



COMMENT & RESPONSE

Scott D. Grosse, PhD,

National Center on Birth Defects and Developmental Disabilities, US Centers for Disease Control and Prevention, Atlanta, Georgia

Lisa A. Prosser, PhD,

Department of Health Management and Policy, University of Michigan, Ann Arbor; Susan B. Meister Child Health Evaluation and Research Center, Department of Pediatrics, University of Michigan, Ann Arbor

Jeffrey R. Botkin, MD

Department of Pediatrics, The University of Utah, Salt Lake City

In Reply

We appreciate the passion and commitment of Watchko and Maisels to the detection and treatment of neonatal hyperbilirubinemia (NBH) and jaundice. We understand their concern that our Viewpoint calls attention to evidence of a potential long-term harm of phototherapy: increased risk of epilepsy.¹ Advocates often focus exclusively on benefits of screening and treatments. In contrast, it is the responsibility of policy makers to balance trade-offs between benefits and harms. Because the primary justification for screening and treatment for NBH is the prevention of kernicterus as a devastating long-term outcome, our Viewpoint focused on long-term health outcomes and did not attempt to catalog short-term harms or benefits of phototherapy.¹ We realized that phototherapy is associated with a significantly lower need for exchange transfusions,² which we considered a short-term benefit of treatment to reduce serum bilirubin levels.

We thank Newman and Kemper for giving us the opportunity to restate our contention that both benefits and harms of screening and treatment should be considered by policy makers. That stance is consistent with the long-standing practice of the US Preventive Services Task Force and the Advisory Committee on Heritable Disorders in Newborns and Children.^{3,4} Both the benefits and harms of newborn screening depend on the benefits and harms of the treatments that are prompted by positive screening results. Screening alone does not save lives; it is the treatments associated with early diagnoses that save lives. In addition, it is important to keep in mind that even effective treatments may pose risks of harms.⁵

Newman and Kemper suggest that in our Viewpoint we “appear to advocate avoiding phototherapy by avoiding awareness of high bilirubin levels.” Our Viewpoint did not

Corresponding Author: Scott D. Grosse, PhD, US Centers for Disease Control and Prevention, 4770 Buford Hwy NE, Mail Stop S106-4, Atlanta, GA 30341 (sgrosse@cdc.gov).

Conflict of Interest Disclosures: None reported.

advocate for or against screening for NBH.¹ We presume Newman and Kemper refer to our discussion of the nonendorsement by the US Preventive Services Task Force in 2009 and the American Academy of Family Practice in 2014 of universal NBH newborn screening as clinical practice guidelines and the nonendorsement by the Advisory Committee on Heritable Disorders in Newborns and Children in 2012 of universal NBH screening as a public health policy.¹ We recognize that treatment of high bilirubin levels can reduce the risk of kernicterus, but responsible decision-making on screening policy also requires consideration of the risk that treatment prompted by screening can cause harm as well as benefit, accompanied by a rigorous assessment of the certainty of net benefit.^{3,4}

The challenge for clinicians who screen and treat newborns for NHB and jaundice is to select protocols and cutoffs that balance the clinical benefits of treatment with the risk of harms. We thank Newman and Kemper for their ongoing work with the American Academy of Pediatrics to revise treatment guidelines that in the future may lead to fewer infants receiving phototherapy unnecessarily.

Acknowledgments

Disclaimer: The findings and conclusions in this letter are those of the authors and do not necessarily represent the official position of the US Centers for Disease Control and Prevention.

References

1. Grosse SD, Prosser LA, Botkin JR. Screening for neonatal hyperbilirubinemia: first do no harm? *JAMA Pediatr.* 2019;173(7):617–618. doi:10.1001/jamapediatrics.2019.1194 [PubMed: 31107538]
2. Newman TB, Wu YW, Kuzniewicz MW, Grimes BA, McCulloch CE. Childhood seizures after phototherapy. *Pediatrics.* 2018;142(4):e20180648. doi:10.1542/peds.2018-0648 [PubMed: 30249623]
3. Calonge N, Green NS, Rinaldo P, et al.; Advisory Committee on Heritable Disorders in Newborns and Children. Committee report: method for evaluating conditions nominated for population-based screening of newborns and children. *Genet Med.* 2010;12(3):153–159. doi:10.1097/GIM.0b013e3181d2af04 [PubMed: 20154628]
4. Kemper AR, Green NS, Calonge N, et al. Decision-making process for conditions nominated to the recommended uniform screening panel: statement of the US Department of Health and Human Services Secretary's Advisory Committee on Heritable Disorders in Newborns and Children. *Genet Med.* 2014;16(2):183–187. doi:10.1038/gim.2013.98 [PubMed: 23907646]
5. Goldenberg AJ, Comeau AM, Grosse SD, et al. Evaluating harms in the assessment of net benefit: a framework for newborn screening condition review. *Matern Child Health J.* 2016;20(3):693–700. doi:10.1007/s10995-015-1869-9 [PubMed: 26833040]