

Executive summary of the 2017 KDIGO Chronic Kidney Disease–Mineral and Bone Disorder (CKD-MBD) Guideline Update: what's changed and why it matters



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The KDIGO 2017 Clinical Practice Guideline Update for the Diagnosis, Evaluation, Prevention, and Treatment of CKD-MBD represents a selective update of the prior CKD-MBD Guideline published in 2009. This update, along with the 2009 publication, is intended to assist the practitioner caring for adults and children with chronic kidney disease (CKD), those on chronic dialysis therapy, or individuals with a kidney transplant. This review highlights key aspects of the 2017 CKD-MBD Guideline Update, with an emphasis on the rationale for the changes made to the original guideline document. Topic areas encompassing updated recommendations include diagnosis of bone abnormalities in CKD–mineral and bone disorder (MBD), treatment of CKD-MBD by targeting phosphate lowering and calcium maintenance, treatment of abnormalities in parathyroid hormone in CKD-MBD, treatment of bone abnormalities by antiresorptives and other osteoporosis therapies, and evaluation and treatment of kidney transplant bone disease.

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The complete KDIGO 2017 Clinical Practice Guideline Update for the Diagnosis, Evaluation, Prevention, and Treatment of Chronic Kidney Disease–Mineral and Bone Disorder (CKD-MBD) is publishing simultaneously in *Kidney International Supplements*, volume 7, issue 1, 2017, which is available online at www.kisupplements.org.

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In 2009, Kidney Disease: Improving Global Outcomes (KDIGO) published the KDIGO Clinical Practice Guideline for the Diagnosis, Evaluation, Prevention, and Treatment of Chronic Kidney Disease–Mineral and Bone Disorder (CKD-MBD).¹ At that time, the Work Group acknowledged the lack of high-quality evidence on which to base recommendations. Over the years that followed, multiple randomized controlled trials (RCTs) and prospective cohort studies examined some of the key issues underlying the assessment, development, progression, and treatment of CKD-MBD. KDIGO recognizes the need to reexamine the currency of its guidelines on a periodic basis, and therefore convened a Controversies Conference in 2013, titled “CKD-MBD: Back to the Future.”²

The conference participants concluded that most of the 2009 recommendations¹ were still applicable in current practice; however, a total of 12 recommendations were identified for revision, based on new data. As a result, a Work Group was convened to undertake a “selective update”³ of the 2009 KDIGO CKD-MBD Guideline (Table 1).¹ Notably, despite the availability of results from several new key clinical trials, large gaps of knowledge still remained. Accordingly, many of the “opinion-based” recommendation statements from the 2009 Guideline¹ remain unchanged (see summary of KDIGO CKD-MBD recommendations).

Similar to the original 2009 KDIGO CKD-MBD Guideline,¹ development of the 2017 Update³ followed a rigorous process of evidence review and appraisal, based on systematic reviews of results from clinical trials. The structured approach was modeled after the GRADE system,⁴ which ascribes grades to the quality of the overall evidence and strength for each recommendation. Where appropriate, the Work Group issued “not graded” recommendations, based on general advice, that were not part of a systematic evidence review.

Despite the dearth of high-quality evidence identified in several areas pertaining to CKD-MBD, the Work Group was committed to developing a comprehensive guideline document that is of highest value to the nephrology community. The list of research recommendations in each chapter of the