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Life expectancy. “There is a general denial of death, denial of frailty,” said Dr. O’Malley. “It is a nosy topic.”

**Talking to the patient**

The ADA/AGS Framework offered an entry to this difficult conversation and some specific criteria on which to base elderly patients’ glycemic goals.

According to the consensus paper, healthy patients (those with few or no comorbidities and intact cognitive and functional status) should have an HbA1c goal below 7.5%. Intermediate patients (multiple comorbidities, 2 or more impairments in activities of daily living [ADLs], or mild to moderate cognitive impairment) should aim for under 8%. And finally, patients in long-term care or those with end-stage disease, moderate to severe cognitive impairment, or 2 or more ADL dependencies should have a goal below 8.5%.

The categories sound fairly definitive, but by calling their advice “a framework for considering treatment goals,” the experts made it clear that even they are not absolutely certain of the optimal treatment course.

“There is not yet a clearly defined target for glucose control that you set a group of experts down around the table and they’ll say, ‘Oh, for this patient, it should absolutely be under 6.5% or under 7.5%.’ There’s going to be debate,” said Jeffrey B. Halter, MD, professor of internal medicine, director of the Geriatrics Center at the University of Michigan in Ann Arbor, and an author of the consensus paper.

“Therefore, this is an area where involving the patient and family is important to do,” he continued. However, patients vary in both their interest and ability to participate in shared decision making about treatment goals, Dr. O’Malley noted.

“In the elderly, there’s a much higher prevalence of cognitive impairment, so it’s even more challenging,” he said.

Cognitively impaired patients will often come in with a caregiver, though, who can be engaged in the decision making, Dr. Halter said. Dr. Halter provided an example of his counseling strategy: “I often say, ‘Do you understand what hemoglobin A1C is? What do you think is the right target?’ I get all sorts of answers to that one. I say, ‘There’s national discussions and guidelines, and here’s what some of the options are.’”

He offers his analysis of where the patient fits in the ADA/AGS framework and then solicits the patient’s and/or caregiver’s perspective on the choices. “Sometimes they just say, ‘Doc, do what you think I should do?’” Dr. Halter said, but the majority will have some opinion.

**Other factors to consider**

Even if the decision is left to the physician, he or she should solicit some other information in consultation and use it in choosing a goal and treatment, according to Dr. Ismail-Beigi. “I need to know how much support they have at home. Do they live alone or have a wife or a husband who is healthy or bedridden?” he said. “Can they treat hypoglycemia if they get it? Can they afford [their medication]? If a treatment regimen doesn’t work with a patient’s lifestyle, it’s better to know that up front. ‘I say to the patient, ‘What can you do? What are you willing to do?’’” Dr. Ismail-Beigi said. “No sense asking them to do things they’re not going to do.”

These psychosocial issues may actually be more important to choosing a glycemic goal than the medical issues, he added, noting that requirements like frequent blood glucose checks can be a significant burden. “What’s their life going to be like? We’re trying to improve their life,” Dr. Ismail-Beigi said.

There are also medical issues that didn’t make the ADA/AGS framework but should be considered in goal setting. Duration of diabetes is a major one. “If you have a 70-year-old person who’s already had diabetes for 15 years and doesn’t have cardiovascular disease yet, it may not be very effective to lower that person’s glucose intensively. Whereas, a 70-year-old who’s had diabetes for 15 years or normal until they were 69 and a half, maybe it’s very effective to keep their glucose levels very close to normal,” said Dr. Halter.

Relatedly, clinicians should consider how difficult it will be to get a patient to a given goal. “A low A1C that can be achieved with diet, exercise, and metformin is a good A1C,” said Dr. Wesler.

Physicians often underestimate lifestyle changes in the treatment of elderly patients, Dr. O’Malley noted. “Exercise is harder in the elderly, where there’s less functional capability, but where there is functional capability, we should be emphasizing it,” he said.

When the first-line treatments of lifestyle changes and metformin aren’t enough to get elderly patients to their individualized goal, clinicians face the toughest dilemmas of how intensively to treat.

“We need to think long and hard before starting insulin or a sulfonylurea in an elderly diabetic, and we need to be much more aware of the risk of hypoglycemia,” said Dr. O’Malley. “The risk of hypoglycemia is the major reason for the move toward less intensive treatment in the elderly, after all. It’s not only more common but potentially more risky for them than younger patients, Dr. Ismail-Beigi noted.

“When younger people get severe hypoglycemia, it’s damaging but probably not as significant. The younger brain probably recovers, but older people don’t seem to recover so well,” said Dr. Ismail-Beigi.

The alternatives pose problems of their own, however. “I personally don’t use thiazolidinedione drugs hardly at all. Maybe that’s an overreaction, but benefits and risks have been debated,” said Dr. Halter. “The category of thiazolidinediones scares me in this population at high risk for cardiovascular disease.”

There’s also the problem that alternatives to insulin are individually less effective. “How many different classes of oral agents should one try before going to insulin? There’s no clear answer to that question, but I’m very sensitive to polypharmacy issues,” said Dr. Halter. “I definitely do not like using more than 3 classes of drugs.”

How many medications a patient is already taking for various comorbidities should certainly be a consideration in selection of a glycemic target and treatment, the experts said. And if a patient is newly diagnosed with diabetes, the process of adding medications should be very slow.

“We start conservative and safe, and as the person learns more and they can do better and better, then I can tighten it a bit,” said Dr. Ismail-Beigi. “It doesn’t bother me greatly if their A1C is 8% for a while. Their world won’t come to an end. But it will be a major problem if an older person develops severe hypoglycemia and has a heart attack.”

Scary as that possibility sounds, the overall message for clinicians, who have been constantly cautioned about the risks of hyperglycemia for the past couple decades, is one of reassurance. “This disease is very, very slow, so everybody could take a chill pill and slowly get people to the target range,” Dr. Ismail-Beigi concluded.

**Antibiotic and sulfonylurea reactions linked to serious hypoglycemic events**

Hypoglycemia occurred more frequently in patients taking certain antibiotics while on sulfonylureas, a study found. Researchers conducted a retrospective cohort study of Texas Medicare claims from 2006 to 2009 for patients 65 years or older who were prescribed glipizide or glyburide and who also filled a prescription for 1 of the 16 antimicrobials most commonly prescribed for this population. They then compared rates of hypoglycemic events in the 14 days after filling the antimicrobial prescriptions. Results appeared online in Jama Internal Medicine on Sept. 1.

Compared to those taking antibiotics not expecting to interact with sulfonylureas, patients taking clairinomycin had a much higher rate of hypoglycemia (odds ratio [OR], 3.96; 95% CI, 2.42 to 6.69), as did those on levofloxacin (OR, 2.65; 95% CI, 2.18 to 3.10), sulfamethoxazole-trimethoprim (OR, 2.56; 95% CI, 2.12 to 3.10), metforminamide (OR, 2.11; 95% CI, 1.28 to 3.47), and ciprofloxacin (OR, 1.62; 95% CI, 1.33 to 1.97). Antibiotics not expected to interact with sulfonylureas (and used as the reference standard) included amoxicillin, azithromycin, cefdinir, cefuroxime, cephalexin, clindamycin, doxycycline, nitrofurantoin, and penicillin V.

The number needed to harm ranged from 71 for clairinomycin to 334 for ciprofloxacin. More than a third (39.8%) of the antimicrobial/sulfonylurea hypoglycemia events required hospitalization and the rest were treated and released from the emergency department. Nine patients on the interacting drugs died during hospitalization for hypoglycemia, compared to 3 on the noninteracting antimicrobials (P=0.02).

The researchers noted that interactions with some drugs, for example sulfamethoxazole-trimethoprim, have been known for a while, and yet patients on sulfonylureas are still commonly receiving them. The study found that, in 2009, 28.3% of the patients prescribed a sulfonylurea received 1 of the 5 problematic antimicrobials, and they were associated with 13.2% of all hypoglycemia events in patients taking sulfonylureas. The low cost of the drugs may motivate physicians to prescribe them, but the expense of treating hypoglycemia outweighs the cost savings, with excess Medicare payments for the emergency department and hospital treatment of hypoglycemia adding $30.54 per prescription, the authors calculated.

An editorial stated that since polypharmacy has become ubiquitous, better surveillance for drug-drug interactions is needed, and noted that the true costs of hypoglycemia extend beyond immediate treatment. “Serious hypoglycemia substantially lowers health-related quality of life for many patients and, therefore, shifts the balance of benefits and harms,” the editorial said.