COMMENTS AND RESPONSES

Comment on: Inzucchi et al. Management of Hyperglycemia in Type 2 Diabetes: A Patient-Centered Approach. Position Statement of the American Diabetes Association (ADA) and the European Association for the Study of Diabetes (EASD). Diabetes Care 2012;35: 1364–1379

We are writing as the co-chairpersons of the Consensus Panel that developed the 2009 Glycemic Control Algorithm of the American Association of Clinical Endocrinologists/American College of Endocrinology (AACE/ACE) Algorithm for Management of Diabetes. A more detailed comment by the same authors appears simultaneously in Rodbard and Jellinger (1), in reference to Inzucchi et al. (2).

- The ADA/EASD position statement for the management of type 2 diabetes (2) is dramatically improved compared with the 2009 ADA/EASD algorithm (3), bringing the position of the ADA/EASD much closer to the AACE/ACE algorithm (4).
- The AACE/ACE algorithm requires modification to accommodate three changes: *1*) rosiglitazone is no longer available; *2*) sitagliptin, exenatide, and liraglutide have been approved by the U.S. Food and Drug Administration for use in combination with basal insulin; and *3*) once-weekly exenatide is now available.
- Both the AACE/ACE algorithm (4) and the ADA/EASD statement (2) emphasize the need to individualize treatment goals.
- The ADA/EASD statement proposes a three-pronged approach involving initial monotherapy for HbA_{1c} <9%, optional use of dual therapy for HbA_{1c} between 9 and 10%, and possible use of insulin therapy for HbA_{1c} >10%. The AACE/ACE algorithm recommended HbA_{1c} thresholds of ≤7.5, >7.5–9.0, and >9.0%, respectively (4).
- The ADA/EASD statement lists regular and NPH insulins *before* the long- and rapid-acting insulin analogs (Table 1 in ref. [2]), and does not indicate a preference for insulin analogs despite greater nocturnal hypoglycemia with NPH and reduced postprandial fluctuation with the rapid-acting analogs. AACE/ACE indicates strong preferences for the insulin analogs in view of their reduced risk of hypoglycemia, improved pharmacodynamics, and greater consistency of effect.
- The ADA/EASD flowchart (Fig. 2 in ref. [2]) states "order not meant to denote any specific preference" for 12 regimens involving dual and triple therapy. Regrettably, sulfonylureas and thiazolidinedione are listed first, which can be misconstrued as suggesting higher priority. The AACE/ACE algorithm indicates a preferred sequential order for each of the regimens (Fig. 1, from above downward, in ref. [4]). This specific prescriptive approach of the AACE/ACE algorithm should be advantageous.
- The AACE/ACE algorithm gives lower priority to colesevelam and α–glucosidase inhibitors due to their limited efficacy as monotherapy, and excludes cycloset.
- AACE/ACE lowered priorities for sulfonylureas (due to hypoglycemia, weight gain, fluid retention, limited durability of effectiveness) and for thiazolidinediones (weight gain, fluid retention, congestive heart failure, fractures, cardiac events).
- The medication cost of sulfonylureas is less than that of other medications (except metformin); the medication costs of regular and NPH insulin are less than those of the insulin analogs. However, when one considers morbidity, mortality, and costs of emergency room visits and hospitalizations due to hypoglycemia, use of sulfonylureas is more expensive than the other classes of medications. Similarly, use of regular and NPH insulins have ultimately a larger total cost than insulin analogs due to hypoglycemia. The cost of insulin, oral agents, and diabetic supplies is only 12.1% of the total annual cost of diabetes-related expenses for patients with diabetes (Table 9 in ref. [5]).

The AACE/ACE algorithm, with the specificity of its recommendations, prioritization of therapeutic regimens, stratification of treatment based on HbA_{1c}, higher priorities for incretin-based therapies and insulin analogs, and low priorities for sulfonylureas and thiazolidinediones, remains an equally or more valuable tool for clinical practice.

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DOI: 10.2337/dc12-0768

Acknowledgments—This article was prepared with no financial support and no writing assistance from any source. H.W.R. conducts clinical research, serves on advisory panels, consults, and lectures with support from Amylin, Bristol-Myers Squibb, Boehringer Ingelheim, Lilly, Merck, Novo Nordisk, Novartis, Roche, and sanofi-aventis. P.S.J. serves on advisory panels, consults, and lectures with support from Amylin, Boehringer Ingelheim, Lilly, Merck, and Novo Nordisk. No other potential conflicts of interest relevant to this article were reported.

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