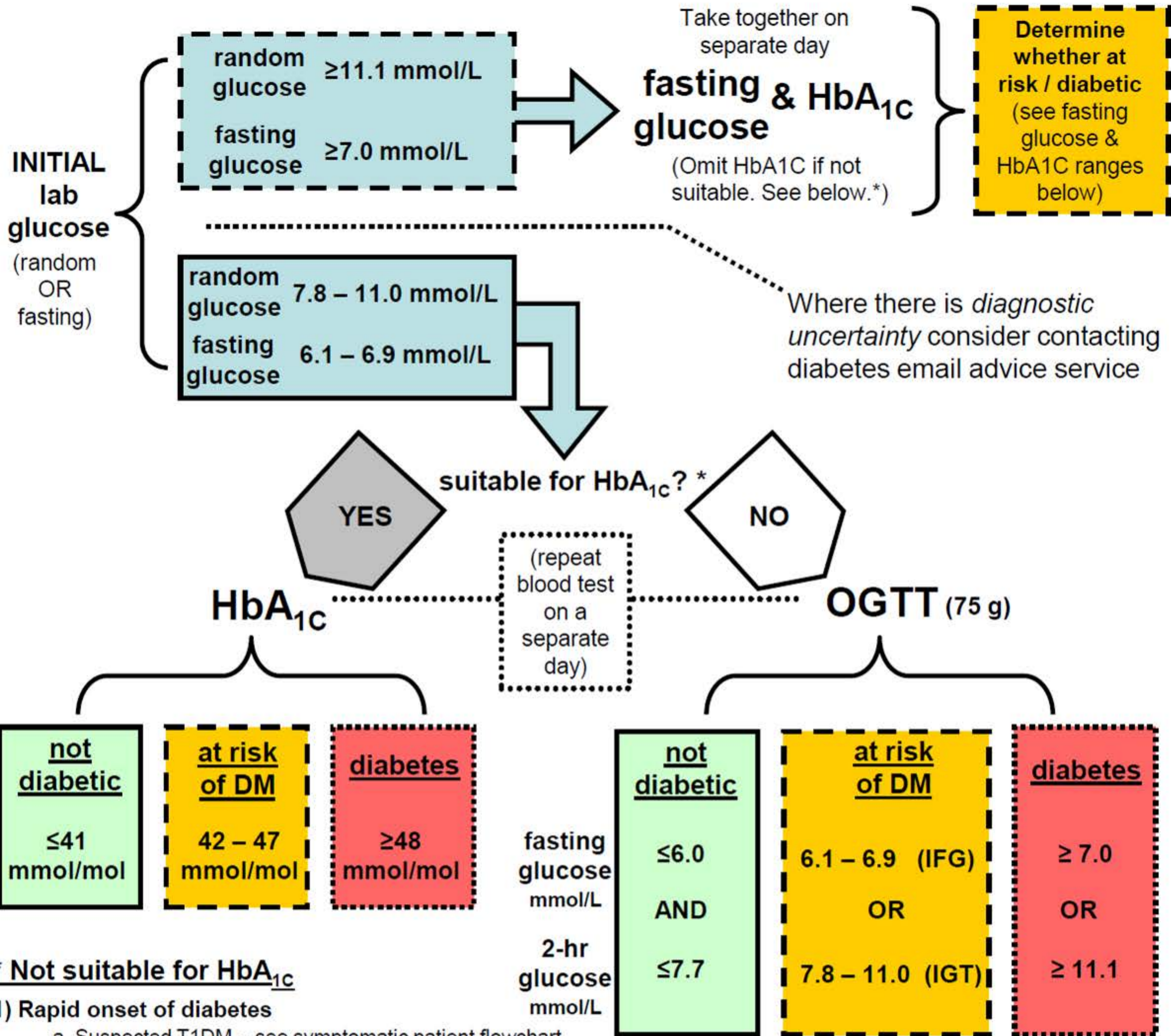# Diagnosis of diabetes mellitus in **ASYMPTOMATIC** adults

(If elderly, frail and asymptomatic, please consider whether screening is appropriate.)

INITIAL lab glucose (random OR fasting)

random glucose	≥11.1 mmol/L
fasting glucose	≥7.0 mmol/L

Take together on separate day → **fasting & HbA$_{1C}$ glucose**

(Omit HbA1C if not suitable. See below.*)

Determine whether at risk / diabetic (see fasting glucose & HbA1C ranges below)

random glucose	7.8 – 11.0 mmol/L
fasting glucose	6.1 – 6.9 mmol/L

Where there is *diagnostic uncertainty* consider contacting diabetes email advice service

suitable for HbA$_{1C}$? *

YES → **HbA$_{1C}$**

(repeat blood test on a separate day)

NO → **OGTT** (75 g)

HbA$_{1C}$

not diabetic	at risk of DM	diabetes
≤41 mmol/mol	42 – 47 mmol/mol	≥48 mmol/mol

OGTT (75 g)

	not diabetic	at risk of DM	diabetes
fasting glucose mmol/L	≤6.0	6.1 – 6.9 (IFG)	≥ 7.0
	AND	OR	OR
2-hr glucose mmol/L	≤7.7	7.8 – 11.0 (IGT)	≥ 11.1

* Not suitable for HbA$_{1C}$

1) Rapid onset of diabetes
   a. Suspected T1DM – see symptomatic patient flowchart
   b. Drug-induced: steroids, anti-psychotics, immuno-suppressants – a fasting glucose may not be sufficient.
   c. Pancreatic disease

   } Seek diabetes team advice

2) Conditions affecting Hb turnover / HbA1C assay
   a. Haemoglobinopathy
   b. Anaemia (especially haemolytic)
   c. Severe blood loss, Blood transfusion
   d. Splenomegaly / Splenectomy
   e. Renal dialysis +/- erythropoitein
   f. Anti-retrovirals, ribavarin, dapsone

3) Children

* Pregnancy - see local guidelines for screening/referral

a. HbA1C may be used to screen for pre-existing diabetes, but should **NOT** be used to screen for Gestational Diabetes (GDM)
b. Note that the OGTT for GDM uses **lower** cut-offs:
   Fasting glucose ≥5.1 mmol/L, 2-hr glucose ≥8.5 mmol/L

At risk of DM groups include:

IFG = impaired fasting glucose
IGT = impaired glucose tolerance
HbA$_{1C}$ 42-47 mmol/mol

Consider lifestyle advice & annual HbA$_{1C}$ check for these groups

Diagnosis must be based on laboratory glucose measurements