

## The sixth vital sign in diabetes

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### Abstract

The vital signs are an integral part of clinical methods. In diabetes, determination of plasma glucose can be taken as the fifth vital sign. The sixth vital sign is well being, which can easily be measured by two item questionnaires designed to assess distress, depression and coping skills. This sign is essential for the screening and follow up of persons living with diabetes, as it provides an idea of quality of care, helps plan therapeutic interventions, and serves as a surrogate for prognosis or outcome. Inclusion of the sixth vital sign reflects the relevance of the bio-psychosocial model of health to diabetes care.

**Keywords:** Depression, diabetes distress, coping skills, screening, living with diabetes

### The Four Vital Signs

We are all aware of the four vital signs, enshrined in clinical medicine.<sup>1</sup> The measurement of pulse, blood pressure, respiratory rate and temperature provides a fair idea of the health of the patient. These vital signs also convey the severity of illness, and expected prognosis. A vital sign should be easy and quick to measure, objective in its results, with minimal inter-observer or intra-observer variability, and should have an influence on clinical decision-making. Whatever tool is used should be accurate and effective.

### The Fifth Vital Sign: Glucose

Various specialties have added a fifth sign to suit their needs and focus: an electrocardiogram in cardiology, a cardiotocogram in obstetrics, urinalysis in nephrology, and pain in internal medicine.<sup>2</sup> Diabetology uses the glucometer to provide an assessment of glycaemia, which can be termed as the fifth vital sign in diabetes care. Glucose estimations, if performed and interpreted properly, provide an idea of the gluco-phenotype of the patient, and help plan optimal therapy.

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### Psychosocial Health

Diabetes, however, is not just a biomedical condition. A perfect exemplar for the bio psychosocial model of illness, it is associated with various psychological and psychiatric comorbidities, including diabetes distress and depression.<sup>3</sup> Living with diabetes requires a significant degree of coping skills,<sup>4</sup> which may or may not be present in all persons. These aspects of psychosocial health need to be addressed, if one aims for optimal outcomes, including achievement of the comprehensive definition of health. To address these issues, one first needs to measure them.

### The Sixth Vital Sign

We therefore suggest well being as the sixth vital sign of diabetes. Our suggestion is inspired by the routine screening for distress, as practiced in patients with head and neck and neurologic cancers, by Bultz et al.<sup>5</sup> Ours is a positive statement, rather than a negative one (distress) as used by authors in other fields. The sixth sign promotes screening for psychological health, and does not presuppose an abnormality. For example, it is temperature and pulse which are considered vital signs, rather than fever or tachycardia. Therefore, the sixth vital sign should be well being, instead of distress.

Various aspects of psychological health are measured using validated psychometric instruments. Different questionnaires are available for the screening, and diagnosis, of conditions such as diabetes distress,

**Box-1:** The sixth vital sign of diabetes.

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Screening for diabetes distress: DDS2

Rate the degree, on a 1-6 scale, to which the following items caused distress:

- ◆ Feeling overwhelmed by the demands of living with diabetes
- ◆ Feeling that I am often failing with my diabetes regimen.

Screening for depression: PHQ 2

- ◆ During the past month, have you been bothered by having little interest or pleasure in doing things?
- ◆ During the past month, have you been bothered by feeling down, depressed, or hopeless?

Screening for negative coping skills: GlucoCoper 2

- ◆ How often do you get stuck in extremely negative or persistently negative thoughts?
  - ◆ How often do you blame yourself or others for diabetes?
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depression, anxiety and drug dependence. Tools have also been published to assess coping skills mechanisms.

### Three Tools; Two Questions Each

For the sixth vital sign of diabetes, we suggest three simple methods of screening for diabetes distress, depression and negative coping skills.<sup>6,7</sup> Put together, these two item tools provide a comprehensive overview of the psychosocial challenges faced by persons living with diabetes, and the need for skills to overcome them. Easy and rapid to use, these screening aids do not require much training to administer. All that is required is a commitment to patient care.

### From Diagnosis to Management

If lack of well being is diagnosed, it needs to be managed. This can be done by both non-pharmacological and pharmacological means. It is essential for diabetes care professionals to incorporate education, counseling and support in their routine practice. This can be facilitated by learning communication and motivational skills. The core non-pharmacological intervention is termed "diabetes therapy by the ear", which includes active listening, empathic explanation, and filtering of hearsay. This is complemented by coping skills training, which assists the person with diabetes in identifying his negative coping mechanisms, and replacing them with positive

ones. Diabetes distress is managed by non-pharmacological means alone, while depression may need drug therapy as well.

### Conclusion

Screening for the sixth vital sign, well being, should be included as a routine part of diabetes care. Use of validated, simple tools will help early identification, and timely addressal of psychological challenges such as distress, depression and inappropriate coping skills. This, in turn, will facilitate optimal outcomes, and ensure that people are able to live healthy lives with diabetes.

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