### INTENSIFYING INJECTABLE THERAPY IN TYPE 2 – ADA STANDARDS Figure 9.4 2024

Including reinforcement of behavioral interventions (weight management and physical activity) and provision of DSMES to meet individualized treatment goals.

To Avoid Therapeutic Inertia - Reassess and modify treatment regularly (3-6 months)

# If injectable therapy is needed to reduce A1C1

# Consider GLP-1 RA or GIP/GLP-1 RA in most individuals prior to insulin<sup>2</sup>

INITIATION: Initiate appropriate starting dose for agent selected (varies within class)

**TITRATION:** Titration to maintenance dose (varies within class)

1

If already on GLP-1 RA or GIP/GLP-1 **RA** or if these are not appropriate OR if insulin is preferred:

# If above A1C target

## Add basal insulin<sup>3</sup>

Choice of basal insulin should be based on person-specific considerations, including cost. Refer to **Table 9.4** for insulin cost information.

## Add basal analog or bedtime NPH insulin

INITIATION: Start 10 units a day OR 0.1-0.2 units/kg a day

#### **TITRATION:**

- Set FPG target (see Section 6: Glycemic Targets)
- Choose evidenced-based titration algorithm, e.g., increase 2 units every 3 days to reach FPG target without hypoglycemia
- For hypoglycemia determine cause. If no clear reason lower dose by 10-20%

## Assess adequacy of basal insulin dose

Consider clinical signals to evaluate for overbasalization and need for adjunctive therapies (e.g., basal dose >0.5 units/kg/day, elevated bedtime-morning and/or post-preprandial differential, hypoglycemia [aware or unaware], high variability)

## If above A1C target and not on GLP-1/GIP, consider adding to treatment plan. If A1C still elevated:

## Add prandial insulin5

Usually, one dose with the largest meal or meal with the greatest PPG excursion; prandial insulin can be dosed individually or mixed with NPH as appropriate

#### **INITIATION:**

- 4 units a day or 10% of basal insulin
- If A1C <8% (64 mmol/mol) consider lowering basal dose by 4 units a day or 10% of basal dose.

## **TITRATION:**

- Increase dose by 1-2 units or 10-15% twice
- For hypoglycemia determine cause. If no clear reason lower corresponding dose by 10-20%



## If on bedtime NPH, consider converting to twice-daily NPH regimen

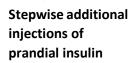
Conversion based on individual needs, glycemic control. The following is one possible approach:

#### **INITIATION:**

- Total dose= 80% of current NPH dose
- 2/3 given in the morning
- 1/3 given at bedtime

**TITRATION:** Titrate based on individualized needs





(i.e., two then three additional injections)



(i.e., basal insulin and prandial insulin with each)

## Consider self-mixed/split insulin regimen

Can adjust NPH and short/rapid-acting insulins separately

#### **INITIATION:**

- Total NPH dose = 80% of current NPH dose
- 2/3 given before breakfast
- 1/3 given before dinner
- Add 4 units of short/rapid-acting insulin to eachinjection or 10% of reduced NPH dose

#### **TITRATION:**

 Titrate each component of the regimen based on individualized needs

# Consider twice daily premix insulin regimen

#### **INITIATION:**

 Usually unit per unit at the same total insulin dose, but may require adjustment to individual needs

#### **TITRATION:**

 Titrate based on individualized needs

- 1. Consider insulin as the first injectable if evidence of ongoing catabolism, symptoms of hyperglycemia are present, when A1C levels (>10% [86mmol/mol]) or blood glucose levels (≥300mg/dL [16.7mmol/L]) are very high, or a diagnosis of type 1 diabetes is a possibility.
- 2. When selecting GLP-1 RA, consider: individual preference, A1C lowering, weight-lowering effect, or frequency of injection. If CVD, consider GLP-1 RA with proven CVD benefit. Oral or injectable GLP-1 RA are appropriate.
- 3. For those on GLP-1 RA and basal insulin combination, consider using a fixed-ratio combination product (iDegLira or iGlarLixi).
- 4. Consider switching from evening NPH to a basal analog if there is hypoglycemia and/or the individual frequently forgets to administer NPH in the evening and would be better with an AM dose of long-acting basal insulin
- 5. If adding prandial insulin to NPH, consider initiation of a self-mixed or premixed insulin regimen to decrease the number of injections required.

ADA Standards of Care 2024 Figure 9.4 – Intensifying to injectable therapies. DSMES, diabetes self-management education and support; FPG, fasting plasma glucose; FRC, fixed-ratio combination; GLP-1RA, glucagon-like peptide 1 receptor agonist; max, maximum; PPG, postprandial glucose. Adapted from Davies et al. 151).