



## Providing Hope to the Underserved

**Kim Smith-Whitley, M.D.**


Executive Vice President and Head of Research and Development  
Global Blood Therapeutics, Inc





# LIVING OUR MISSION

To truly make SCD a well-managed disease, we must continue to advance innovations in care and address long-standing gaps in health equity.



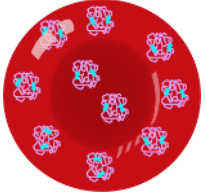
**Muyiwa**  
Age 36  
Durham, NC  
*Actual Patient*



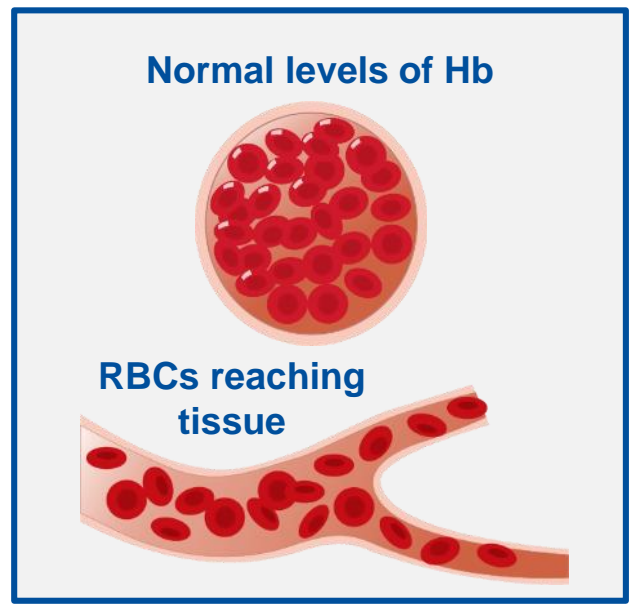


# SCD: A DEVASTATING DISEASE IMPACTING RED BLOOD CELL HEALTH

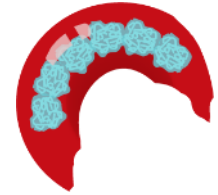
Normal RBC with oxygenated Hb



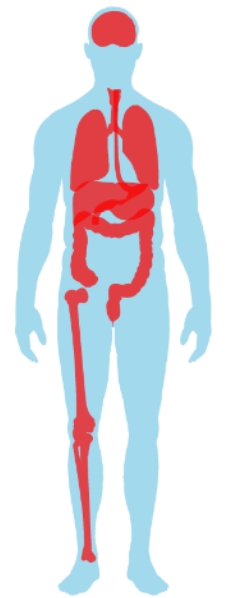
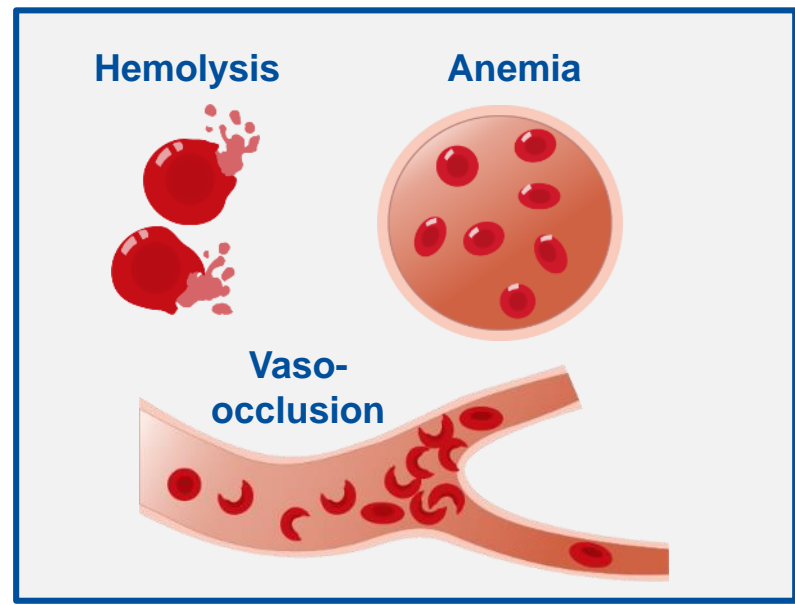
Normal oxygen content and delivery



Sickle RBC with polymerization of deoxygenated Hb

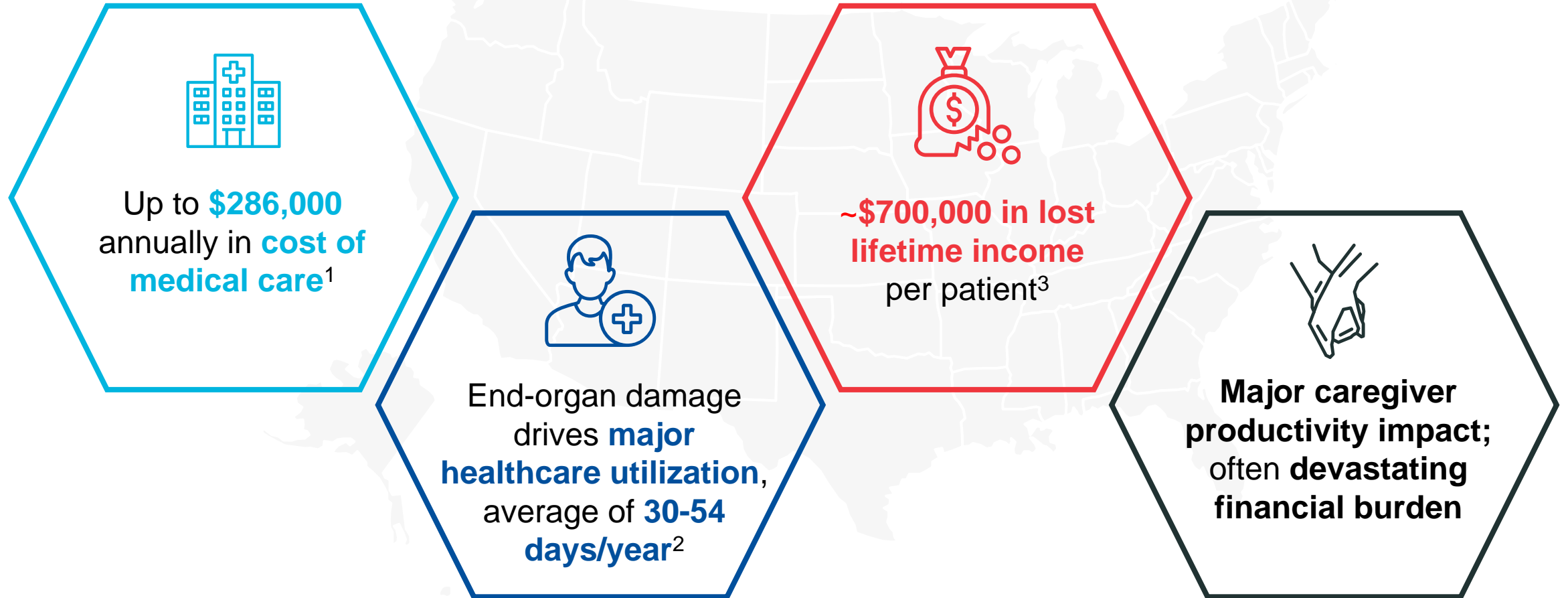


Decreased oxygen content and impaired delivery



Hb = hemoglobin; HbS = sickle hemoglobin; RBC = red blood cell; SCD = sickle cell disease.  
Rees DC et al. *Lancet*. 2010;376:2018-2031.  
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# MAJOR BURDEN ON U.S. PATIENTS AND SOCIETY



1. Song, X, et al. Economic Burden of End Organ Damage Among Patients with Sickle Cell Disease in the US. 2019 American Society of Hematology Annual Meeting. Poster #3388. 2. GBT Internal Data.  
3. Lubeck, D. et al. Estimated Life Expectancy and Income of Patients With Sickle Cell Disease Compared With Those Without Sickle Cell Disease. JAMA Netw. Open. 2019 Nov 1;2(11):e1915374.  
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# RACE AND DISEASE DISCRIMINATION IMPACT CARE



## Misconceptions can lead to undertreatment<sup>1</sup>

- + HCPs have misconceptions that lead to undertreatment, including:
  - Fear that the patient is a drug abuser
  - Disbelief in the patient's pain severity
  - Reluctance to prescribe opioids

## Interactions with the healthcare system can be challenging

- + ED healthcare providers harbor negative attitudes about patients with SCD<sup>2</sup>
- + SCD patients experienced longer ED wait times<sup>3</sup>
- + HCPs provide poor communication, demonstrating less respect and spending less time<sup>4</sup>

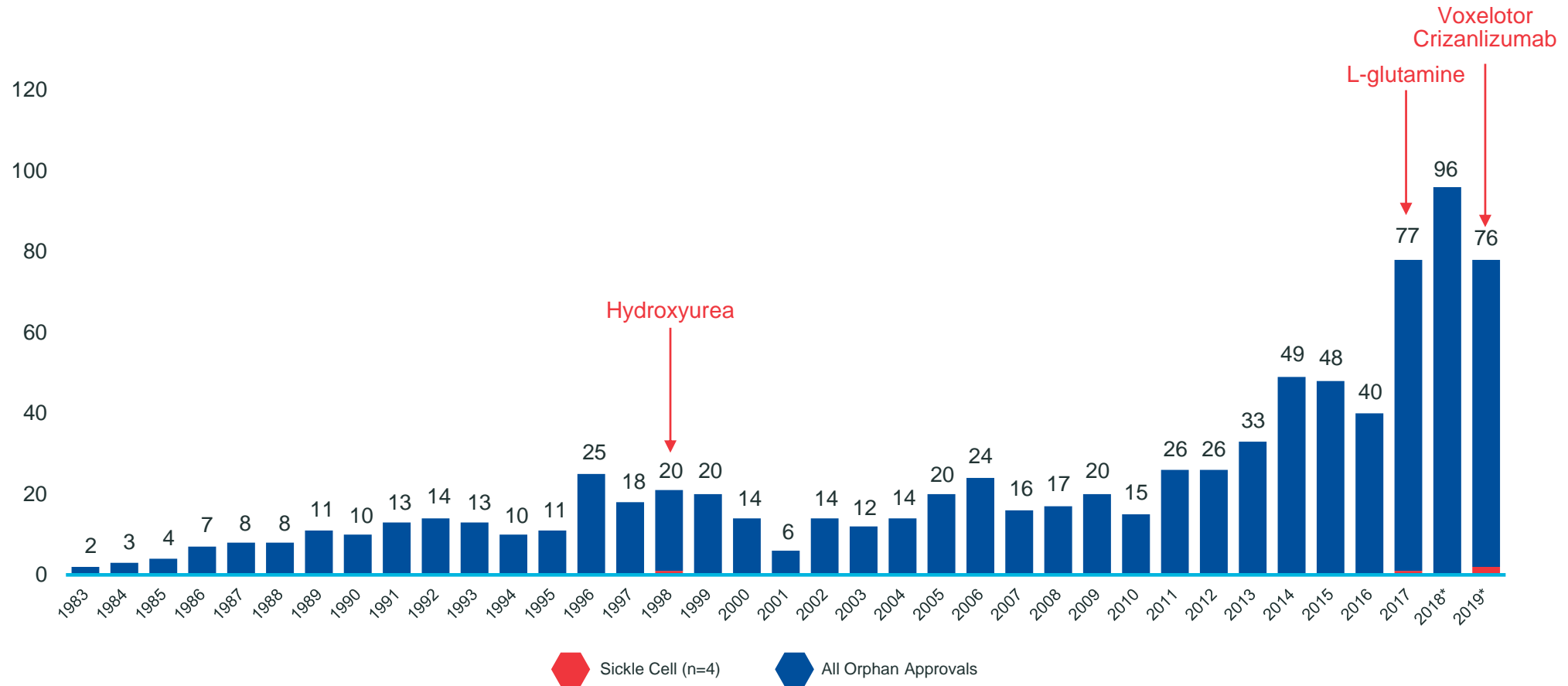
ED = emergency department; HCP = healthcare provider;

1. Adams-Graves P and Bronte-Jordan L. Expert Rev Hematol. 2016;9:541-552; 2. Glassberg J et al. Am J Hematol. 2013;88:532-533; 3. Haywood C Jr et al. Am J Emerg Med. 2013;31:651-656; 4. Haywood C Jr et al. Patient Educ Couns. 2014;96:159-164.

# INNOVATION IN SCD THERAPIES HAS LAGGED OTHER RARE DISEASES



## Number of FDA Orphan Drug Approvals

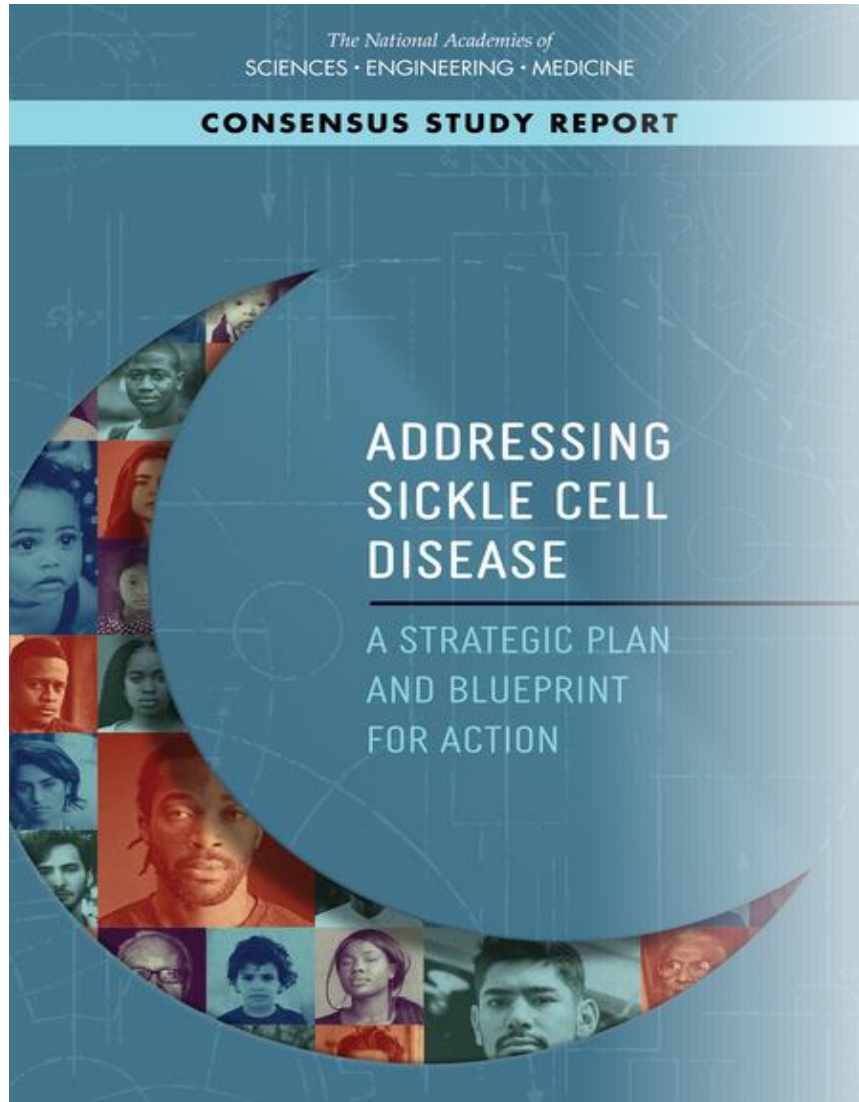


Adapted from Miller, KL. Investigating the landscape of US orphan product approvals. Orphanet J Rare Dis. 2018; 13: 183.

\*Food and Drug Administration (FDA). Search orphan drug designations and approvals. <http://www.accessdata.fda.gov/scripts/opdlisting/oopd/index.cfm>. Accessed October 2020.

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# SCD MOMENTUM AT THE NATIONAL AND STATE LEVELS



Increased investment in innovative medicines

Growing focus on need to fill health equity gaps

Policy initiatives to improve SCD patient care

*SCD now receives more attention, but more is needed to ensure lasting and impactful change.*



# 10 YEARS OF INNOVATION & COMMITMENT TO THE FUTURE



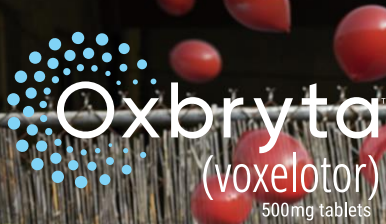
**First-in-class  
therapy**

**Global expansion  
underway**

**Robust pipeline of  
potential  
SCD therapies**

**Commitment to  
ending health  
inequality**





# FIRST AND ONLY FDA APPROVED MEDICINE THAT DIRECTLY INTERFERES WITH RED BLOOD CELL SICKLING

## INDICATION

### What is OXBRYTA®?

OXBRYTA is a prescription medicine used for the treatment of sickle cell disease in adults and children 12 years of age and older.

It is not known if OXBRYTA is safe and effective in children below 12 years of age.

This indication is approved under accelerated approval based on increase in hemoglobin (Hb). Continued approval for this indication may be contingent upon verification and description of clinical benefit in confirmatory trial(s).

## IMPORTANT SAFETY INFORMATION

**Do not take OXBRYTA** if you have had an allergic reaction to voxelotor or any of the ingredients in OXBRYTA. See the end of the patient leaflet for a list of the ingredients in OXBRYTA.

**If you are receiving exchange transfusions**, talk to your healthcare provider about possible difficulties with the interpretation of certain blood tests when taking OXBRYTA.

**Before taking OXBRYTA**, tell your healthcare provider about all of your medical conditions, including if you:

- + have liver problems
- + are pregnant or plan to become pregnant. It is not known if OXBRYTA can harm your unborn baby
- + are breastfeeding or plan to breastfeed. It is not known if OXBRYTA can pass into your breastmilk and if it can harm your baby. Do not breastfeed during treatment with OXBRYTA and for at least 2 weeks after the last dose

**Tell your healthcare provider about all the medicines you take**, including prescription and over-the-counter medicines, vitamins, and herbal supplements. Some medicines may affect how OXBRYTA works. OXBRYTA may also affect how other medicines work.

**For more information about Oxbryta, please see the Full Prescribing Information and Patient Information, which is available from your presenter or by visiting [www.Oxbryta.com](http://www.Oxbryta.com)**



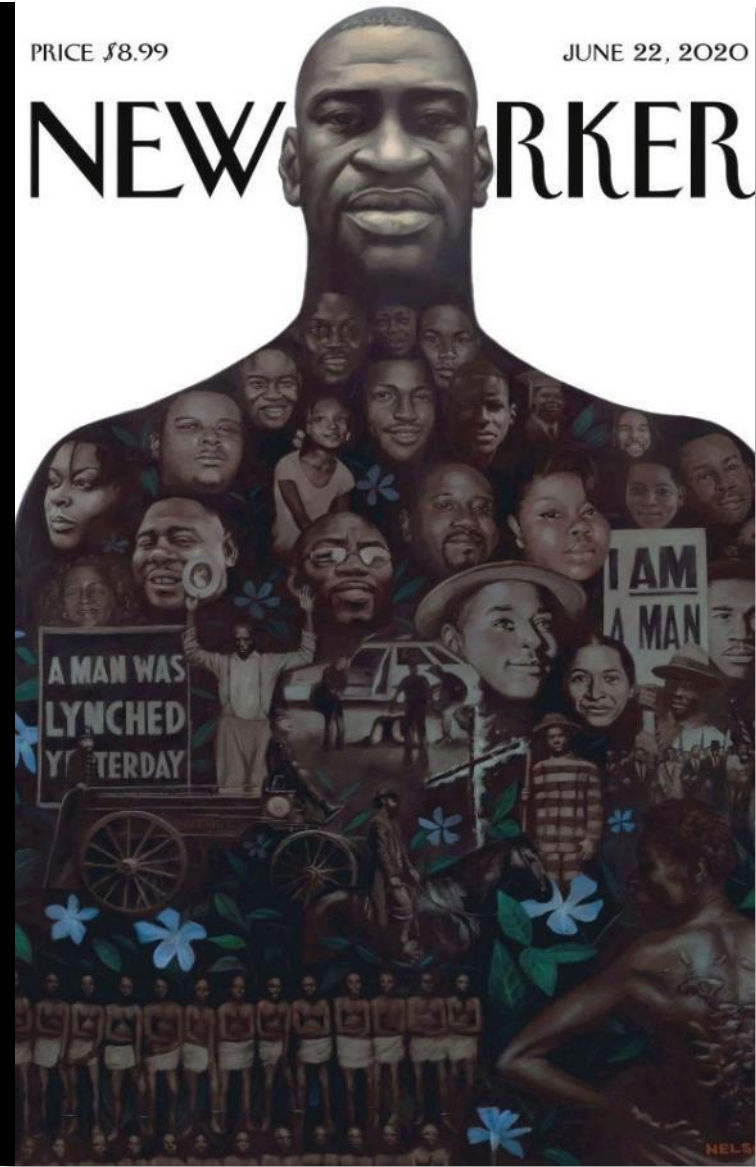
# OXBRYTA® INTERFERES IN THE SICKLING PROCESS REDUCING SICKLING AND IMPROVING RBC HEALTH



For more information about Oxbryta, please see the Full Prescribing Information and Patient Information, which is available from your presenter or by visiting [www.Oxbryta.com](http://www.Oxbryta.com)



# UNPRECEDENTED CHALLENGES



# SCD COMMUNITY IS THE CENTER OF EVERYTHING WE DO



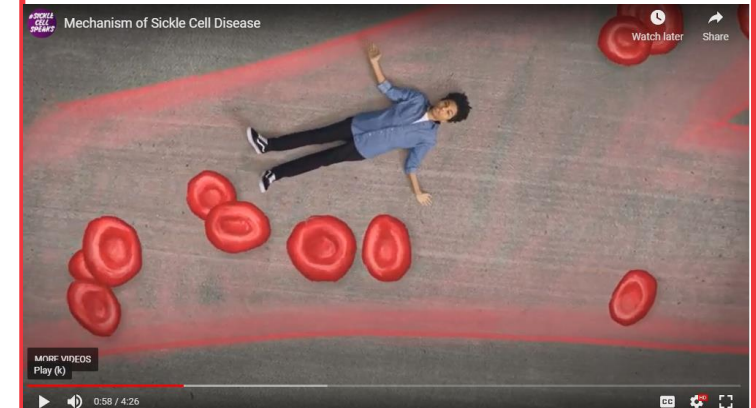
Engaging through clinical studies, access, and advocacy



Addressing long-standing inequities



Closing the knowledge gap





# ACCELERATING HIGHER QUALITY CARE IN SCD



## Access to Excellent Care for Sickle Cell Patients (ACCEL) Grant Program 2021 Grantees



Improving the Transition from Pediatric to Adult Care for SCD Patients in Rural Areas of California



Increasing COVID-19 Vaccine Awareness in the SCD Community across the U.S.



Empowering SCD Patients to Educate Healthcare Providers about the Impact of Race and Healthcare Disparities



Connecting SCD Patients and Families with Health and Social Service Resources



Building a Collaborative Community Network to Mitigate Social Determinants of Health



Offering Disease Education and Improving Communication with Patients and Families



Improving Transitions from Pediatric to Adult Care



Helping SCD Patients Better Manage Pain with Palliative Care



Increasing Nurses' Theoretical and Clinical Expertise in the Care of SCD Patients

# IMPROVING THE HEALTH OF UNDERSERVED PATIENT COMMUNITIES WORLDWIDE



Supporting programs that aim to create meaningful and sustainable change

SCD education/awareness, empowerment, and access to care

Innovative solutions to improve healthcare equity

# GBT COUNCIL FOR SCD HEALTHCARE EQUITY



Uniting SCD community leaders to create initiatives to improve SCD care, anchored in the broad vision of NASEM recommendations



**Biree Andemariam, MD**  
Director, NE Sickle Cell Institute  
University of Connecticut



**Beverly Francis-Gipson**  
President & CEO, Sickle Cell  
Disease Association of America



**Terry Jackson, PhD**  
Jaxson Enterprises



**Diane Nugent, MD**  
Chief, Hematology  
Children's Hospital of Orange  
County



**Mattie Robinson**  
Micromattie Consulting



**Wanda Whitten-Shurney, MD**  
CEO, Michigan Chapter  
SCDAA



**Latasha Lee, PhD, MPH**  
Vice President of Clinical and  
Social Research &  
Development NMQF



**Betty Pace, MD**  
Tedesco Distinguished Chair,  
Ped Hematology  
Augusta University



**Emma Andelson**  
Program Manager  
Sick Cells



**Matt Powers**  
Managing Director, MMS  
Health Management Associates



**Donnell Ivy, MD**  
Vice-CMO  
SCDAA



**Mary Brown**  
President & CEO  
Sickle Cell Disease Foundation



**Charlotte Curtis**  
Founder, Sickle Cycle



# A DEEP COMMITMENT TO THE MISSION







*hope*

*Science*

*Community*

**Thank You**

