Authors' response

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We thank Dr Weinberger for the interest in our publication "Dexamethasone for inpatient childhood asthma exacerbations is as effective as short-acting corticosteroid treatment."[1] The increasing number of studies in this area reflects the importance of refining our approach to treating children with acute asthma exacerbations, the most common reason for childhood hospitalizations in the United States.[2] We believe our report fills an important knowledge gap by answering the question of whether a 2-dose dexamethasone regimen is as effective as short-acting systemic corticosteroid (SCS) for hospitalized children.

Despite the conflicting conclusions regarding the efficacy of SCSs cited by Dr Weinberger, expert panel guidelines recommend these medications as a fundamental component of exacerbation treatment.[3] Thus, it would be ethically indefensible to conduct additional SCS- vs placebo randomized clinical trials. Indeed, we sought to examine the effectiveness of this treatment in a real-world practice setting and were careful to use this term rather than *efficacy*, which is the term used to describe differences in outcome within the more idealized and restrictive setting of a randomized clinical trial.[4]

The heterogeneity of clinical expression and response to treatment, including to SCSs, is a challenging feature of acute asthma exacerbations, notwithstanding consensus SCS treatment recommendations.[5] Indeed, more than 80% of childhood exacerbations are precipitated by viral respiratory infections.[6] These children do not consistently benefit from treatment with SCSs and represent most emergency department nonresponders who require hospitalization for further management.[7]

Dr Weinberger is correct that our study did not address the question of whether 2 doses of 3 mg/kg of prednisone or prednisolone would provide the same outcome as the dexamethasone dose of 0.6 mg/kg. Although this was not the question we sought to answer, we pointed out that dexamethasone has a much longer half-life and a greater affinity for the glucocorticoid receptor compared with these short-acting corticosteroids. We believe these data support the interest among clinicians in the use of dexamethasone rather than short-acting SCSs dosed at 1 to 2 mg/kg/day for 3 to 10 days as recommended by expert guidelines.[8] The option to administer all SCS doses as dexamethasone before hospital discharge is additionally appealing to parents who must fill prescriptions for short-acting SCSs and to clinicians who are aware of the low fill-rates for these prescriptions.

To our knowledge, our report is the first to examine comparative outcomes among children hospitalized with acute asthma exacerbations and treated with defined dexamethasone and short-acting SCS regimens. As such, we believe it provides knowledge to fine-tune our care of these patients.

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