The Diabetes Care Algorithms for Type 2 Diabetes included within this document are taken from the American Association of Clinical Endocrinologists (AACE) Road Maps which can be found in the May/June issue of Endocrine Practice, Vol. 13, Issue 3, 2007, pages 262–264 AND the American Diabetes Association’s (ADA) Consensus Statement, Management of Hyperglycemia in Type 2 Diabetes: A Consensus Algorithm for the Initiation and Adjustment of Therapy, 2006 (Diabetes Care, Volume 29, Number 8, August 2006, p. 1963—1972).

These algorithms serve as sample guides to assist diabetes practitioners in improving care associated with diabetes. The algorithms are not intended to replace or preclude clinical judgment or more intensive management. Use them as a quick reference to simplify diabetes treatments and as a way to improve care to patients with Type 2 diabetes.

An electronic version of this tool may be obtained from www.kentuckydiabetes.net.
Road Map to Achieve Glycemic Goals: Treated Patients (Type 2)

<table>
<thead>
<tr>
<th>Current A1C%</th>
<th>Current Therapy</th>
<th>Intervention</th>
<th>Continuous Titration of Rx (2-3 months)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;6.5%</td>
<td>Monotherapy or Combination therapy</td>
<td>Continue current therapy if all ACE glycomic goals are met</td>
<td>Monitor/adjust Rx to maintain ACE Glycemic Goals†</td>
</tr>
<tr>
<td>6.5-8.5</td>
<td>Monotherapy: Glinides, SU, AGI, metformin, TZD, DPP-4, premixed insulin preparations, prandial2 or basal insulin3</td>
<td>Intensity Lifestyle Modification Initiate Combination Therapy</td>
<td>Monitor/adjust Rx to meet ACE Glycemic Goals†</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Metformin + SU or Glucose</td>
<td>TZD + incretin mimetic</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Metformin + TZD2 or AGI</td>
<td>Basal2 or premixed insulin preparations3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• TZD + SU</td>
<td>Amylin analog4 with prandial insulin2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• DPP-4 + Metformin</td>
<td>Other approved combinations including approved oral agents with insulin.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• DPP-4 + TZD</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Incretin mimetic + metformin and/or SU</td>
<td></td>
</tr>
<tr>
<td>&gt;8.5</td>
<td>Monotherapy or Combination therapy</td>
<td>Intensity Lifestyle Modification Maximize Combination Therapy</td>
<td>Monitor/adjust Rx to meet ACE Glycemic Goals†</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Glinides, SU, DPP-4, AGI, metformin, TZD, incretin mimetic3, premixed insulin preparations, prandial2 or basal insulin3</td>
<td>Maximize insulin Therapy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• If elevated FPG, add or increase basal insulin3</td>
<td>Add incretin mimetic to patients on SU, TZD, and/or metformin</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• If elevated PPG, add or increase prandial insulin2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• If elevated FPG and PPG, add or increase basal2 or prandial2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Premixed insulin preparations3</td>
<td></td>
</tr>
</tbody>
</table>

†ACE Glycemic Goals
- ≤ 6.5% A1C
- < 110 mg/dL FPG
- < 110 mg/dL Preprandial
- < 140 mg/dL 2-hr PPG

* Available as exenatide
** Analog preparations preferred
1 Prandial insulin (rapid-acting insulin analog, inhaled insulin, or regular insulin) can be added to any therapeutic intervention at any time to address persistent postprandial hyperglycemia
2 Available as glargine and detemir
3 A recent report (NEJM, 5/14/07) suggests a possible link of rosiglitazone to cardiovascular events that requires further evaluation

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Management of Hyperglycemia in Type 2 Diabetes

1. Diagnosis

   Lifestyle Intervention + Metformin

   - A1C ≥7%
     - No
     - Yes*

   Add Basal Insulin* - Most effective
   
   - A1C ≥7%
     - No
     - Yes*

   Add Sulfonylurea - Least expensive
   
   - A1C ≥7%
     - No
     - Yes*

   Add Glitazone - No hypoglycemia
   
   - A1C ≥7%
     - No
     - Yes*

   Add Glitazone*

2. A1C ≥7%

3. Intensify Insulin*

4. Add Glitazone*

5. Add Basal Insulin*

6. Add Sulfonylurea*

7. Add Basal or Intensify Insulin*

Intensive insulin + Metformin +/- Glitazone

Figure 2—Algorithm for the metabolic management of type 2 diabetes. Reinforce lifestyle intervention at every visit. *Check A1C every 3 months until <7% and then at least every 6 months.

*Although three oral agents can be used, initiation and intensification of insulin therapy is preferred based on effectiveness and expense. #See fig. 1 for initiation and adjustment of insulin.
Insulin regimens should be redesigned taking lifestyle and meal schedule into account. The algorithm can only provide basic guidelines for initiation and adjustment of insulin. See ref. 71 for more detailed instructions. *Premixed insulins are not recommended during adjustment of doses; however, they can be used conveniently, usually before breakfast and/or dinner if proportion of rapid- and intermediate-acting insulins is similar to the fixed proportions available. bg, blood glucose.