

MANAGEMENT OF TYPE 2 DIABETES IN INTERNAL MEDICINE

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BACKGROUND

- T2DM is a chronic disease associated with significant mortality and morbidity
- Comprehensive evaluation for diabetic complications and optimisation of CV risk factors are essential
- Various audits in out-patient setting have shown inadequate screening for complications and poor adherence to recommended treatment targets *Bryant et al MJA 2006; 185:305-309*
- A significant proportion of Internal Medicine in-patients have T2DM – good opportunity for diabetes evaluation

AIMS AND OBJECTIVES

- To assess the adequacy of screening for diabetic complications
- To determine the proportion of patients who meet recommended treatment targets
- To assess the use of statins, anti-platelet and anti-hypertensive agents

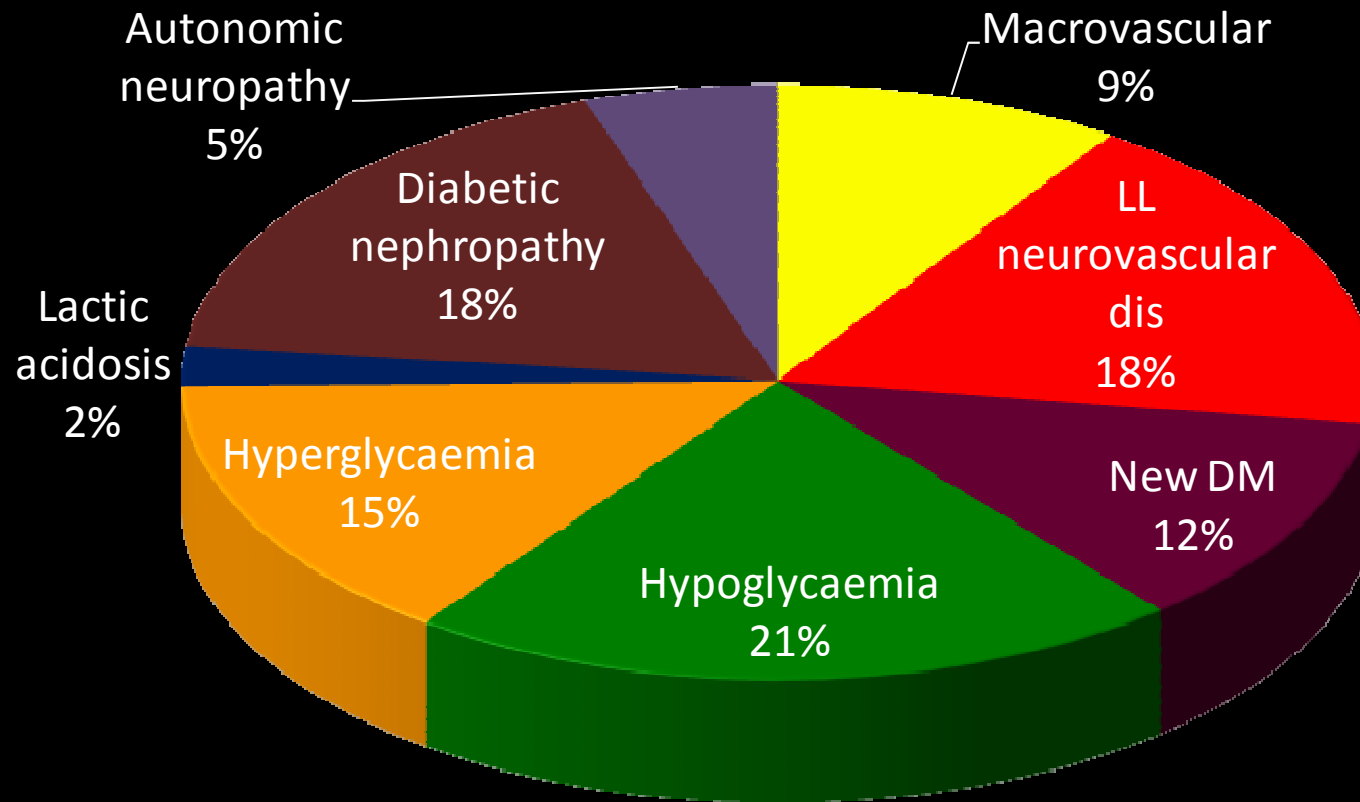
METHODS

- Retrospective audit of clinical notes
- T2DM patients admitted to Internal Medicine at RPH
- Primary admission diagnosis directly related to diabetes
- Exclusion criteria – Type 1 diabetes, admission to Short Stay Medical Unit, death/palliation during admission

PATIENT CHARACTERISTICS

- Total of 95 patients audited (53% male)
- Mean age – 70 yrs (range 37-94 yrs)
- Average length of stay – 9.4 days (range 1-78 days)

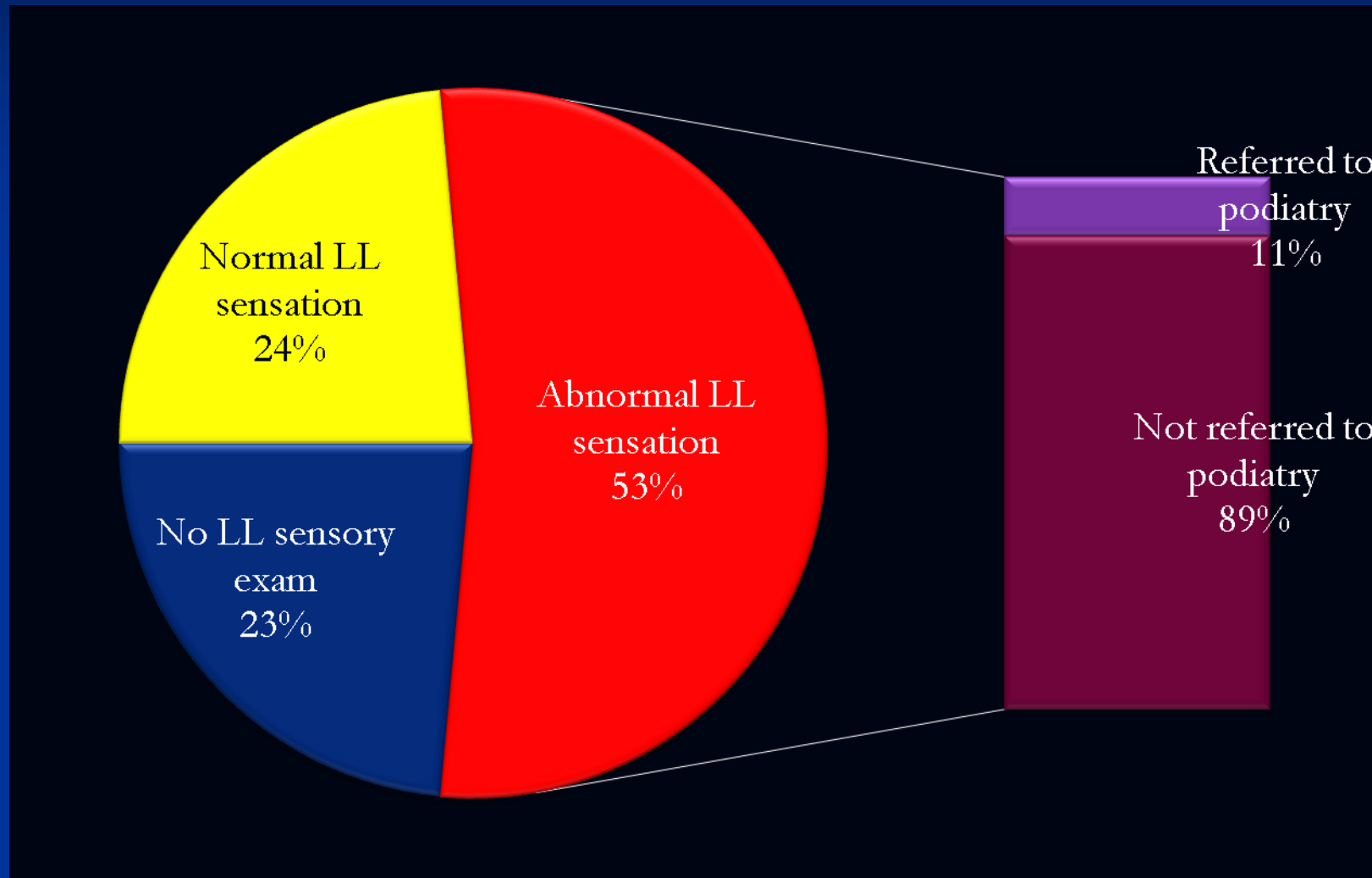
ADMISSION DIAGNOSIS



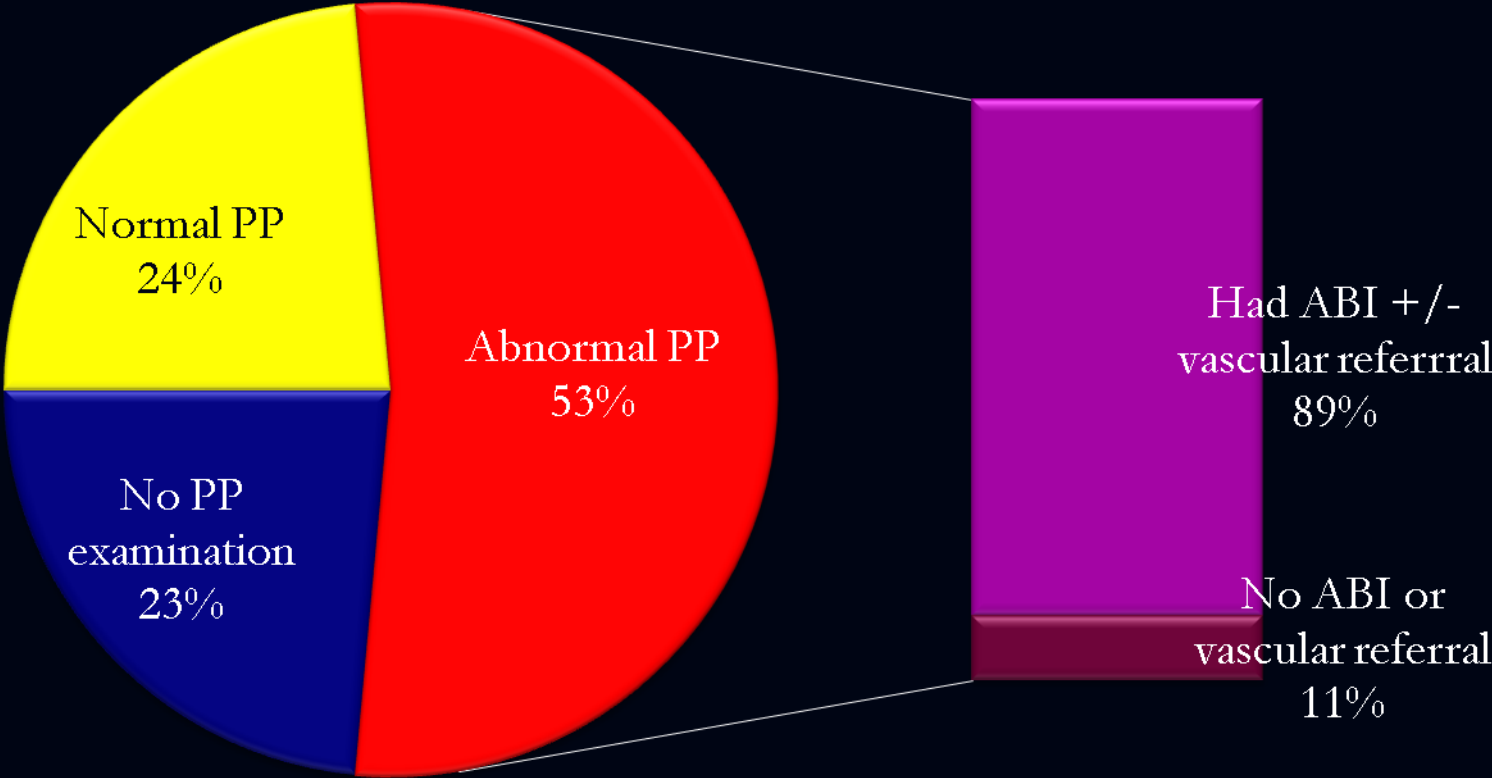
ADEQUACY OF SCREENING

SCREENING PERFORMED	NUMBER OF PATIENTS (%)
Fundoscopy	8%
Lower limb sensory examination	52%
Peripheral pulses examination	40%
Urinary ACR or PCR	51%
BMI measured	26%

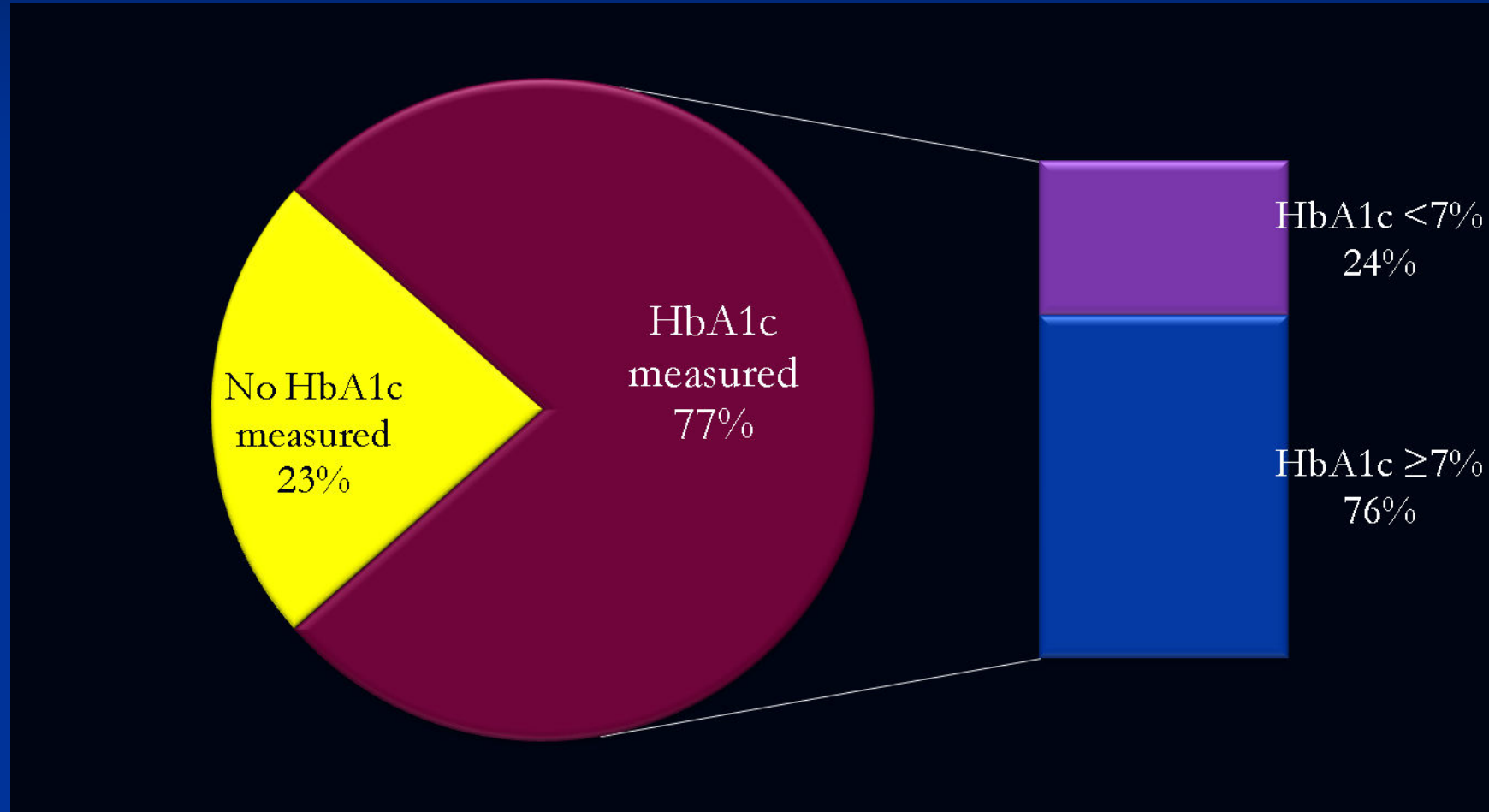
Screening for Peripheral Neuropathy in patients with LL neurovascular complications (n=17)



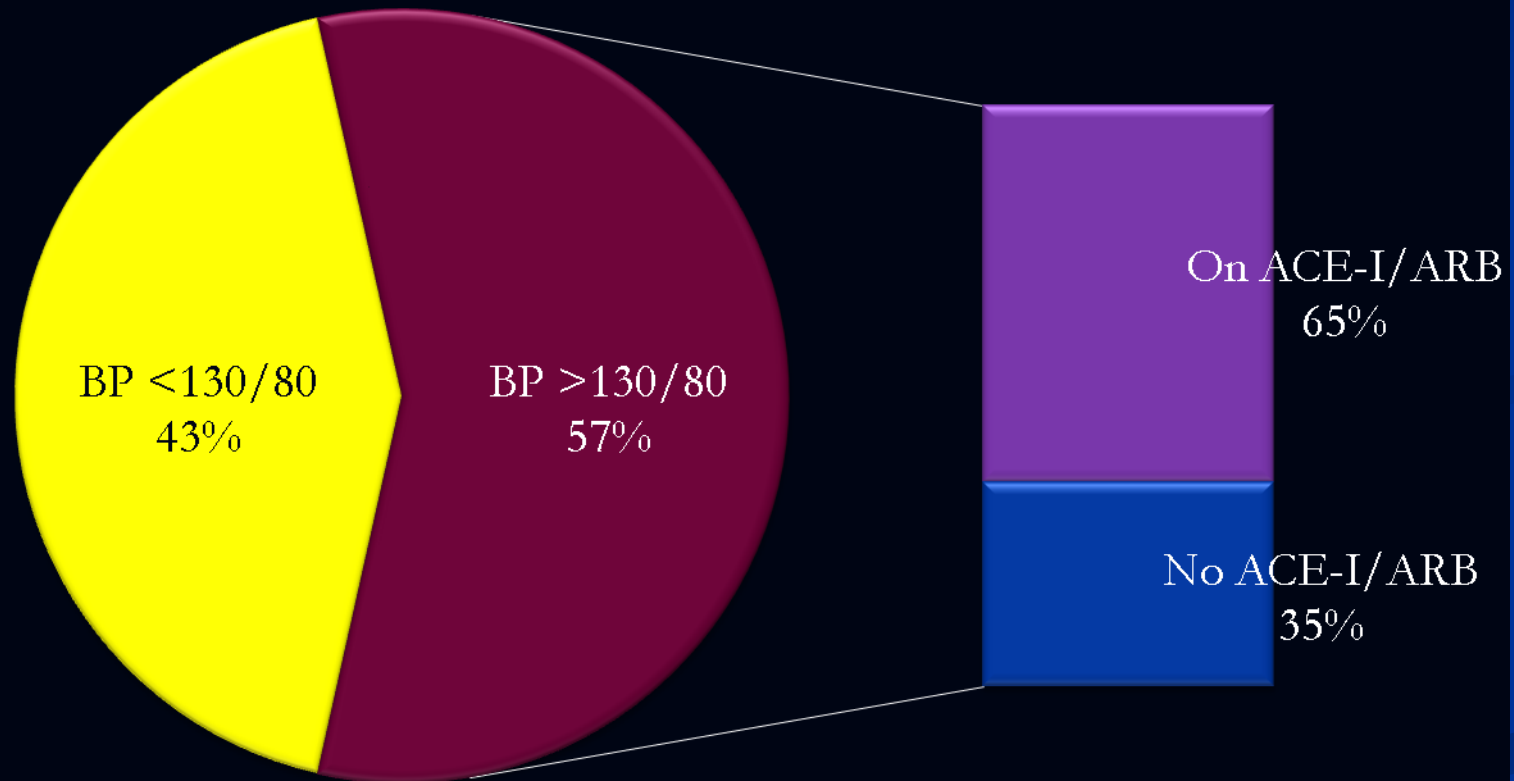
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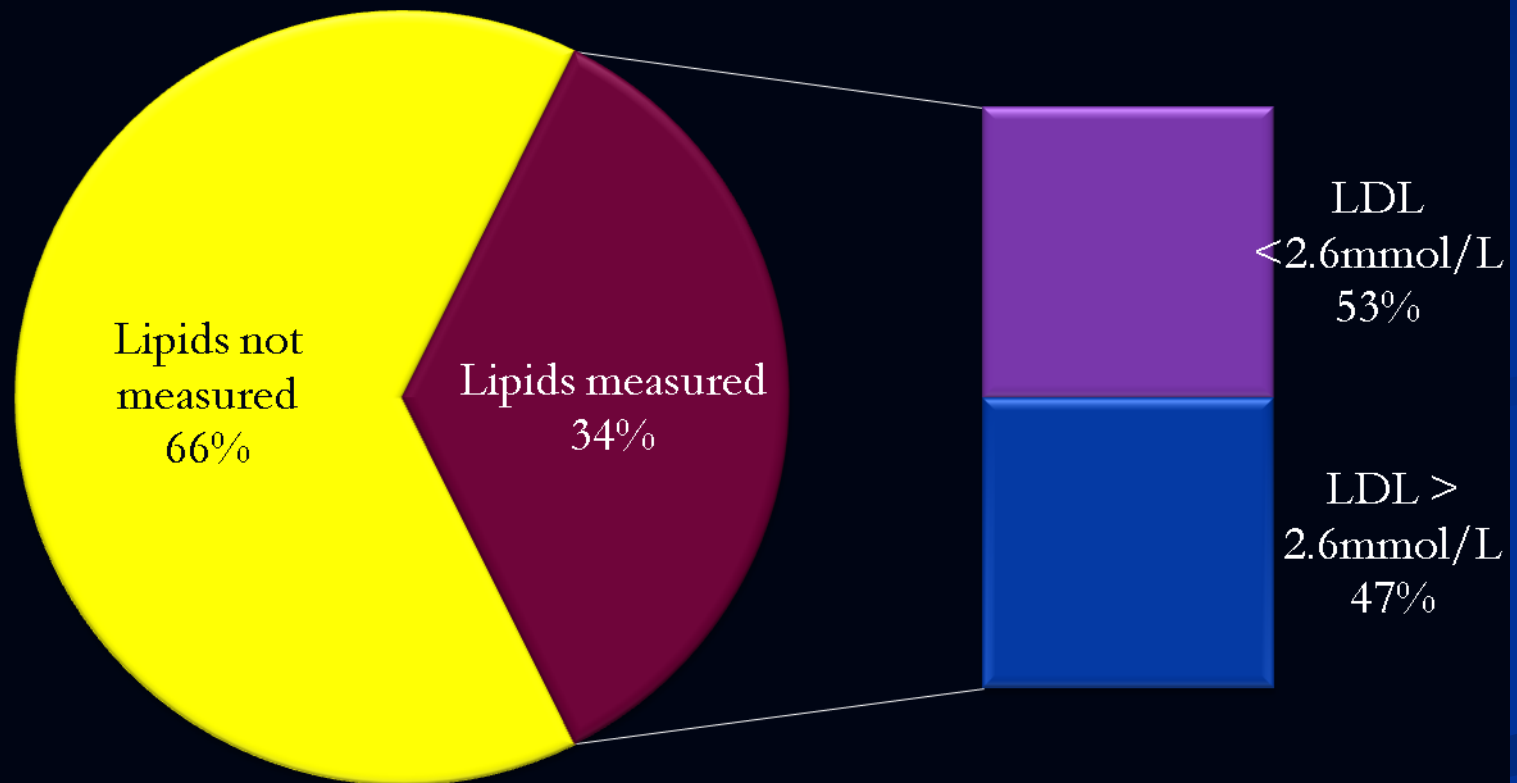
GLYCAEMIC CONTROL



BP MANAGEMENT



DYSLIPIDAEMIA



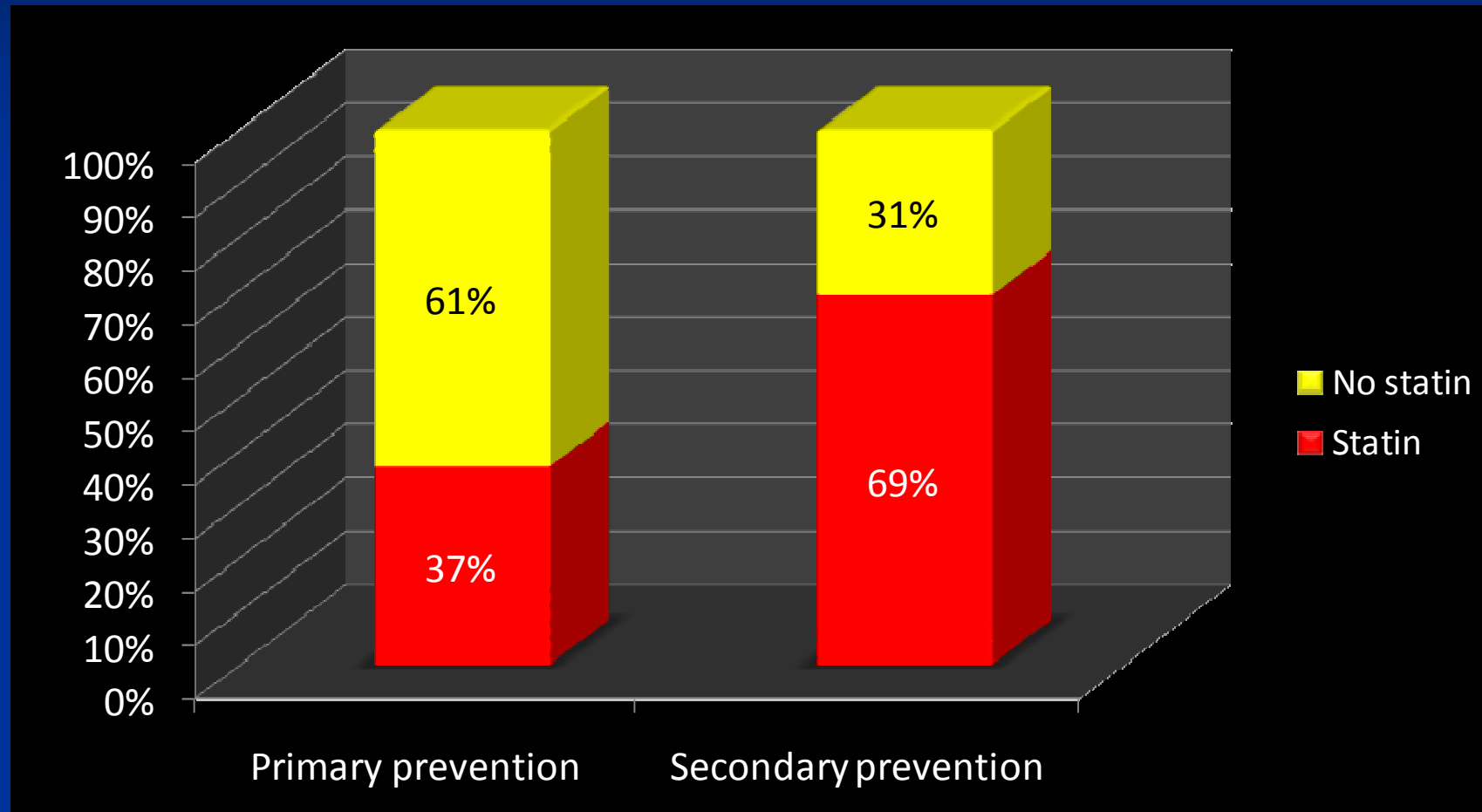
STATIN THERAPY

- American Diabetes Association guidelines for statin therapy in diabetes:

- Statin therapy should be added to lifestyle therapy, regardless of baseline lipid levels, for diabetic patients:
 - with overt CVD. (A)
 - without CVD who are over the age of 40 years and have one or more other CVD risk factors. (A)

Standards of Medical Care in Diabetes – 2010.
ADA Position Statement. *Diabetes Care* Jan
2010

STATIN THERAPY



ANTI-PLATELET USE FOR PRIMARY PREVENTION OF CV DISEASE

- Consider aspirin therapy (75–162 mg/day) as a primary prevention strategy in those with type 1 or type 2 diabetes at increased cardiovascular risk (10-year risk >10%). This includes most men >50 years of age or women >60 years of age who have at least one additional major risk factor (family history of CVD, hypertension, smoking, dyslipidemia, or albuminuria). (C)

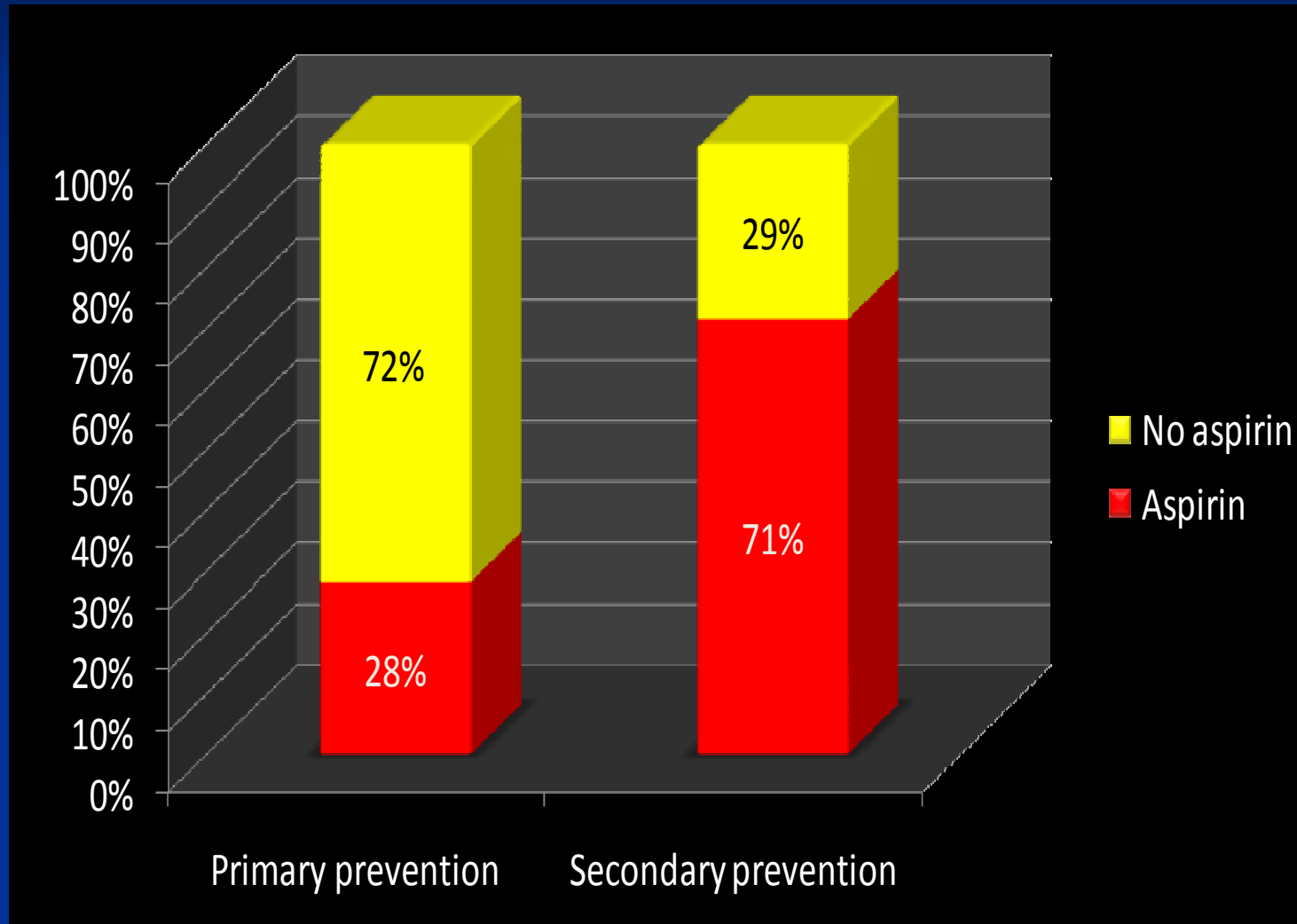
Standards of Medical Care in Diabetes – 2010. ADA
Position Statement. *Diabetes Care* Jan 2010

ANTI-PLATELET USE FOR SECONDARY PREVENTION OF CV DISEASE

- Use aspirin therapy (75–162 mg/day) as a secondary prevention strategy in those with diabetes with a history of CVD. (A)
- For patients with CVD and documented aspirin allergy, clopidogrel (75 mg/day) should be used. (B)

Standards of Medical Care in Diabetes – 2010.
ADA Position Statement. *Diabetes Care Jan*
2010

ANTI-PLATELET USE



FOLLOW-UP ON DISCHARGE

- 85% of patients were discharged without any specific advice to the GP regarding further complication screening or CV risk factor management

SUMMARY OF FINDINGS

- T2DM patients in Internal Medicine are not adequately screened for diabetic complications
- Large proportion of patients do not meet recommended treatment targets for CV risk factors
- Lack of communication with GP on discharge

LIMITATIONS

- Did not determine whether HbA1c, lipid profile, urinary ACR etc had been measured and addressed by GP in the previous 1 year
- Individual patient circumstances or clinical situations may have necessitated modifications to treatment goals

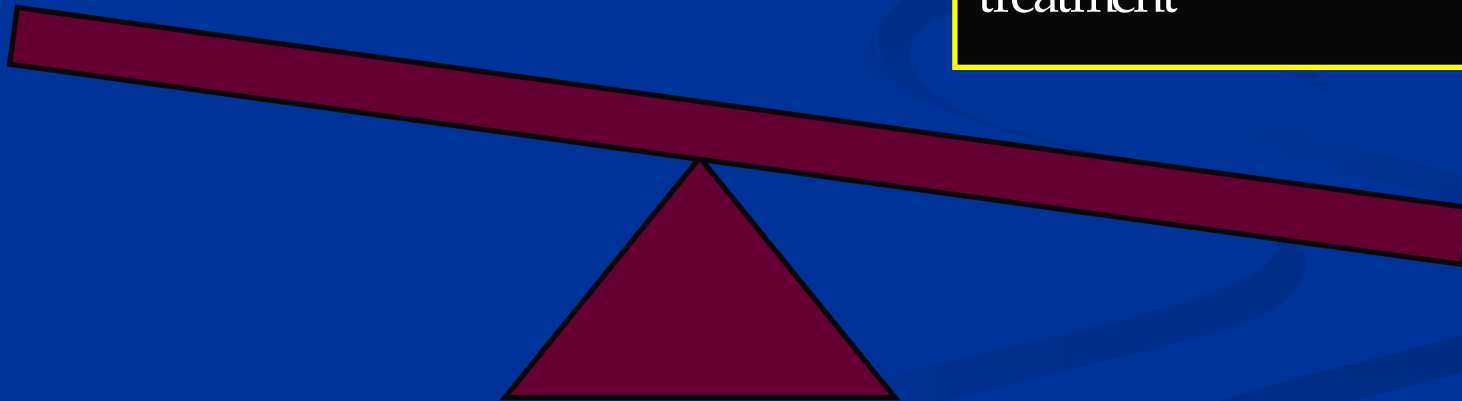
REASON FOR INADEQUATE ASSESSMENT AND CV RISK MANAGEMENT

- Lack of time – emphasis on early discharge
- Acute admission may not be an appropriate setting to address long-term diabetes complications
- Reluctance to be aggressive with Rx
- Treating teams not aware of recommended treatment targets

THE ROLE OF INTERNAL MEDICINE PHYSICIANS

- Comprehensive diabetes evaluation and CV risk optimisation

- Reducing length of stay to relieve pressure on hospital beds
- Being cost effective in investigations and treatment



FINDING THE BALANCE

- Diabetes management needs to be tailored to individual patients
- Certain investigations should be done as an in-patient but others may be more appropriate as an out-patient
- Providing clear and specific advice to GP's on discharge - multidisciplinary care plans can improve adherence to recommended Rx targets for BP, HbA1c, total cholesterol in T2DM

Zwar et al Aust Fam Physician 2007; 36:85-89

FINDING THE BALANCE

- Chronic disease management programmes
- Nurse educators or case managers provide patient education, promote diabetes guidelines, coordinate specialist referral
- Can minimise hospital admissions and reduce health care costs, while improving outcome measures in T2DM Sidorov J et al *Diabetes Care* 2002; 25:684-689

CONCLUSION

- The management of diabetic complications and CV risk factors is suboptimal among T2DM patients admitted under Internal Medicine
- Diabetes management in hospital should be tailored to individual patients' needs
- Clear discharge summaries for proper GP follow-up
- Ambulatory resources such as chronic disease management programmes may be the best model of care

THE END