Addressing Insulin Misperceptions (AIM) — Part 2
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Abstract
This article is the second in the series of Addressing Insulin Misperceptions (AIM). It structures perceived objections to insulin according to those prevalent at initiation and intensification, and suggests specific interventions for the commonly encountered misperceptions. The article reflects the need for dialogue in the diabetes clinic: a careful history-taking, involving focused listening, will help identification of misperceptions, and allow crafting of an appropriate strategy to dispel them.

Introduction
Insulin cannot be initiated or intensified successfully, unless all doubts, queries and misperceptions of the patient, and his/her family members are addressed. This article classifies various misperceptions according to whether they are encountered as initiation or at intensification. It lists commonly held misperceptions, and provides simple, yet effective, ways to dispel these.

The First Insulin Encounter
It is essential that the first insulin encounter should be a pleasant one.1 An insulin prescription, or rather, a diabetes prescription differs from one containing an antibiotic or a painkiller. Value-added therapy (VAT), in the form of tangible material (delivery devices, flexibility of administration) and intangible. Support (patient counseling, therapeutic patient education, support) is required for successful therapeutic outcomes with insulin.2

Addressing Insulin Misperceptions at Insulin Initiation (AIM Initiation)
The insulin-naive person, prescribed insulin for the first time in the clinic, presents with a "metabolic memory" or "glycaemic legacy" of his own. Apart from the memory related to glycaemic complications,3 each person carries pre-existing knowledge, beliefs and attitudes related to insulin use. These beliefs and attitudes may be accrued from multiple sources, which include family, friends, community members, social media, mass media and health care professionals. These aspects have to be explored, addressed, and resolved, before successful insulin initiation can take place. Some common misperception at initiation of insulin, and specific ways of resolving them, are listed below.

Perceived Worsening of Health
"Initiating insulin means that I am sick/ I will develop complications/ I will die".
A patient explanation of the natural history of pancreatic function in diabetes, likening it to other organs of the body is required. Emphasis should be on the fact that we have the power to make a difference 'Just as we wear spectacles or lenses to compensate poor eyesight, and are able to lead an optimal life with them, we take insulin to compensate for the pancreas'

Perceived Side Effects
Pain
"Injections hurt". "I am afraid of needles".
This misperception is relatively easy to dispel. Simple information, shared with confidence, often suffices.

'We have newer, modern syringes and delivery devices with short, thin needles; which do not hurt'.

'An insulin needle hurts less than a blood sample does'

'My insulin doesn't hurt: I use modern needles'
Demonstration sometimes help: the health care professional may wish to insert a needle into her own arm, to show how painless and easy the procedure is.

Hypoglycaemia
'What will happen if my sugar goes down?' 'Who will take care of me if I get hypoglycaemia?' 'How will I know if my sugars are low?'

This issue is a genuine concern, which partly overlaps with misperception. This important aspect of diabetes care is best managed by comprehensive patient education and support.

"All insulin cause hypoglycaemia" is a misperception, which can easily be countered".

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We use modern insulins that are safe and well-tolerated, if prescribed in the right dose, and used in the right manner.

**Weight Gain**

"I have heard that insulin causes weight gain. I don’t wish to gain weight".

This misperception is increasingly being heard in South Asian cultures, where weight gain or overweight was earlier considered a welcome sign of health. The best approach will be an honest one:

"Not all insulins cause weight gain in all patients. We will ensure that you do not gain excessive weight, by choosing the correct insulin".

**Perceived Inability**

"I do not know how to inject". "I do not know how to self-monitor blood glucose". I will not be able to handle a complication". "Where will I store insulin?" "I cannot afford insulin".

Confidence building is necessary here.

"These self-management skills are easy to learn. Newer delivery devices and glucometers are easy to use. Together we can do it" "Insulin is more economical than the cost of diabetes complications"

**Perceived Intrusion**

Intrusion into one’s lifestyle becomes a major concern, when an increase in number of doses is contemplated.

Many people feel that once on insulin, their life will revolve around injections.

"I will not be able to play sports, or travel, or leave home." "I will be stuck to insulin forever"

A major misperception, the fear of intrusion, often limits acceptance of insulin. Shared decision making, a propos insulin regimes, types and delivery devices, can minimize intrusion of insulin into one’s lifestyle, and minimize the discomfort of change.

"Modern insulins allow a high degree of flexibility, in timing and device of administration". "You will not feel encumbered by insulin. We can begin with one injection a day, and see how it goes".

The availability of flexible modern insulins and co-formulations obviates this concern to a large extent. Modern rapid-acting and biphasic insulin analogues can be injected before or after a meal, thus allowing flexibility.4

The ultra long acting basal insulin degludec, and its co-formulation I Deg Asp (insulin degludec aspart) take the concept of flexibility a step further. Degludec can be administered at any time of the day, with the inter-dose gap ranging from 8 to 40 hours, while I Deg Asp can be injected with any major meal(s), without them necessarily being antipodal meals.5

**Perceived Social Stigma**

"What will people say?"

"My daughter won’t get a good match if my community gets to know I am on insulin"

This is a challenging situation, because it is closely connected to the person’s personal beliefs and world view. A soft approach may help:

"let us start with an injection that you can take at home, in the privacy of your bedroom".

**Perceived Lack Of Efficacy/ Pessimism**

"I am too sick: nothing can help me now". "I doubt if insulin will be effective in a sick person like me".

Here, too, confidence building is required. Psychological support and anti-depressant medication may help

"let’s begin. We certainly will win".

**Perceived Inability to Marry/Procreate**

A specific misperception, commonly encountered in South Asian cultures, is the fear of insulin therapy &/or diabetes causing difficulty in finding a matrimonial match, in cohabiting with partners, in planning a family, and in allowing birth of healthy children.6,7 This misperception is fuelled by social values, and is difficult to dispel.

An empathic approach, combined with positive thinking, is invaluable

"Focus on your studies and career: insulin or diabetes is just a tiny part of you, like spectacles"

"Diabetes is not a disability, provided we keep it under control"

"Diabetes teaches us self-discipline. Combined with self confidence, it can move mountains"

**Perceived Inappropriateness of Insulin**

"I am healthy. My sugars are fine: it is the machine which is wrong."

"Why not try another tablet no matter how expensive".

Such a case of "psychological insulin resistance"8 requires
tact and patience. One may slowly, but surely, began to debunk objections to insulin, by ordering an HbA1c to provide objective proof of poor control, by listing the advantages of insulin; and by providing relevant examples of proactive behavior in daily life. Such examples should be relevant to the patients age, gender, socioeconomic status; and occupation.

'A stitch in time saves nine.' 'Your car/vehicle gets service at regular intervals; so should you.'

'Insurance for our valuables; insulin for us!'

**Addressing Insulin Misperception at Intensification (AIM-Intensification)**

The misperceptions encountered at insulin intensification may differ from those at initiation. The insulin-user has now accumulated personal experiences with the use of insulin, which shapes his or her views of the therapy. This perception may be positive, negative, neutral, or mixed. Insulin intensification, defined as a change in insulin formulation, regimen, frequency or dosage, or addition of other therapeutic modalities, with a view to improving glycaemic control, is a challenge in its own. The attitude towards change of therapy may vary from person to person, and is strongly influenced by a multitude of factors.

**Perceived Failure**

"I must have done something wrong". "My doctor said 'basal insulin failure'. He means I have failed".

Such reactions are common when insulin intensification is suggested. A proactive approach, using phrases such as 'basal insulin inadequacy', instead of 'basal insulin failure', explaining the natural progression of diabetes, helps.

**Perceived Side Effects**

The approach to handling such misperception is the same as at insulin initiation. One may offer a choice of therapies, such as insulin-gluagon-like peptide1 (GIP1) receptor agonists (GLP1RA), which are associated with a lower risk of hypoglycaemia and weight gain.

**Perceived Cost**

A major obstacle to insulin intensification in pay-from-pocket markets is perceived to be cost.

Premixed insulin analogues have been demonstrated to have a beneficial health economic profile in a variety of settings. All "intensive" regimes are not expensive: premixed insulins and co formulations are often more economical than corresponding basal insulins.

**Conclusion**

This article, the second in its series, describes a robust framework with which to classify and address insulin misperceptions. It helps the diabetes care professional to approach such challenges with a scientific mind, and create a patient-centred strategy to identify and correct misperceptions which may hamper insulin initiation or intensification.

This series of Addressing Insulin Misperception will continue in future editions of Primary Care Diabetes AND RECENT Advances in Endocrinology. The JPMA welcomes contributions from readers which highlight best practices in the art of insulin use.

**References**