## Hanna Bennett (hbennett@umich.edu), Paul Kessenich\* (paulkess@umich.edu) and P. Gavin LaRose (glarose@umich.edu), Department of Mathematics, University of Michigan, 530 Church St., Ann Arbor, MI 48109-1043. Re-envisioning Assessment at Scale: Curricular and Programmatic Design to Improve Outcomes, Inclusiveness, and Retention.

In the early 1990s, reform calculus movements funded by the NSF sought to transform calculus from a "filter" to a "pump," to increase student persistence and success through multiple courses, and to address barriers presented by differences in preparation and background. We consider how the re-envisioning of our calculus sequence in the course of this calculus reform informs and underpins a second reform movement that we are undertaking now to incorporate mastery assessment, improve instruction and instructor support, and increase the inclusiveness of our introductory course sequence. We discuss the use of active learning at scale in a program that teaches 95 sections of calculus I in the fall semester, specific efforts to improve instruction across those sections, the development of a mastery assessment structure, and concrete administrative changes we have made to make our courses and their assessment more inclusive of groups traditionally under-represented in mathematics. (Received September 17, 2019)