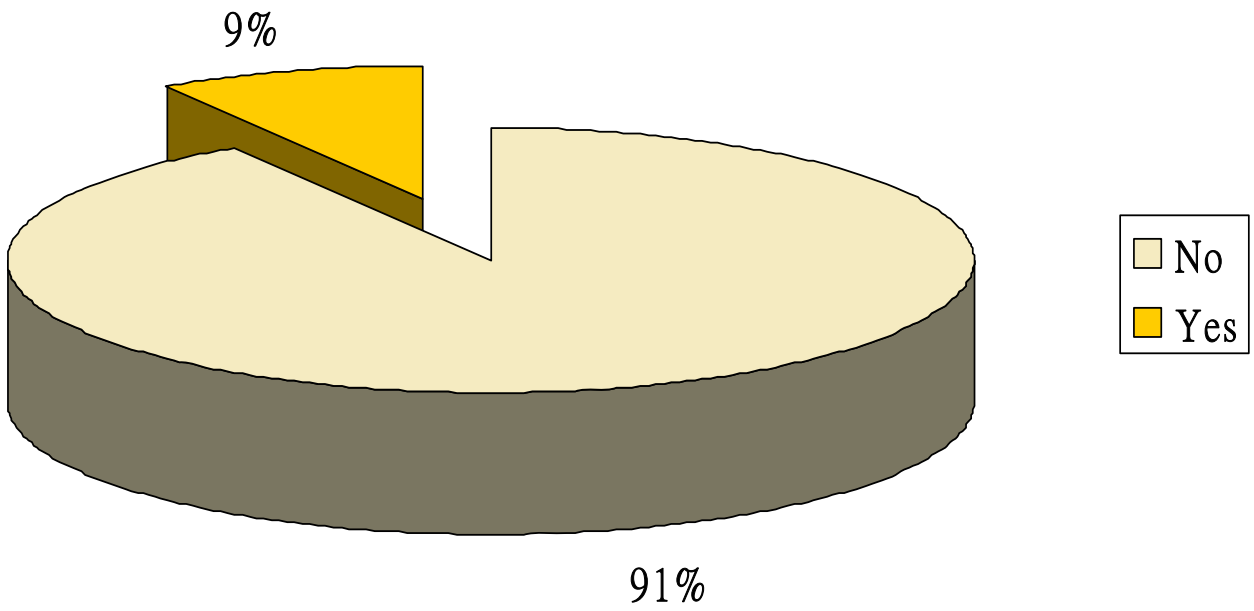


DM complication screening done yearly

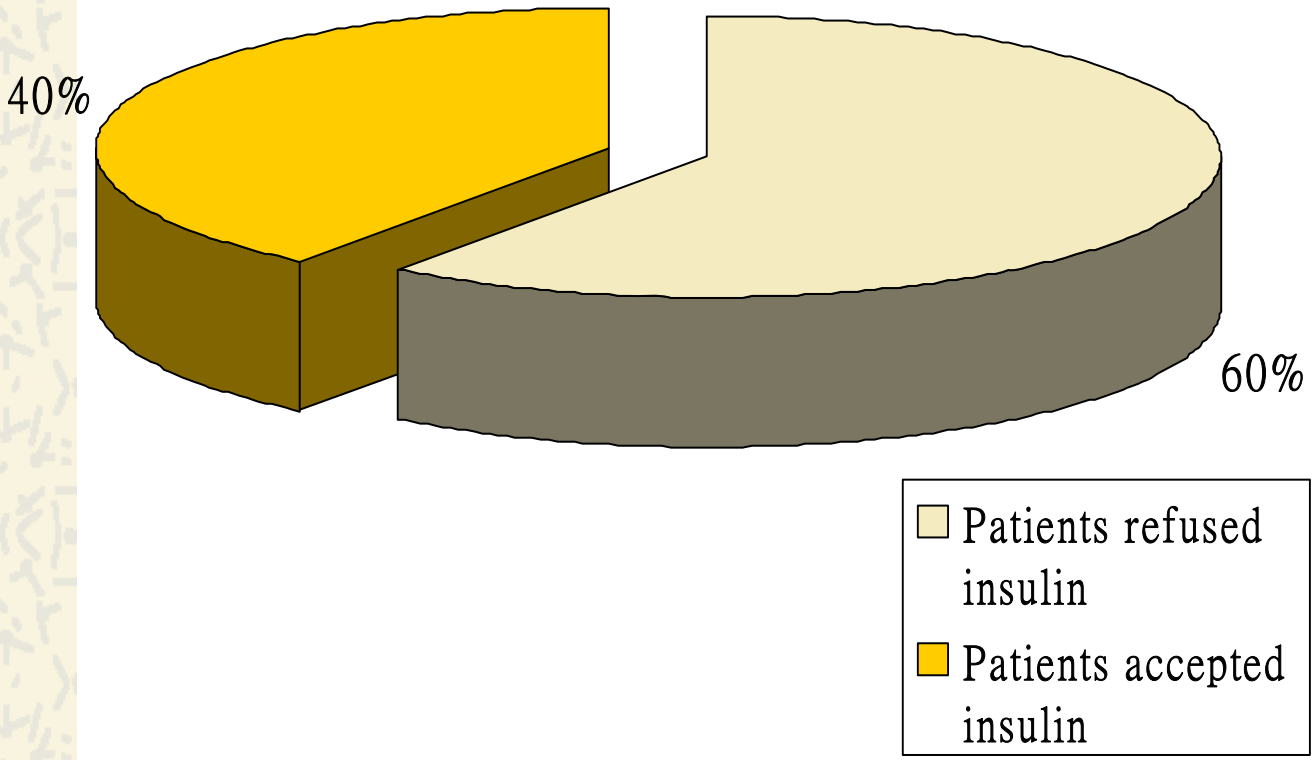


Patients’ Attitude

Patients defaulted more than 2 times



Comparison between insulin refusal and acceptance



Discussion

Monitoring and complication screening

- The majority of patients with poor DM control received
  - Dietary advice
  - Regular DM complication screening

Intervention

- Intervention can be further intensified
- Non-pharmacological:
- Refer to individual nurse counseling / specially organized DM education class
- Doctors need to be more active in educating and counseling
- may be the only contact point that is acceptable to these patients

- Pharmacological:
- adjustment of OHA should be more actively considered
- insulin therapy should be more actively considered
  - Doctor factor
  - Patient factor
- genuine caring attitude, education and gentle encouragement → reduce patient's fear and anxiety about insulin injection therapy

Limitations of the Study

retrospective descriptive study

- data collected may not reflect the whole consultative process
- doctors may not document all consideration when making decision on choosing or not choosing intervention for individual patients
- patient's factors that might influence the intervention that the doctor subsequently took may not be fully elicited or documented.

Conclusion

- Poorly controlled diabetes mellitus presents a **challenge** to medical professionals
- GOPC **doctors** are good at
  - **regular monitoring** DM control
  - providing **timely DM complication screening**
  - offering **dietary advice**

Conclusion (Cont'd)

- Intervention can be strengthened on detecting poor control
  - closer monitoring
  - adjustment of medications
  - initiation of insulin therapy
  - refer to individual nurse counselling / education class / endocrinologists if appropriate

Conclusion (Cont'd)

- Patient factors also important in improving diabetic control:
  - Patient's disease knowledge
  - attitudes towards treatment
  - compliance

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Thank You