

Clinical Inertia: Overcoming a Major Barrier to Diabetes Management

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ABSTRACT

Background: Clinical inertia is a major and pervasive factor in diabetes management.

Objective: In this brief overview, some of the contributing factors to clinical inertia will be explored, along with some practical guidelines to help busy practitioners avoid this pitfall.

Methods: English-language articles were identified through a search of MEDLINE and Google (1990–2006) using the search terms *clinical inertia*, *diabetes*, *patient noncompliance*, and *advancing therapy*.

Results: Clinical inertia has been defined as “the recognition of the problem, but failure to act.” Three simple strategies could enhance the ability of the busiest of primary care physicians to consistently and accurately assess care, to avoid being pulled off task by “soft” reasons for not acting, and to organize in order to better achieve goals. First, formally establish a defined goal for the glycosylated hemoglobin (A1C) value and consistently work toward it. Second, establish a time frame for achievement of this A1C goal. Finally, publicly display your progress toward achieving this goal (ie, have the results visible to you and your patient at all times during the follow-up).

Conclusions: Although various psychological and system barriers can slow the physician from rapidly achieving established therapeutic goals, the simple strategies outlined here can eliminate many of the confounding factors that hinder aggressive management. (*Insulin*. 2006;1:61–64). Copyright © 2006 Excerpta Medica, Inc.

Key words: clinical inertia, diabetes, glycemic control, glycosylated hemoglobin.

INTRODUCTION

Clinical inertia is a major and pervasive factor in diabetes management. Increasing numbers of patients with diabetes and more data demonstrating the benefits of aggressive diabetes management add to the challenge that physicians now face: to act aggressively to achieve desirable glycemic control in their patients with diabetes. In 2006, an impressive armamentarium of therapeutic tools and an extensive store of knowledge about the benefits of aggressive therapy exist; too often, however, these tools are employed only reluctantly, if at all. Clinical inertia has been defined by Phillips et al¹ as “the recognition of the problem, but failure to act.” One retrospective study by el-Kebbi et al² found that pharmacotherapy was intensified in only 50% of the visits made to a municipal hospital diabetes clinic over a 3-year period by patients with type 2 diabetes mellitus (DM) who clearly met the criteria for advancement of therapy.

In this brief overview, some of the contributing factors to clinical inertia will be explored, along with some practical guidelines to help busy practitioners avoid this pitfall.

MATERIALS AND METHODS

English-language articles were identified through a search of MEDLINE and Google (1990–2006) using the search terms *clinical inertia*, *diabetes*, *patient noncompliance*, and *advancing therapy*.

WIDESPREAD OCCURRENCE OF CLINICAL INERTIA

Current data from the Centers for Disease Control and Prevention show that diabetes is an expanding problem of epidemic proportions, with a 54% increase in new cases of diabetes diagnosed among adults (between 18 and 79 years of age) in the United States from 1997 through 2004.³ Society is bombarded with television and print media advertisements concerning diabetes. Popular magazines dedicated to diabetes are appearing in grocery store checkout lanes. Hardly a month goes by that major medical journals do not include articles on the impact and treatment of diabetes. Physicians and patients alike are more aware, better educated, and increasingly better equipped to manage this expanding health menace. However, data from the National Health and Nutrition Examination Survey (NHANES) show that in the last decade, physicians have been losing ground in the achievement of glycosylated hemoglobin (A1C) control by even the broadest of standards.⁴ New diabetes therapies and heightened awareness have not translated into better control for our patients with diabetes.

Clinical inertia is not a concept isolated to diabetes.¹ Unfortunately, a remarkable chasm exists between what we know and what we actually do to manage dyslipidemia, hypertension, and many other chronic “silent” diseases. Clearly, in medicine, critical needs tend to receive critical attention. Bleeding is stopped. Chest pain is quelled. But when a condition presents silently, largely heralded by

abnormal and asymptomatic laboratory values, our sense of therapeutic urgency seems to dwindle. Data from the United Kingdom Prospective Diabetes Study (UKPDS) clearly showed us that fasting plasma glucose deteriorates with time,⁵ and thus, some of the shortfall in achieving adequate diabetes control is undoubtedly related to the nature of the diabetes itself. However, beyond the failure of β -cell function, it is undeniable that quite a few physicians are not doing all that could be done as aggressively as possible when faced with actionable A1C data.

It is probably a fair assumption that most physicians sincerely want to do what is right for their patients, but results from NHANES and other studies tell us that we fall short of that goal.⁴ While the physician's first reflex might be to blame therapeutic shortcomings on patient noncompliance, studies show that clinical inertia is a phenomenon separate from patient-related issues—it is a problem of the physician and the health care system failing to take appropriate action for the patient.⁶ Although patient noncompliance may actually potentiate clinical inertia on the part of the physician, patients are generally willing to follow medical recommendations and keep their appointments.^{7,8} Thus, the failure to advance therapy (ie, clinical inertia) is a matter most critically related to physician and delivery system issues, not a condition stemming from patient noncompliance.

OBSTACLES TO ADVANCING DIABETES THERAPY AMONG CLINICIANS

A number of time-honored, but unsubstantiated, myths may psychologically impair the clinician from advancing diabetes therapy, especially to initiating the use of insulin. The idea of keeping the regimen simple is always a basically appealing strategy. However, UKPDS findings clearly illustrate that excellent glycemic control requires progressive advancement of therapy to more complex regimens.⁵ Results from the Diabetes Control and Complications Trial (DCCT) showed that aggressive therapy is related to high rates of hypoglycemia.⁹ However, the UKPDS intensive glucose control patients with type 2 DM experienced lower rates of severe hypoglycemia than those seen in the DCCT (a study of patients with type 1 DM).

Hypoglycemia is much less of a problem in a group of patients with some degree of pancreatic reserve intact. There are long-standing fears that insulin might be atherogenic.¹⁰ UKPDS results seemed to shatter this notion by showing a 16% reduction in myocardial infarction with intensive treatment.⁵ While weight gain is a concern for intensive therapy, the European Prospective Investigation of Cancer in Norfolk raises the question of whether the benefits of improved glycemic control might overshadow any detrimental effect of modest weight gain.¹¹ In short, intensive therapy aimed at excellent control appears to trump all fears that would slow achievement of aggressive glycemic control.

Considerable effort has been expended attempting to elucidate why physicians do not take action as A1C levels elevate. In a managed care study by Brown and Nichols reported

in 2003, despite an existing American Diabetes Association (ADA) recommendation to take action when A1C values exceed 8.0%, most patients reached a mean A1C level of 9.4% for several months before therapy was advanced by their physician.¹² These researchers theorized that perhaps physicians made lifestyle recommendations that did not materialize or maybe hoped that their patients' hyperglycemia would only be temporary.

Wallace and Matthews¹³ suggested in a 2000 commentary that "patients and physicians have often colluded in implicit and unspoken contracts to continue oral agents for as long as possible. Physicians prevaricate with a view that they are giving improvement of diet or another effort at weight loss one last chance."

A retrospective study was conducted of 4818 patients with diabetes.¹⁴ Based on data collected over the course of 1 year of treatment, more than half the patients with actionable A1C values ($\geq 8.0\%$) did not have a change in therapy initiated after the abnormal laboratory result was available to the physician. The researchers concluded that this may be due to the asymptomatic nature of diabetes or the fact that most offices do not have systems that alert physicians of actionable results.

A 3-year study was conducted by el-Kebbi et al² at a municipal hospital diabetes clinic in Atlanta, Georgia. Of a total of 1051 visits made by patients who met the established criteria for advancement of therapy, treatment was intensified only 36% of the time.

Phillips et al¹ have suggested 3 underlying causes of this pattern of clinical inertia: (1) overestimation of care provided; (2) use of "soft" reasons to avoid intensification of therapy; and (3) lack of education, training, and practice organization focused on achieving therapeutic goals.

STRATEGIES TO OVERCOME CLINICAL INERTIA

I would like to suggest 3 simple strategies that could enhance the ability of the busiest of primary care physicians to consistently and accurately assess care, to avoid being pulled off task by "soft" reasons for not acting, and to organize in order to better achieve goals. Used in my practice, these strategies have simplified, accelerated, and improved quality of care—and thus should improve patient outcomes (**Table**). First, formally establish a defined target or goal A1C value and consistently work toward it. Secondly, at the time of first encounter, establish the time frame you will allot to achieve your stated target goal. Finally, "keep your work public"—have results visible to you and your patient at all times during follow-up.

You must specifically know where you are going in order to measure your progress and stimulate continued effort. UKPDS imparted the importance of "tight control" in the patient with type 2 DM and began to steer us toward actual A1C measures as guidelines for advancing therapy in patients with type 2 DM.⁵ A number of authoritative groups have formalized A1C target goals that suggest effective diabetes control. Although the ADA had previously established an A1C treatment goal of $<7.0\%$, the 2006 ADA Clinical

Table. Steps to overcome clinical inertia.

1. Establish your "actionable" A1C goal.
 - a. ADA goal <7.0%.¹⁵
 - b. AACE goal ≤6.5%.¹⁶
2. Establish time frame for achievement of your A1C goal.
3. Publicly display your progress toward achieving your A1C goal.
 - a. Keep A1C results prominently displayed in the patient's chart.
 - b. Make the patient aware in advance of the A1C goal.

A1C = glycosylated hemoglobin; ADA = American Diabetes Association; AACE = American Association of Clinical Endocrinologists.

Guidelines suggest that even A1C levels <6.0% may be appropriate for some patients.^{12,15} This reflects the emerging understanding of the relationship between tight control and macrovascular outcomes.

The American Association of Clinical Endocrinologists has set the bar a little lower at ≤6.5%, a goal similar to European standards.¹⁶ As new data come to light about macrovascular benefits associated with lowering A1C levels, newer and more stringent standards for managing A1C levels may evolve. For the busy clinician, the point is to be familiar with the established guidelines and specifically select an appropriate therapeutic target for each patient, applying the working standard. While striving for "better sugars" or "lower A1C" is a noble concept and advances therapy in the proper direction, such general goals may leave physician and patient far from achieving the maximum benefit that is known to be derived from achieving an established treatment goal.

Having dealt with the "are we there yet?" question, we now turn to the equally important "when are we going to get there?" issue. Anyone who has traveled with children has wrestled with this question. But what about primary care physicians and the newly encountered or poorly controlled patients with diabetes? If a specific treatment goal is defined, then the "when are we going to get there?" question screams out. Unlike determining target A1C levels that are well defined in the literature, there are no formal guidelines about how long it should take to achieve target A1C levels. This does not mean it is an unimportant concept.

Several published studies provide suggested time frames to achieve glycemic control. A recent study by Riddle et al¹⁷ on the introduction of basal insulin therapy using glargine or neutral protamine Hagedorn did show that the care of patients was managed to help them reach A1C levels of ~7.0% in roughly 12 weeks, although this study was not specifically designed to address time frames for achieving glycemic control.

Hirsch et al¹⁸ have suggested a treatment strategy that calls for continual intensification of oral antidiabetic therapy, followed rapidly by insulin introduction, if necessary, to achieve glycemic control within several months of starting to work with the patient.

Why should we hold ourselves to an established time frame? First, without a time reference, our goal becomes a distant, abstract concept and not an action item. Secondly, a time frame builds in natural checkpoints to assess progress. The successful physician has in place a plan that calls for progressive and systematic advancement of therapy—using all necessary tools—until glycemic control is achieved on time. We put our patients at needless risk by not working diligently to get to the goal "on time." Make sure that you and your patient know from the outset the answer to the question, "when are we going to get there?"

Finally, keep your progress public. By this I mean to prominently display and share the waypoints of A1C values as you work toward the goal. A study of lipid management demonstrated that one of the prime determinants to effectively establishing lipid treatment was having a low-density lipoprotein cholesterol measurement present in the chart.¹⁹ A recent report has demonstrated that when primary care providers are given feedback on performance, lower A1C levels are achieved.²⁰ Although this may seem painfully obvious, in a busy practice with attention pulled in a thousand directions, we are unlikely to treat what we do not see. While knowledge of numbers does not guarantee advancing therapy, failure to check and know the patient's A1C level is likely to ensure no action. To bury the A1C measurement—if it is done at all—deep inside a huge chart certainly robs this value of its vitality!

Important management parameters should be displayed very "publicly" in the chart, perhaps as prominently as the patient's name and certainly as visible as the traditional "vital signs." Electronic medical records will prove extremely valuable to highlight such data for the physician. Along these same lines, it is no surprise that point-of-care A1C testing has been shown to improve active titration of therapy²¹—seeing where we stand with the patient's control in real time drives us to advance therapy for the good, rather than file the number away.

Studies addressing clinical inertia also show that peer-to-peer review of performance numbers leads to advancing therapy more effectively.¹ A number of performance review initiatives currently are under way in a variety of quality assurance and managed care settings. Having A1C data prominently displayed in the chart, purposefully shared with the patient, and reviewed by your peers—either formally or informally—aids in overcoming the natural clinical inertia inherent in treating diabetes.

Primary care physicians will be experiencing a barrage of new demands in caring for patients with type 2 DM in the coming decades. We must recognize the threat of clinical inertia and the significant detriment it poses to our attempts to optimally care for our patients. Establishing a well-defined

and simplified strategy to advance therapy toward established goals in a timely fashion may be one of the best tools to enable the clinician to effectively meet the challenge of excellent diabetes control.

CONCLUSIONS

Clinical inertia is a problem common to the management of all illnesses that do not present symptomatically. While a variety of psychological and system barriers can slow the physician from rapidly achieving established therapeutic goals, the simple approach outlined in this article eliminates

many of the confounding factors that hinder aggressive management. Set the treatment goal. Drive toward the goal in a defined time period. And “publicly” track the steps toward progress so that you, your patient, and your accountability system are all fully aware of where you are along the journey.

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