Technical meeting: Use and interpretation of haemoglobin concentrations for assessing anaemia status in individuals and populations

29-30 November and 1 December, 2017
Salle C, WHO Geneva, Switzerland

SCOPE AND PURPOSE

Anaemia is a condition in which the number of red blood cells or their oxygen-carrying capacity is insufficient to meet physiologic needs, which vary by age, sex, altitude, smoking, and pregnancy status. Accurate characterisation of anaemia is critical to understanding the burden and epidemiology of this problem, for planning public health interventions, and for the clinical care of patients. The threshold haemoglobin concentration for diagnosis of anaemia is presently defined using a putative 95% reference range in normal individuals adjusted for age, sex and pregnancy status, with corrections for altitude of residence and smoking status.

Accurate and justifiable definitions of anaemia have worldwide benefits for both public health programmes as well many clinical interventions per year. Improved definitions of anaemia will permit a more accurate assessment of the determinants, their burden and hence the impact of this condition in individuals and populations. Governments, non-governmental organisations and donors will be able to appropriately target interventions, monitor the effectiveness of programmes, and make informed-decisions regarding allocation of resources. Clinically, measurement of haemoglobin is one of the most commonly performed laboratory tests – in the primary care setting, hospital and critical care setting; updated definitions of anaemia will help health professionals manage, investigate and treat their patients.

The World Health Organization (WHO) has initiated a 4-year project to review its global guidelines for haemoglobin thresholds used to define anaemia at the individual and population level. As the first step, More than 4,000 technical experts, researchers, blood banks, policy makers and programme implementers were asked to identify priority questions to understand the key information and knowledge that would enable a revised definition of haemoglobin thresholds, in the form of a prioritized list of scoping questions. Over 500 questions from more than 150 respondents were received and consolidated into 58 questions across six categories that were ranked as the most relevant aspects on anaemia diagnosis. Based on the questions and research needs that scored highest by stakeholders, and priorities outlined in the 2030 Sustainable Development Goals,
the Evidence and Programme Guidance Unit, Department of Nutrition for Health and Development, WHO, in collaboration with the Services Organization and Clinical Interventions unit, Department of Service Delivery and Safety (WHO) is convening a technical meeting on *Use and interpretation of haemoglobin concentrations for assessing anaemia status in individuals and populations*, to be held in Geneva, Switzerland in 29-30 November and 1 December, 2017.

The objectives of this consultation are to review:

1. Definition of anaemia as a public health problem and classification of severity.
2. Variation in haemoglobin thresholds for anaemia across the lifecycle and other psycho-biological aspects affecting haemoglobin concentrations
3. Effect of haemoglobin levels on mother and child health, including cognitive and physical development in children
4. Diagnostic value of haemoglobin concentration for monitoring clinical and nutrition specific/ nutrition sensitive interventions.
5. Methods for haemoglobin measurement in clinical laboratories and field studies.
6. Ethics, human rights and determinants of equity in access to anaemia diagnosis.
7. Country level experiences and lessons learnt with haemoglobin determinations and anaemia diagnosis.
8. Research priorities to better support evidence of improved nutrition and unintended adverse effects.

The outcomes of this technical consultation will contribute to the Member States’ efforts to strengthen their health systems and provide them with a summary of technical considerations and lessons learnt which can be useful in the diagnosis of anaemia and its causes as well as with the implementation of nutrition-specific and nutrition-sensitive programmes that could help to decrease the prevalence of anaemia. It will also contribute to WHO’s continuous work for future normative work in this field.

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