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## Blood Disorders and Public Health

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Millions of people in the U.S. are affected by blood disorders.<sup>1</sup> The accumulating epidemiologic evidence for non-malignant blood disorders continues to strengthen its consideration as a national public health priority. Although there is enormous potential for public health practice to reduce the disease burden and associated healthcare costs, the fiscal resources with which to do so are decreasing and may continue in the near future. Thus, the Division of Blood Disorders (DBD) at the Centers for Disease Control and Prevention (CDC) has embraced a new currency of developing and implementing a comprehensive set of public health approaches to effectively promote and improve the health of people with blood disorders.

In spite of having effective regimens to prevent blood clots, it is estimated that thousands of patients will die of a blood clot associated with a hospital stay.<sup>2</sup> Hydroxyurea has been proven to result in fewer painful crises, fewer episodes of acute chest syndrome, fewer blood transfusions,<sup>3</sup> and lower risk of death in adult sickle cell disease (SCD) patients,<sup>4</sup> yet less than one third of the patients who might benefit from it actually receive it.<sup>5</sup> Prophylactic treatment in hemophilia patients reduces the number of bleeds significantly as compared to on-demand treatment; however, this has not become a standard of care.<sup>6</sup> These public health activities have been undertaken by DBD and seek to bring to bear proven interventions in areas where research and surveillance findings suggest that potential benefits might be realized and adverse effects might be mitigated. Additionally, these approaches attempt to develop and implement interventions that benefit the entire community of people affected by blood disorders.

This is the third special set of articles published by the *American Journal of Preventive Medicine* describing and highlighting the unique challenges and opportunities for public health to positively impact the health and care of people affected by a blood disorder. In this theme issue, the DBD details its work in meeting the emerging public health needs of people with a blood disorder while also focusing on DBD's unique role in serving the community of those affected by a blood disorder, first by supporting public health practice activities directed to people with hemophilia, and subsequently by expanding to serve people with

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other nonmalignant blood disorders.<sup>7</sup> These articles communicate the DBD's efforts to develop surveillance systems to provide data for action and monitoring interventions.<sup>8</sup> Further, they also illustrate the use of data used in decision making to improve the lives of people with blood disorders.<sup>9,10</sup>

The DBD is committed to serving those affected by a blood disorder, whether inherited (e.g., hemophilia and SCD) or acquired (venous thromboembolism). No single entity or organization alone will be able to accomplish the objectives of improving quality and length of life for these special populations. This special theme focus affords an important opportunity to communicate the Division's ongoing efforts to a wider audience with the goal to align, leverage, and synergize our work with that of others in the field. In collaboration with our many public health partners—other federal and state agencies, academia, and professional and community-based organizations—the DBD at CDC works to improve the lives of people at risk of or affected by a blood disorder. Through public health practice, the DBD is ensuring that evidence is put into practice to improve health outcomes for the populations it serves.

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