



# Triplica Counseling for Diabetic Patient with Co-Existent Hepatitis: Public Health Awareness Glance

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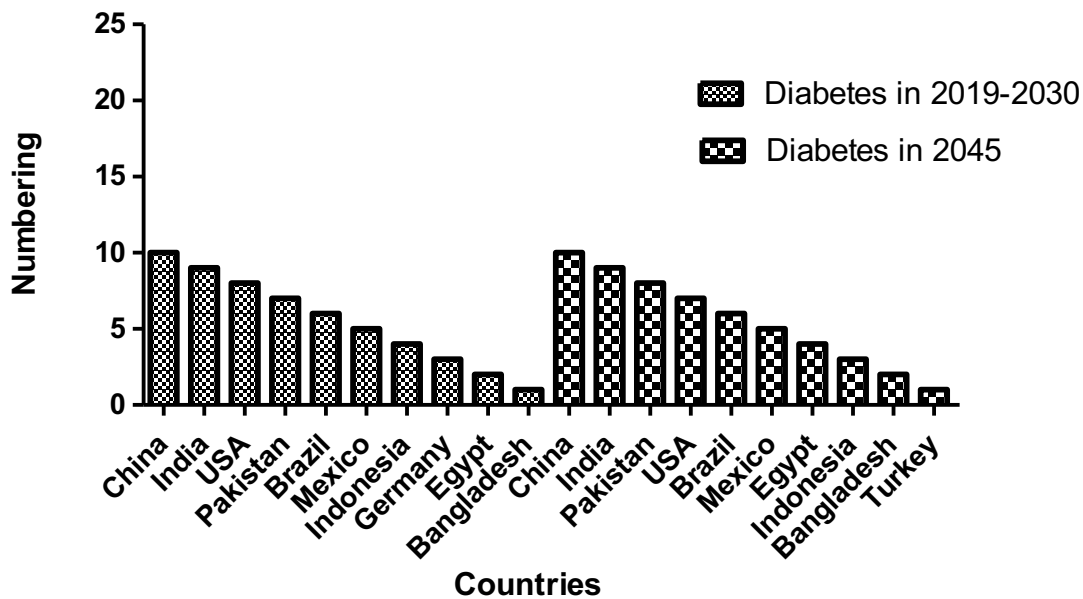
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## Dear Editor-in-Chief

Diabetes mellitus is nowadays a burning issue. According to the International Diabetes Federation (IDF) 2021 survey, in China diabetes mellitus is on pinnacle followed by India, USA, Pakistan and Brazil, due to high prevalence rate of DM the Pakistan can upgrade to third in the

world in the year 2045 (1). IDF reported 19.4 million diabetics in Pakistan in the 2019 survey as reflected in the Fig. 1. Terribly, looking at the highest prevalence rate in Pakistan proper awareness will encourage the public to discourage diabetes mellitus (2).



**Fig. 1:** The current and future prevalence rate of diabetes mellitus



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Diabetes educator is a health care professional and supported by IDF that the diabetes educators are well-equipped health professionals who deliver high quality care to diabetes and pre-diabetes patients with the ultimate goal to improve the patient quality of life (3).

Ideally, IDF is supporting the presence of multi-disciplinary team (MDT) for optimal patients' therapeutic outcomes which enfold; diabetologist, diabetes educator, dietitian, psychologist and patient (1).

Being a pharmacist worked as a patient educator, I have noted daily more than two patients in one ward of Diabetes and Endocrinology at Tertiary care hospital, Peshawar, Pakistan. Almost all of the patients are unaware regarding proper disposal of pickers', syringes and syringe/needle storage.

To the best of my knowledge there is no such study published regarding this crucial public health awareness scenario. Interestingly, this study will be the first attempt to educate public and diabetes educators regarding co-existences of diabetes mellitus and hepatitis.

Most diabetics are using insulin when their blood glucose level is out of control. For administration of insulin specialized syringes are used. Additionally, needles are required for insulin pens. There are several patients presenting to the hospitals and clinics with co-existence of diabetes and hep-

atitis. The way of education in these patients is slight different to avoid co-morbid consequences. Strategies are presented in below steps;

- **Step 1:** Proper disposal of syringes or needles to avoid strict contact of others, as we are well known that hepatitis is a contagious disease, because it can raise the chances of hepatitis in another individual. Literature reported that the induction ratio from used syringes for hepatitis B is 21 million and for hepatitis C is approximately 2 million in individuals (4, 5).
- **Step 2:** Lancet/gunner of glucometer should be properly disposed of and patients should be properly facilitated or educated for self-insulin administration and self-blood glucose monitoring, this will also avoid the contact of others to infected patients.
- **Step 3:** Most of the patients belonging to under developed nations are poor and unable to discard syringes/needles of insulin on once use directly. The needles and syringes should be discarded but used for two to three days. Notably, these syringes and needles should be stored out of children's reach and sharing with other patients should be robustly avoided. Besides, insulin resistance is most frequently seen in diabetes and hepatitis (4, 5) thus patients should be properly educated regarding insulin up-titration. The triplica is reflected in the Fig. 2.

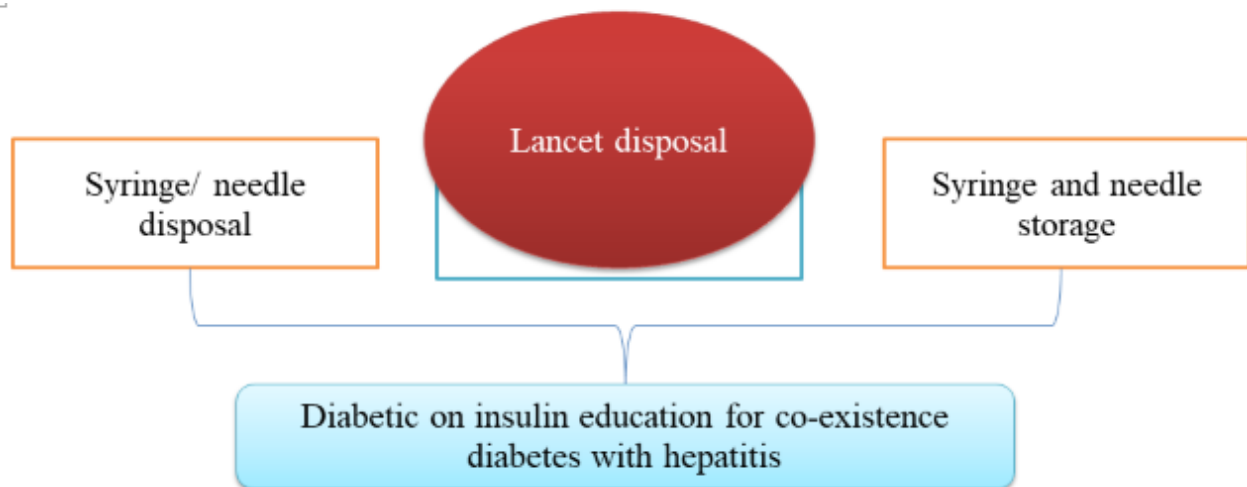


Fig. 2: Triplica for co-existence diabetes and hepatitis for diabetic on insulin

The WHO mandates healthcare providers to play a pivotal role in using the right injections (4, 5). There are numerous problems observed during the injections in which improper injection use is on pinnacle (4).

The triplica for co-existence of diabetes and hepatitis should be properly implemented. Furthermore, this piece of study will enable the diabetes educators or health educators and patients to cope or decline the horizon of these comorbidities and promote safety.

### Conflict of interest

The author declares that there is no conflict of interest.

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