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Lower bounds for Kazhdan-Lusztig polynomials from patterns.

If x and y are elements of a Weyl group W, and W' is a subgroup of W generated by reflections, we give lower bounds for $P_{x,w}(1)$ in terms of the cosets containing x and w and their positions within those cosets. If $W = S_n$ this relates to pattern avoidance – e.g. we get $P_{1,w}(1) \geq P_{1,y}(1)$ where y is any pattern contained in w.

This is joint work with Sara Billey.