(a) Important considerations about the basal-bolus regimen for toddlers and preschoolers (<6 years):

- Young children are often “grazers” who rarely eat regular meals. Long-acting insulin may be needed to cover some snacks.
- Long-acting insulin dose may be slightly higher as a % of the total daily dose to cover frequent intake of small amounts of carbohydrate.
- Rapid-acting insulin may be used more as a correction dose to bring glucose down if it is over 200 mg/dL, rather than as a “carb dose” to cover anticipated carb intake.

(b) Comments about the basal-bolus regimen for 6-19 year-olds:

- School-aged children may need some support for the lunchtime shot; most are able to master the skills needed for this regimen.
- The long-acting insulin is a pure basal or background insulin. Rapid-acting insulin MUST be taken before ALL meals and snacks to have good control. Unlike toddlers, adolescents tend to eat too many carbs at one time to expect adequate coverage with long-acting insulin alone.

(c) Estimating insulin dosing with the “500 Rule” and the “1700 Rule”

1. Estimate total daily dose (TDD) of insulin based on patient’s weight.
2. Use the 500 Rule to estimate insulin-to-carb ratio:
   \[
   \frac{500}{\text{TDD}} = \text{number of carb grams covered by a unit of insulin. Example: } 500/50=10; \text{ 1 unit of insulin will cover about 10 grams of carbohydrate.}
   \]
3. Use the 1700 Rule to estimate a correction dose:
   \[
   \frac{1700}{\text{TDD}} = \text{the expected drop in glucose (mg/dL) in response to 1 unit of insulin. Example: } 1700/35=48; \text{ 1 unit of insulin will drop the serum glucose by about 50 mg/dL.}
   \]

Note that these are estimates. Initial doses must be adjusted based on patient response rather than the calculations.

Type 1 diabetes confirmed or suspected
In some cases, may begin therapy while awaiting results of lab tests to confirm type

Initiate Insulin Therapy based on age of child

Toddlers and preschoolers (<6 years)

Older children and adolescents (6-19 years)

Suggested basal bolus regimen (a)
- Long-acting insulin: 0.3 to 0.4 units/kg/day at breakfast
- Rapid acting insulin
  - Before meals: 0.5 units per 15 to 20 grams carbohydrates
  - Correction dose: 0.5 units per every 50 mg/dL over 200 mg/dL

If you want to calculate your own insulin regimen, use the 500 and 1700 Rules (c).

Suggested basal bolus regimen (b)
- Long-acting insulin: 0.4 to 0.6 units/kg/day at bedtime
- Rapid acting insulin:
  - Before meals and snacks: 1 unit per 10 to 20 grams carbohydrates
  - Correction dose: 1 unit per every 50 g/dL over 150 mg/dL

If you want to calculate your own insulin regimen, use the 500 and 1700 Rules (c).

Initiate patient education
Focus on the following:
- Self monitoring of blood glucose (SMBG)
- Insulin injections, storage, and dosing
- Instructions for home management of hypoglycemia, hyperglycemia, and sick days

Refer for medical nutrition therapy
Dietitian should provide a meal plan that approximates normal eating patterns and is tailored to the basal-bolus regimen:
- **Set up a meal plan**, matching as closely as possible the family’s normal eating habits and patterns.
- **Teach basic carbohydrate-counting** to patient and/or family members. Note that rapid acting insulin is dosed to cover carbohydrate intake EVERY TIME the patient eats—except in some cases, for toddlers.
- **Follow up with the patient and family within the first 2 weeks** to reinforce carb-counting education and make meal plan adjustments as needed. Due to their excessive hunger in the first few days after diagnosis, children often overestimate how much they regularly eat. This usually resolves after 2 weeks on insulin.