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Patricia F Campbell* (patc@umd.edu), Center for Mathematics Education, 2226 Benjamin Building, University of Maryland, College Park, MD 20742-1175. *Addressing Challenges in the Common Core: Mathematics Specialists in Elementary and Middle Schools*. Preliminary report.

The Common Core State Standards for Mathematics (CCSS) both reposition and refocus mathematics objectives in the K-8 curriculum, raising demands on teachers already challenged by calls to increase student achievement. Successful implementation of the CCSS will depend not only on assessment and curriculum development, but also on teachers' knowledge and instructional practice. Recently, mathematics specialists/coaches are being positioned in elementary and middle schools to serve as an on-site resource, addressing teachers' knowledge of mathematics content and pedagogy while catalyzing and sustaining teachers' efforts to define and implement meaningful instructional change across a school. This session will highlight some of the challenges raised by the content of the CCSS and report the results of a collaborative project that utilized a 3-year randomized control-treatment design to investigate the impact of knowledgeable mathematics specialists who served as coaches in elementary schools. Concluding remarks will consider (1) the feasibility of positioning specialists to address some of the demands raised by the CCSS and (2) the implications of mathematicians and mathematics educators working together to develop more rigorous and appropriate content courses for K-8 teachers. (Received September 21, 2010)