

# From vicious to virtuous: Changing the cycle of diabetes care

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Numerous drugs and therapeutic modalities, both oral and injectable, are now available for the management of diabetes. The possible permutations and combinations of which these can be used in increasing the geometric progression with every new molecule that is approved. The last few years have seen the innovation of newer oral anti-diabetic drugs such as the gliptins, bromocriptine, and colesevalam.<sup>[1]</sup> Various novel fixed dose combinations have been developed too, with alpha glucosidase inhibitors and metformin being just an example. Novel non-insulin injectables like liraglutide and exenatide long-acting release (LAR) have hit the market as well. Modern insulins, viz the ultra long-acting degludec is now available, and fixed ratio combinations of degludec with aspart, and degludec with liraglutide, are in differing phases of research.

Not much advancement in the sphere of diabetes therapeutics, has not translated into improved glycemic control at a public health level. Whereas most new drugs are proven to be effective, safe and well-tolerated, and do reduce glycemia in individual patients; their benefits have often not been able to spread across the community of people with diabetes.

Lack of timely initiation with appropriate therapy is one such reason. Drugs such as incretin-based therapy, which ideally should be prescribed early on in the natural course

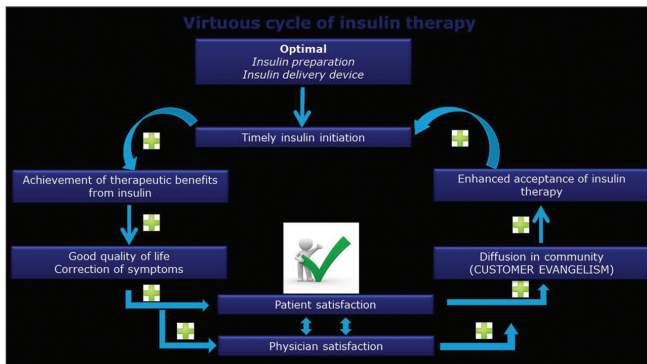
of diabetes when beta cells are still adequate, are often offered too late to the patients. Physicians often prejudge their patients without counseling them. They then justify themselves by saying that while they are willing to prescribe appropriate therapy at the correct time, patients do not accept such treatment. On the other hand, people living with diabetes, many a times, feel that they have not been adequately counseled, and taken into confidence during the decision-making process.<sup>[2,3]</sup>

These perceived barriers, on both sides of the patient-provider bridge, coalesce to create a “vicious cycle of therapeutic inertia”, which prevents various benefits of novel therapy from reaching intended beneficiaries, and creates a vicious cycle of poor glycemic control. In fact, this vicious cycle is worsened by in timely or delayed administration of drugs. Prescription of basal-insulin monotherapy or injectable glucagons like peptide I receptor agonist monotherapy, for example, to a person with complete beta-cell exhaustion, will certainly lead to non-response. This creates a perception in the patient, though him or her, in the family and community, that these drugs are ineffective. This perception fosters further delay in acceptance of injectable therapy by other patients, which again leads to poor therapeutic response, and reinforces collective “wisdom” related to non-suitability to these drugs. Thus, a vicious cycle of Health Care Non-Acceptance is perpetuated.

The Oxford English Dictionary defines ‘vicious cycle’ (circle) as a bad situation producing effects that intensify its original cause.<sup>[4]</sup> Most vicious cycles are self-sustaining, but do not necessarily need to be indefinite. To break a vicious cycle, sustained and concerted efforts are needed to hit it at its weakest spot or spots. We describe herein how the Vicious Cycle of ‘Diabetes Care Non-Acceptance’ can be converted to a Virtuous Cycle of ‘Diabetes Care Acceptance’, leading to optimal therapeutic outcomes [Figure 1].

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**Figure 1:** The Virtuous cycle of diabetes care, as applied to insulin therapy

Diabetes care professionals should also realize the behavioral modification or acceptance of new drug therapy that maybe a slow process, not necessarily manageable in one brief clinic session. An understanding of Prochaska's multistage theory of motivation, as well as other models which delineate insulin motivation, help the diabetologist tailor his or her communication strategy to suit the patient's bio- psychosocial makeup.<sup>[5]</sup> Efficient, two-way communication between patient and physician, following basic rules of etiquette (the WATER approach), is conducive towards shared discussion making (SDM). Acceptability of physician-generated advice is enhanced if the healthcare provider exhibits a few social traits described in the CARES model.<sup>[6]</sup>

Availability of safe and well-tolerated drugs, whose efficacy is lacked by robust evidence, must be initiated in a timely manner. Timely intervention with appropriate drugs leads to alleviation of symptoms, optimal metabolic health, and good metabolic health and quality of life, all of which ensure patient satisfaction. Physician satisfaction and patient satisfaction are intertwined, and feeds upon each other in a positive feedback mechanism.

Patient satisfaction leads to physician satisfaction, which in turn creates physician confidence. This manifests as better communication, which helps to foster enhanced acceptance of therapy and improves patient satisfaction again. Satisfied patients work as 'customer evangelists', spreading the good word about appropriate and timely diabetes care modalities in the family and community. The study of this particular field of behavioral science is known as diffusion research.<sup>[7]</sup>

Real-life example of success diabetes in first care, propagated in first person, sensitize the community to the availability of successful therapeutic modalities, and super demand for them. People with diabetes from the area then begin to approach the physician, asking for information about, and requesting initiation of the appropriate antidiabetic therapy. This interest on part of the patient (who is already in contemplation) helps the healthcare provider to motivate him or her to accept required therapy. Thus, a Virtuous Cycle of Diabetes Care, including healthcare seeking behavior, healthcare acceptance, and optimal outcomes, is generated.

The Virtuous Cycle is self-sustaining. It is fed by continuous, sustained, concerted effort on part of diabetes care professionals, all of whom should speak with one voice: Timely initiation of appropriate therapy is important. Following basic rules of communication, and using motivational skills correctly, we can easily create this virtuous cycle. This will help our patients enjoy the benefits of newer diabetic therapies, such as incretin-based therapies, and achieve the therapeutic goals they desire.

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