Five-Year Strategic Plan

FISCAL YEARS 2024–2028

OUR MISSION

We save lives through cell therapy.

NMDP employees:
One step closer,
stronger together.

CONTENTS

Front cover features:

JJ, transplant recipient and grant recipient

Tiana (right), blood stem cell donor, with her transplant recipient and grant recipient, Donna (100,000th transplant pair)

Life-changing connection embodies hope and gratitude

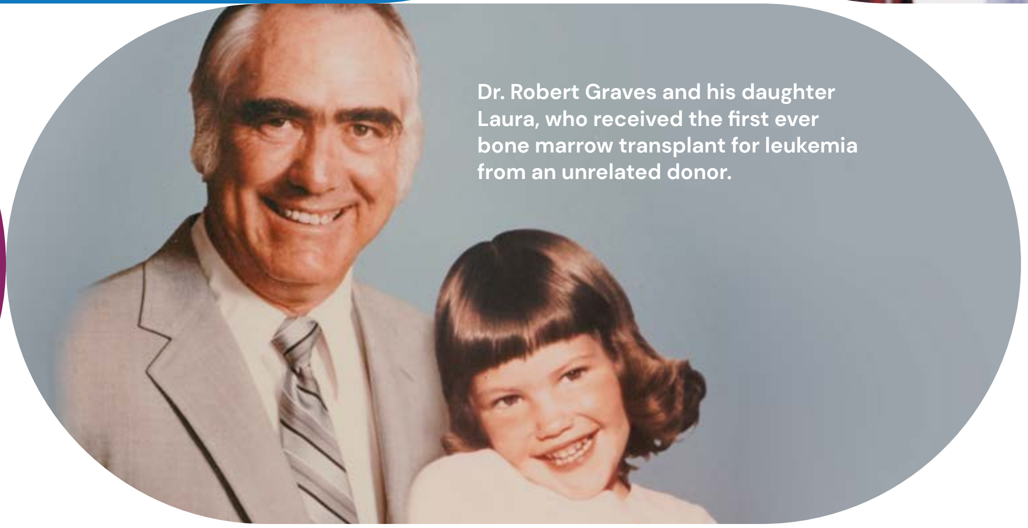
Five years after Tiana joined the registry, she got the call to donate, which saved Donna's life. Donna's transplant was the 100,000th blood stem cell transplant facilitated by NMDP.

> "I hope she lives the best life that she can, and I'm glad I was able to extend her life."
>
> – Tiana (100,000th stem cell donor)

> "There is no way I could ever repay her for what she did."
>
> – Donna (100,000th transplant recipient)

Our Origin Story

More than **125,000** lives impacted.



Dr. Robert Graves and his daughter Laura, who received the first ever bone marrow transplant for leukemia from an unrelated donor.

Years before we started facilitating transplants, before we received our initial funding, before the foremost experts in the country debated if a national marrow registry would be feasible—before all that, 10-year-old Laura Graves received the first-ever unrelated donor transplant to treat leukemia.

The 1979 procedure was a long shot. Until that time, only family members had been called upon to donate for their loved ones who were battling blood cancers. But after Laura relapsed following her chemo treatments, her parents Dr. Robert and Sherry Graves wouldn't give up. And once that groundbreaking transplant was successful, they started fielding calls from other parents all over the country, desperate to find hope for their own children. The Graves knew they had to do all they could to push for progress so unrelated donor transplant could be repeated for others.

In 1986, under the fierce leadership of Admiral Elmo Zumwalt, who would later go on to become chairman of our Board of Directors, and Senator Paul Lexalt, $1.2 million was secured as an appropriation to the Defense budget. With direction from Congress to the Navy, a national bone marrow donor registry was implemented. Led by legislative champions like the chairman of the House Appropriations Committee, Congressman C.W. Bill Young, for whom the federal program is now named, Congress subsequently created the federally authorized National Bone Marrow Donor Registry (now called the C.W. Bill Young Cell Transplantation Program).

In 1987, our organization officially began from an American Red Cross office in St. Paul, Minn., with assistance from a computer program the University of Minnesota created to match searching patients with unrelated, volunteer donors. Six-year-old Brook Ward received a marrow donation from Diane Walters in our organization's very first transplant in 1987.

Potential donors continued to join the registry and then in 1994, we helped to facilitate our first peripheral blood stem cell (PBSC) collection for unrelated transplant. Four years later, our umbilical cord blood program launched, and by the year 2000, we had made transplantation a reality for 10,000 patients.

In 2004, the CIBMTR® (Center for International Blood and Marrow Transplant Research®), in partnership with the Medical College of Wisconsin, was created, resulting in research to increase post-transplant survival rates and decrease complications. In 2016, we broadened our scope to provide cells and support to cell and gene therapy organizations also focused on saving lives. Already the most diverse donor registry in the world, we expanded our footprint into Mexico in 2018, increasing our global impact and providing more opportunities for life-saving matches for patients in need.

The COVID-19 pandemic challenged every aspect of our business. The organization employed a hub-and-spoke model and cryopreservation system that forged innovative pathways for more effective transplantation facilitation—and performance that continued to break records beyond our expectations.

And yet, with all our accomplishments in our more than 35-year history and our more than 125,000 lives impacted (and counting!), at the center of our organization remains the commitment to ensuring every patient can receive the life-saving cell therapy they need and the best possible outcome. Our organization exists because the Graves family continued to persevere to provide hope to all patients. That same perseverance to provide hope to patients still drives our mission and vision. We have the momentum, the plan, the acumen and the talent to deliver on our vision.

Our Operating Principles and Values

Serving as the foundation that guides business decisions, actions and organizational behaviors, our Operating Principles and Values continue to drive a strong culture rooted in trust, connecting and belonging.

Operating Principles

We Operate Knowing

- Our patients deserve to live and thrive, irrespective of their background
- Patients' lives literally depend on our performance every day
- Our success relies on the commitment of our team and our donors, the dedication of our partners, and the generosity of our volunteers and contributors

We Are

- We are a team of uncommon caliber dedicated to saving lives and creating a world where every patient can receive their life-saving cell therapy
- Each of us has the potential to make the impossible possible, because we are empowered to act, adapt, collaborate and innovate
- We are inclusive: We respect the uniqueness of our employees and the interactions with one another to create community

Values

Results Driven

- Accountable for strategy and goals
- Pursue excellence relentlessly

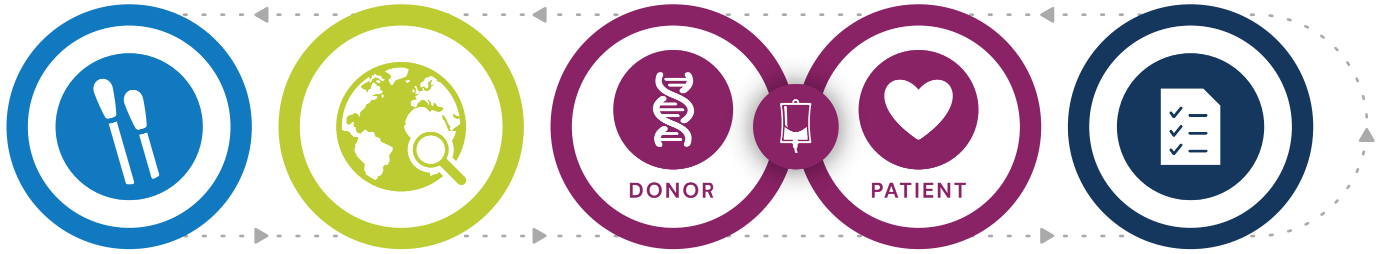
Employees Always

- Foster a culture of inclusiveness
- Show gratitude and provide recognition

Makes the Impossible Possible

- Demonstrate creative and courageous thinking
- Make quality decisions by balancing collaboration and decisiveness

The Critical Life-Saving Components of Our Work



REGISTER
potential donors and cord blood units

MATCH
donors to patients in need

FACILITATE
the donation and patient's path to transplantation

RESEARCH
generates knowledge to improve outcomes and experience

As a global leader, we work tirelessly to save lives and find cures. As we enlist more ethnically diverse donors to the NMDP Registry, we help give patients like Rushi a second chance at life.

Rushi spent his early years in and out of hospitals after being diagnosed with beta thalassemia at birth. Stem cell donor Ketan saw an ad on social media and selflessly joined the NMDP Registry, swabbing his cheek and quickly receiving a call that he was a perfect 10/10 match.

Ketan donated cells in San Diego, and Rushi received his transplant at Texas Children's Hospital. Their match and subsequent transplant proved to be the beacon of hope Rushi and his family so desperately sought, giving Rushi a cure and spreading joy and gratitude to everyone involved. As Ketan reflected on Rushi's path to transplant, he said, **"I can only imagine how hard the journey was to get here. To me I feel like I just gave a fraction of myself, but I gave him a whole new life."**

Ketan (right), blood stem cell donor, with his transplant recipient, Rushi

Our work continues as we advance innovative services to speed up the transplant journey. By conducting ground-breaking research and raising critical funds to improve and impact patients' lives every day, we are accelerating progress and expanding access to transplant for more patients in need around the world.

Planning Our Next Five Years

As we look to the future, we know that a strong plan will enable us to have an exponentially larger impact on the field of cell therapy. The value that a five-year plan brings is three-fold:

1. Sets a vision to energize and motivate our actions while providing purpose and establishing priorities.
2. Provides organizational clarity that aligns internal and external stakeholders on the path forward.
3. Creates stakeholder engagement and an understanding of the impact they each have in driving new levels of achievement.

And through it all, our mission remains unchanged. It is fully embraced throughout the organization.

The foundation of our organization remains consistent. We save lives through cell therapy.

To arrive at our five-year plan, we employed a rigorous strategic planning process focused on the question: how can we save more lives?

- **Understanding the patient journey**: Gathered data to understand why patients diagnosed with a blood cancer or disorder do and do not receive their transplant
- **Defining key problem statements**: Defined the biggest challenges that limit patients in receiving a transplant
- **Identifying solutions**: Conducted brainstorm sessions with internal and external stakeholders focused on how to solve the problem statements
- **Prioritizing initiatives**: Prioritized the many stakeholder ideas based on greatest patient impact
- **Finalizing the plan**: Finalized the strategic plan with unanimous support from the NMDP Board of Directors

Diverse viewpoints were well-represented during our stakeholder engagement and information gathering:

- More than 1,000 stakeholders were engaged
- Multiple channels were used to collect input, including surveys, focus groups, advisory groups and 1:1 discussions
- 20+ strategic theme brainstorming sessions were held
- An Executive Committee of the Board offsite planning session

Steps to Empowering Change

Where are we today?

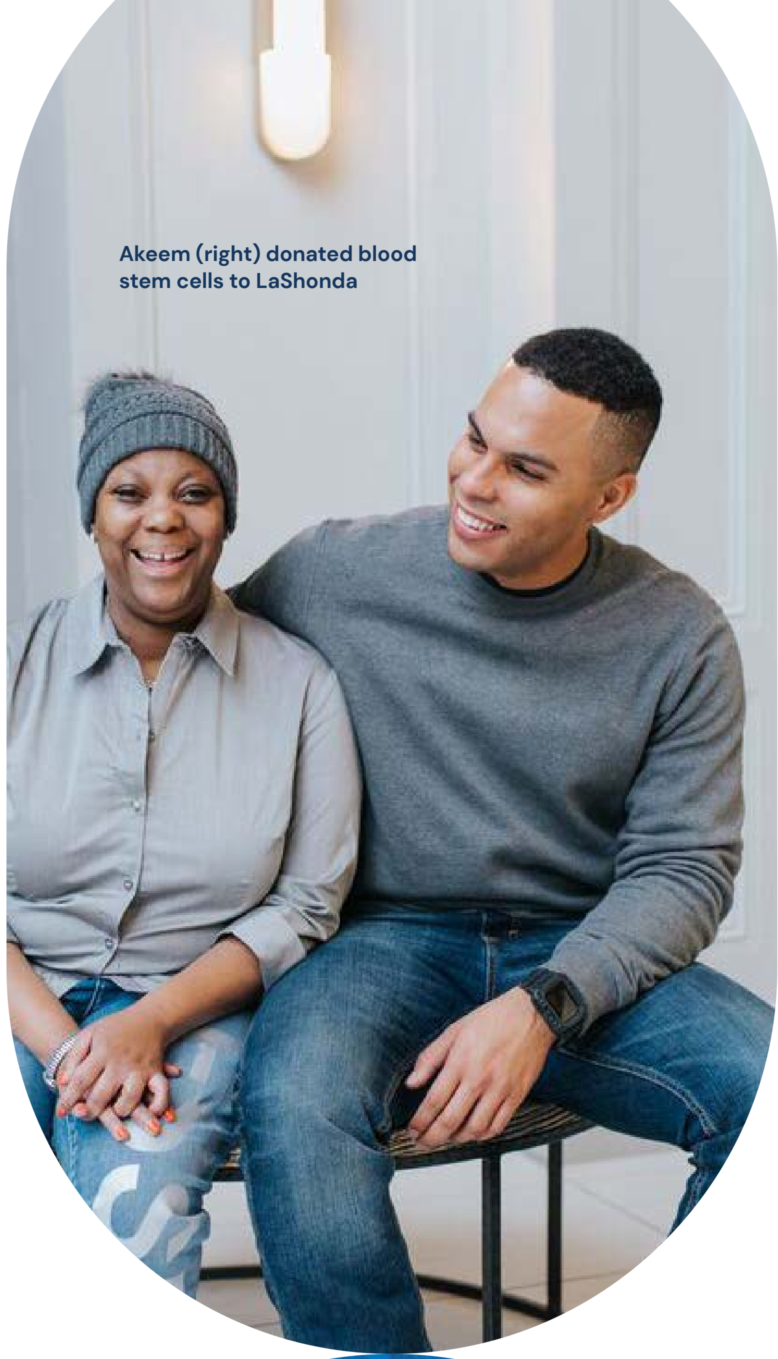
Prioritized key opportunities and problems

Where do we want to be?

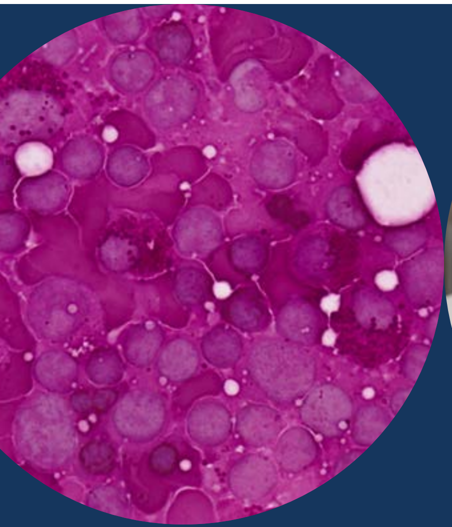
Defined vision and success measurements

How do we get there?

Identified key strategic pillars and actions


Akeem (right) donated blood stem cells to LaShonda


Rhyder, searching patient

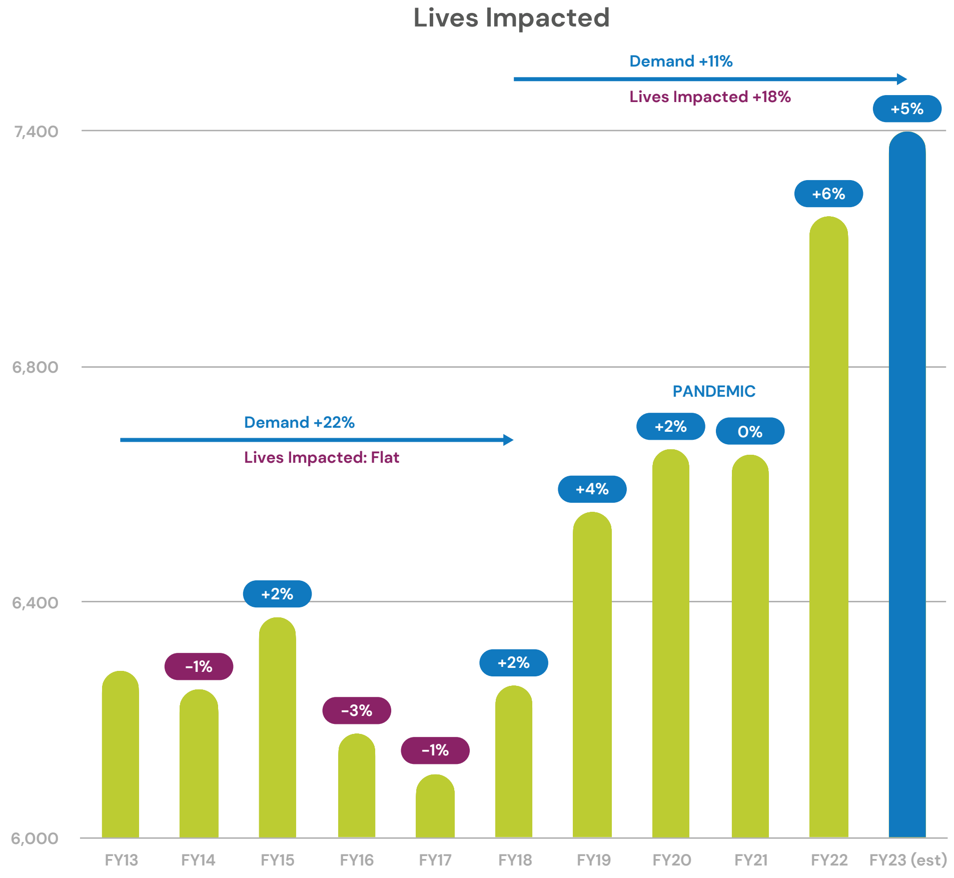


NMDP Biorepository technicians help save lives through vital research.

Where are we today?

A strong strategic plan begins with an evaluation of the current internal and external landscape. We have significant momentum from key accomplishments that will propel us forward to combat future challenges, but as the leader in our field, our drive to save more lives needs to be relentless.

Our achievements over the past few years—when we surpassed both the 100,000th and 125,000th thresholds in the span of just three and a half years … all during a global pandemic—include accomplishments that we will build on over the next five years.



Lives Impacted

18% improvement in lives impacted in FY23 compared to FY18.

In the last five years, NMDP achieved significant improvement between patient demand and our impact on lives. Patient demand grew by 11% and lives impacted increased by 18%.

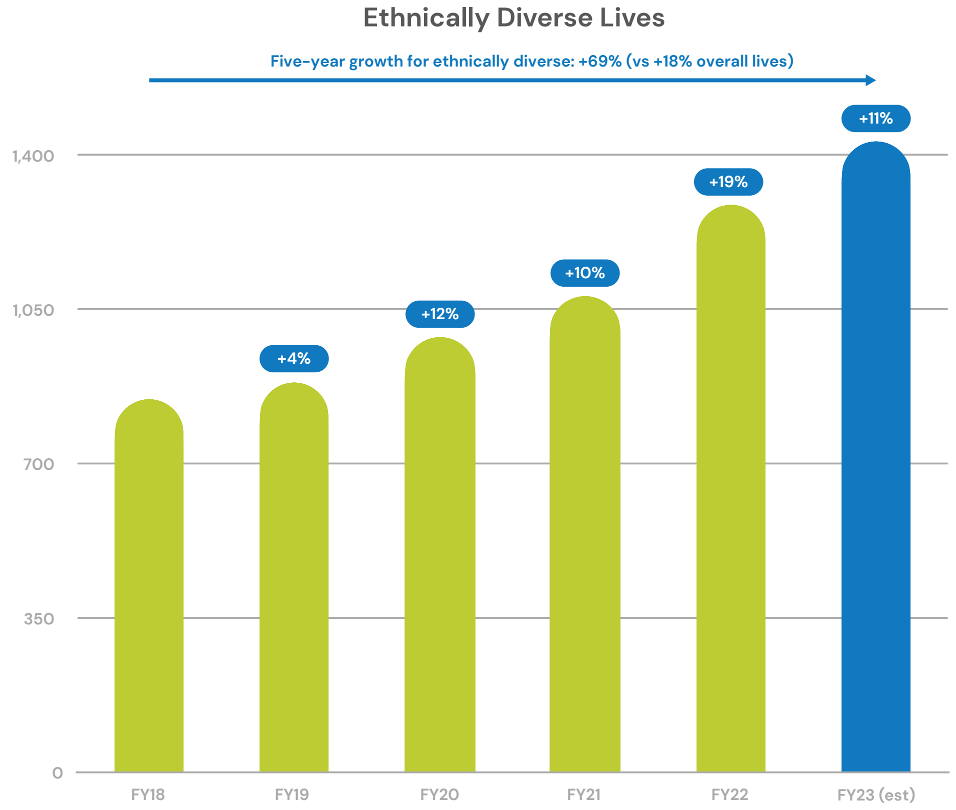
Our previous five-year period (FY13–FY18) saw patient demand grow 22%, however NMDP's impact on lives remained essentially flat.

NMDP has made remarkable progress, enhancing patient outcomes and expanding the reach of this life-changing mission.

Greater Equity

69% improvement in lives impacted among ethnically diverse patients in FY23 vs. FY18.

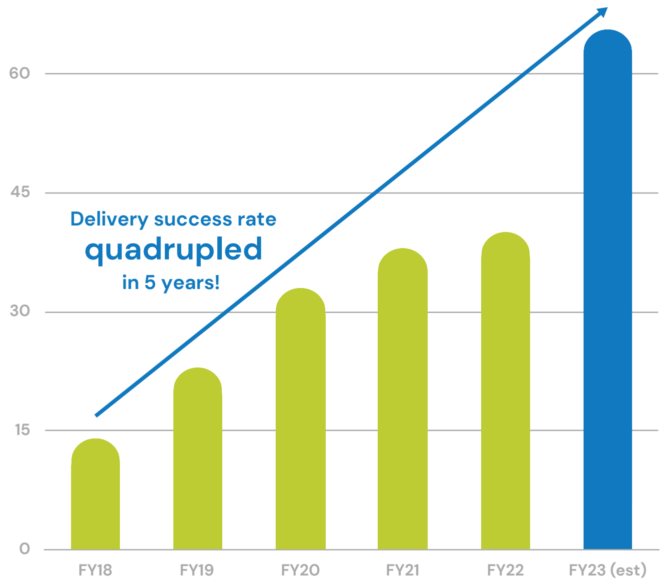
In FY18, only 13.5% of lives impacted were from domestic ethnically diverse populations. Over the past five years, we've increased our impact on domestic ethnically diverse lives by 69%, resulting in 19% of total lives being domestic ethnically diverse in FY23. Our ethnically diverse patient lives population grew at nearly 4x the growth rate of overall lives.



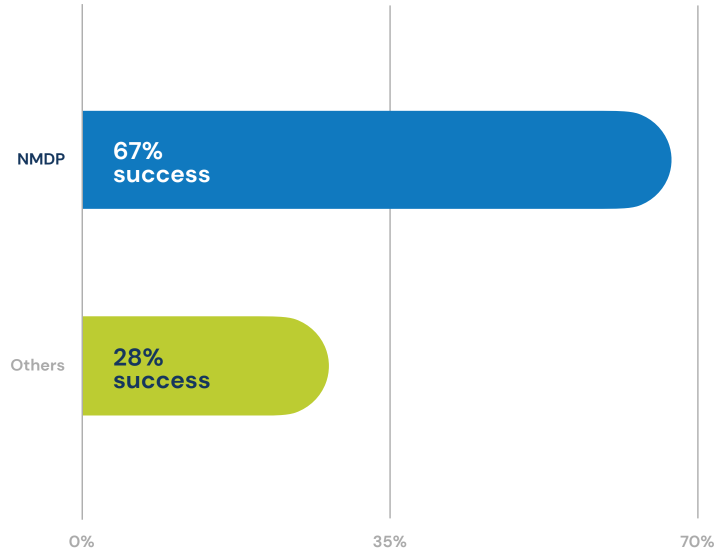
*FY23 data is year to date, as of Aug. 2023

Improved Service

% Successfully Delivered to Transplant Centers



% First Requested Collection Date Met (FY23)



4x improvement in meeting transplant center product delivery demands in FY23 vs. FY18.

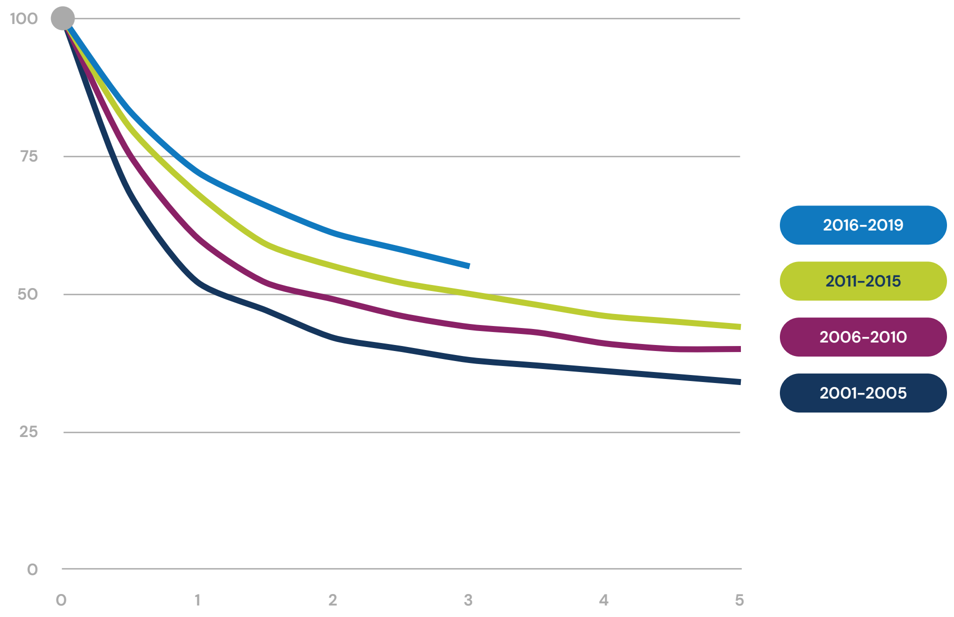
The strategic focus on Service over the past three years has placed NMDP in a global class of its own.

Improved Patient Outcomes

Post-transplant survival rates and quality of life continue to improve over time.

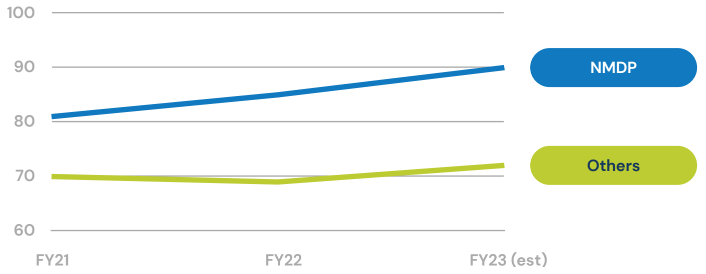
Trends in Survival after Allogeneic HCTs for Acute Myelogenous Leukemia, Myelodysplastic Syndromes and Acute Lymphoblastic Leukemia, in the United States, 2001–2019 CIBMTR Data.

Overall Survival

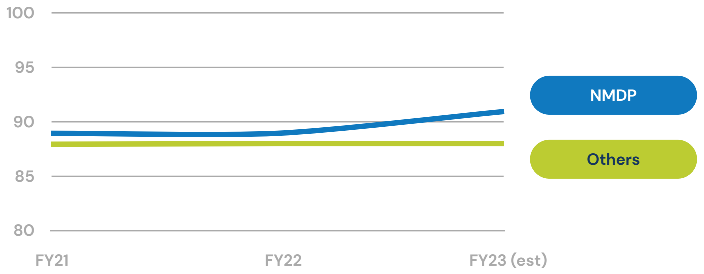


Improved Product Quality

Product Quality – Marrow



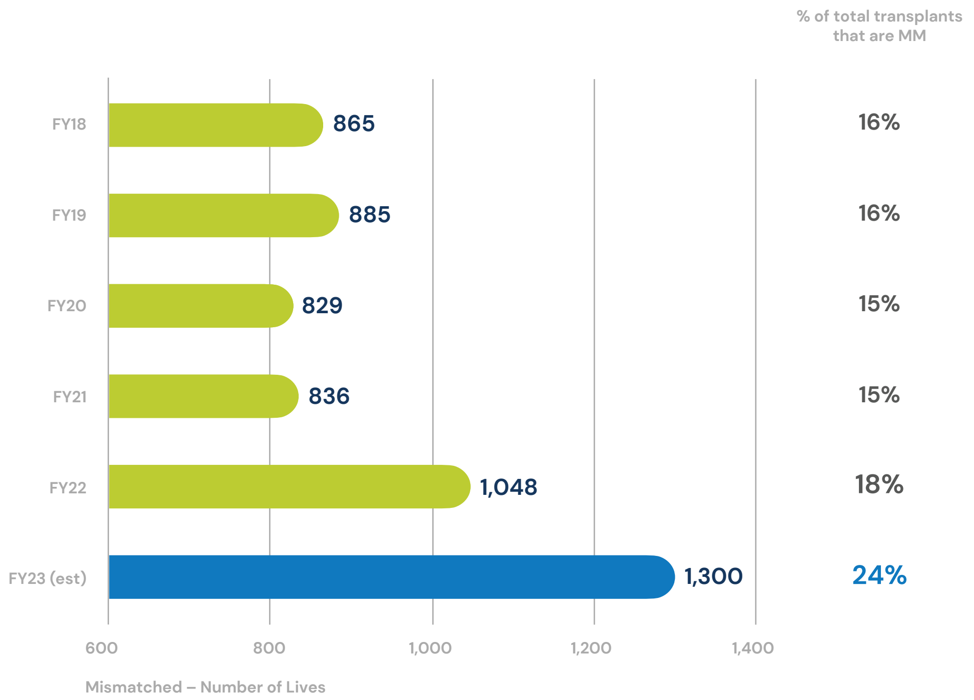
Product Quality – PBSC



18% higher marrow product quality than other suppliers.

The focus on product quality for both marrow and PBSC has also positioned NMDP as an unparalleled leader on the global stage. Product quality—for both marrow and PBSC—has a direct impact on patient outcomes.

Match Category Group (at Collection)

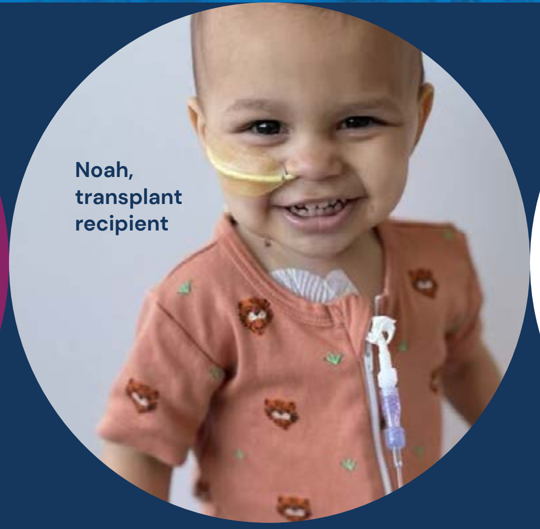


Calculations include domestic and international (other) numbers.

Breakthrough Research

NMDP-sponsored studies, like our ACCESS trial, have led to a **45%** increase in MMUD use since FY18.

The ACCESS study has led to the increased use of mismatched, unrelated donors (MMUD) to ultimately provide a 'donor for all.' As a result of the NMDP MMUD research study, the number of mismatched transplants already has risen significantly during the past two years (+50%), contributing to the growth in the number of ethnically diverse patients receiving a transplant.



Noah, transplant recipient

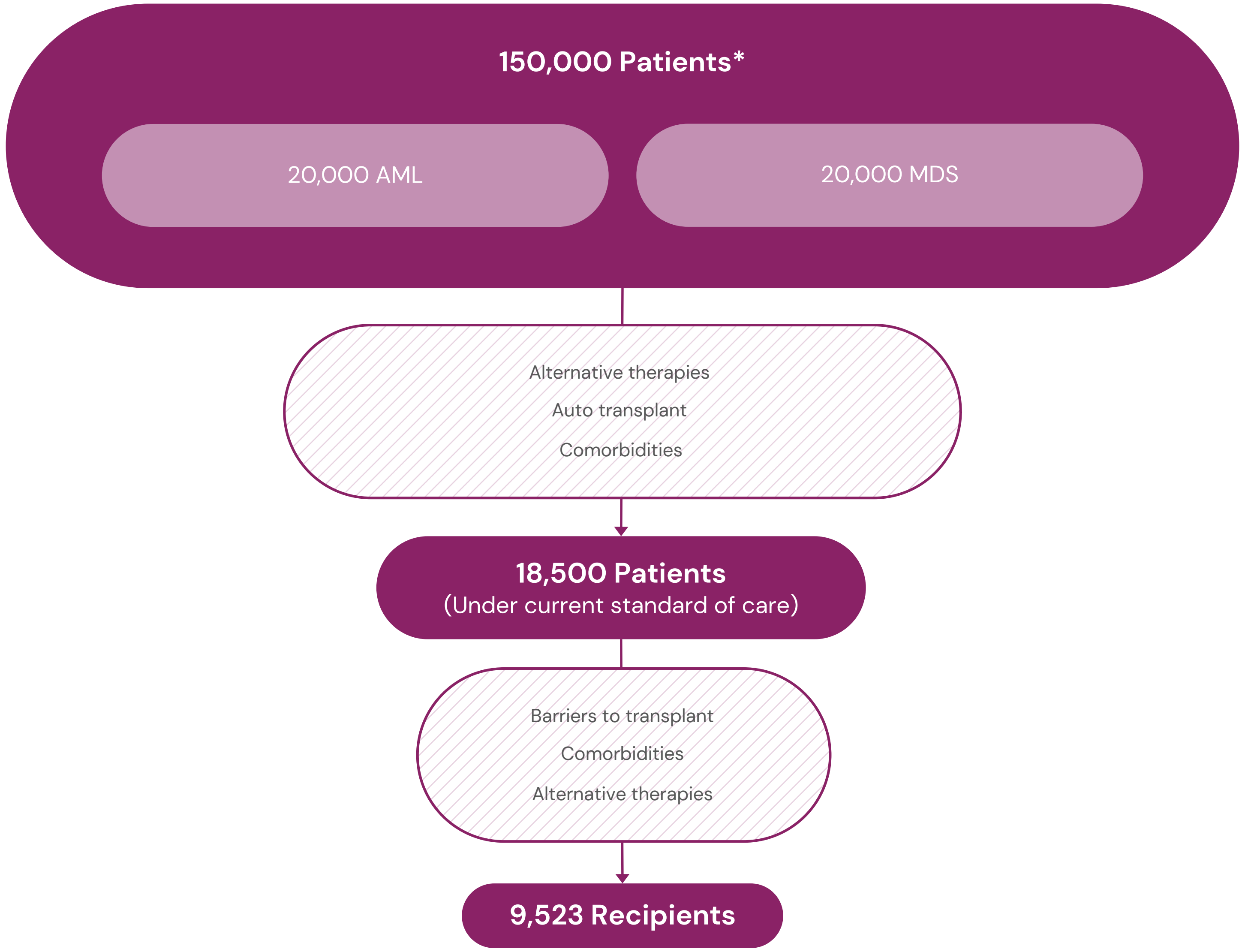
Where do we want to be?

We know that we have an obligation to excel. We must deliver on our mission by raising the bar, tackling the tough problems, finding cures and saving more lives.

It is incumbent on us to address the following four greatest challenges in the next five years.

Patient Lives Demand

There are many more patients who could benefit from life-saving cell therapy than are being treated today. Of the 150,000 U.S. patients diagnosed with blood cancers or blood diseases annually, an estimated 18,500 patients are eligible for allogenic transplants under the current standard of care. But in 2022, only 9,523 received an allogeneic transplant. There are also a significant number of patients diagnosed with acute myeloid leukemia (AML) or myelodysplastic syndrome (MDS) who are not considered eligible for transplant under the current standard of care. These patients do not receive their life-saving transplants due to common issues such as lack of referrals from community oncologists and financial or caregiver barriers.



150,000 Patients*

20,000 AML

20,000 MDS

Alternative therapies

Auto transplant

Comorbidities

18,500 Patients
(Under current standard of care)

Barriers to transplant

Comorbidities

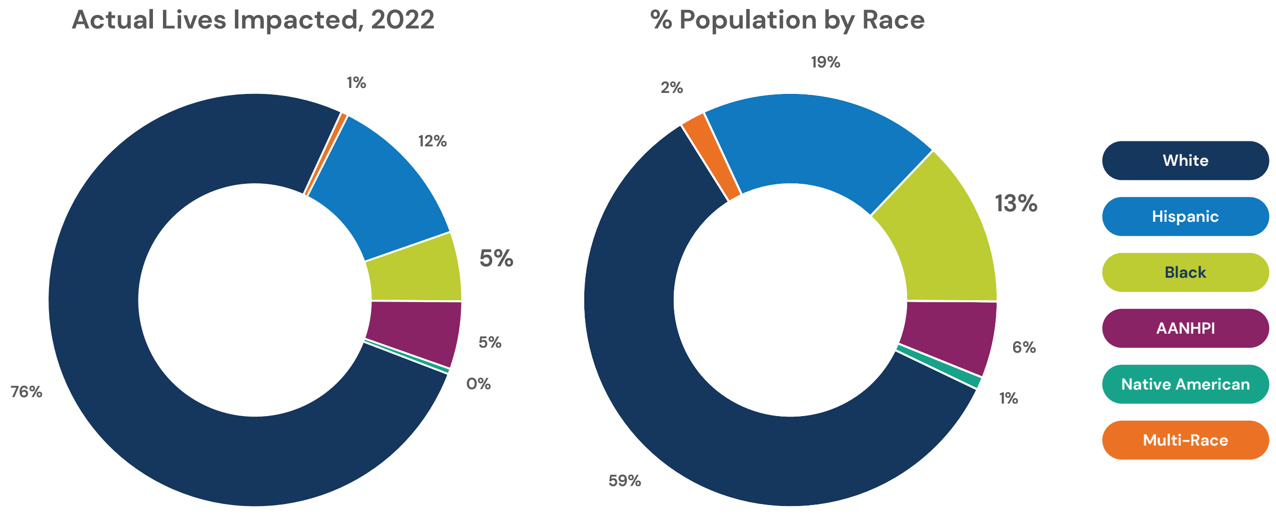
Alternative therapies

9,523 Recipients

*U.S. only.

Applied our systems capacity initiative methodology to the entire U.S. population to determine eligibility based on treatment guidelines for each disease and age of the patient, a significant portion of patients will have an auto transplant or another alternative therapy such as chemotherapy (e.g. chemotherapy is fairly effective for pediatric ALL so only 25% are considered "eligible for allogenic transplant")

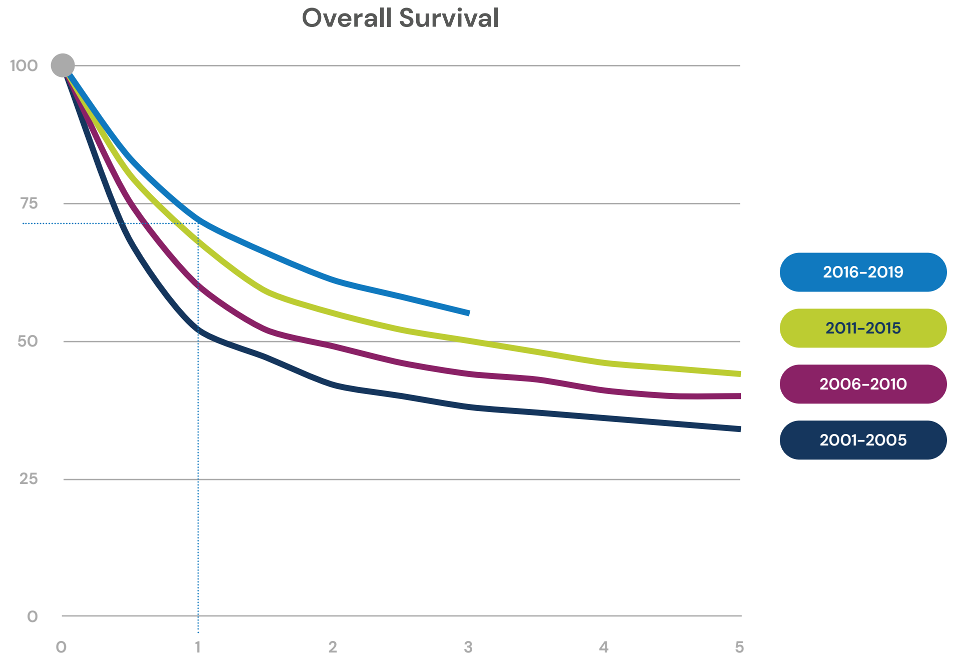
Equity Disparities



There's still so much work to be done to address equity disparities in cell therapy. Despite improvements, a significant gap remains in the number of ethnically diverse patients receiving their cell therapy. Accessibility is strongly unfavorable for ethnically diverse populations compared to white patients, and this disparity continues to be most significant among Black patients. While representing 13% of the population, Black patients accounted for just 5% of lives impacted.

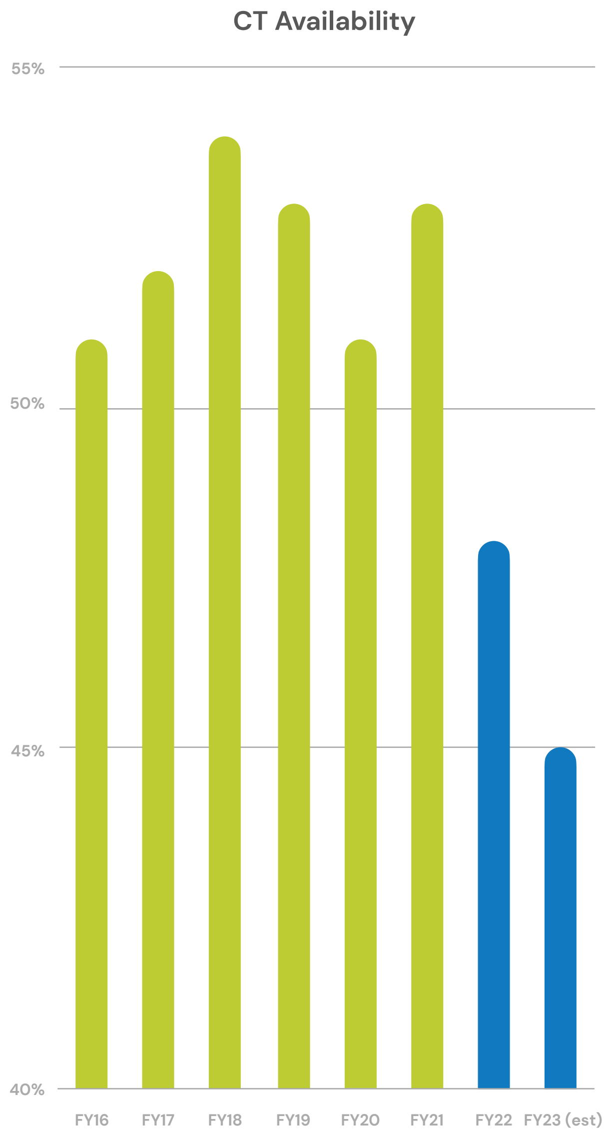
Quality of Life

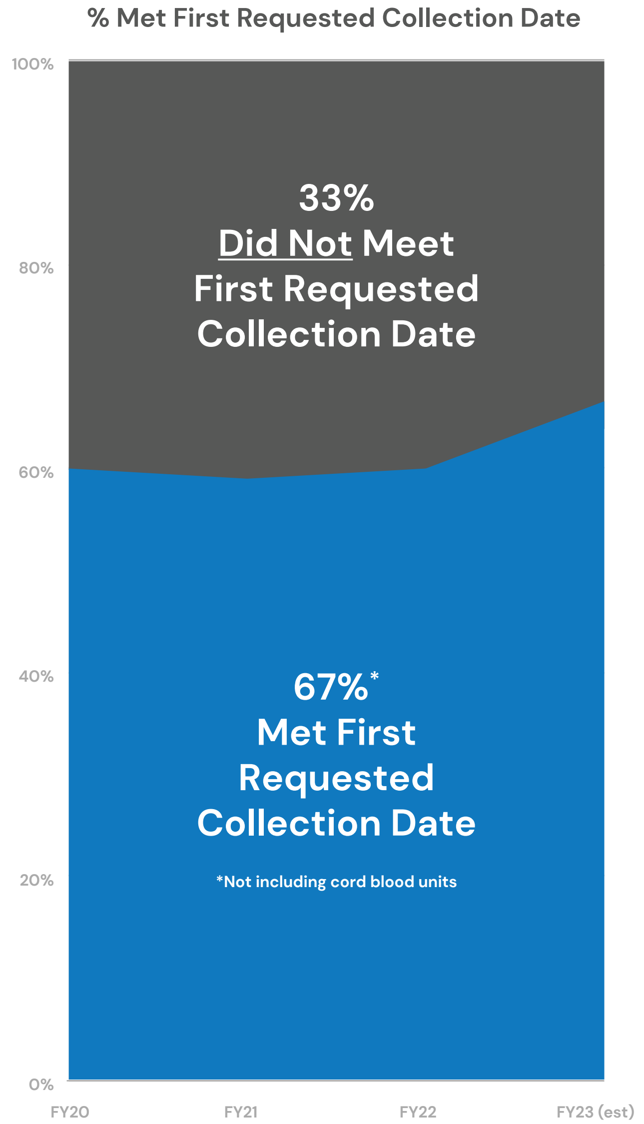
Everyone who receives their life-saving cell therapy should have equal outcomes and we need to raise the bar for everyone. Despite improvement in survival after transplant over the years, too many patients do not achieve their desired post-transplant outcomes. Patients with acute and chronic graft-versus-host disease experience significant complications, impeding their quality of life. Therefore, it is imperative to improve patient outcomes, so patients not only survive but thrive after transplant.

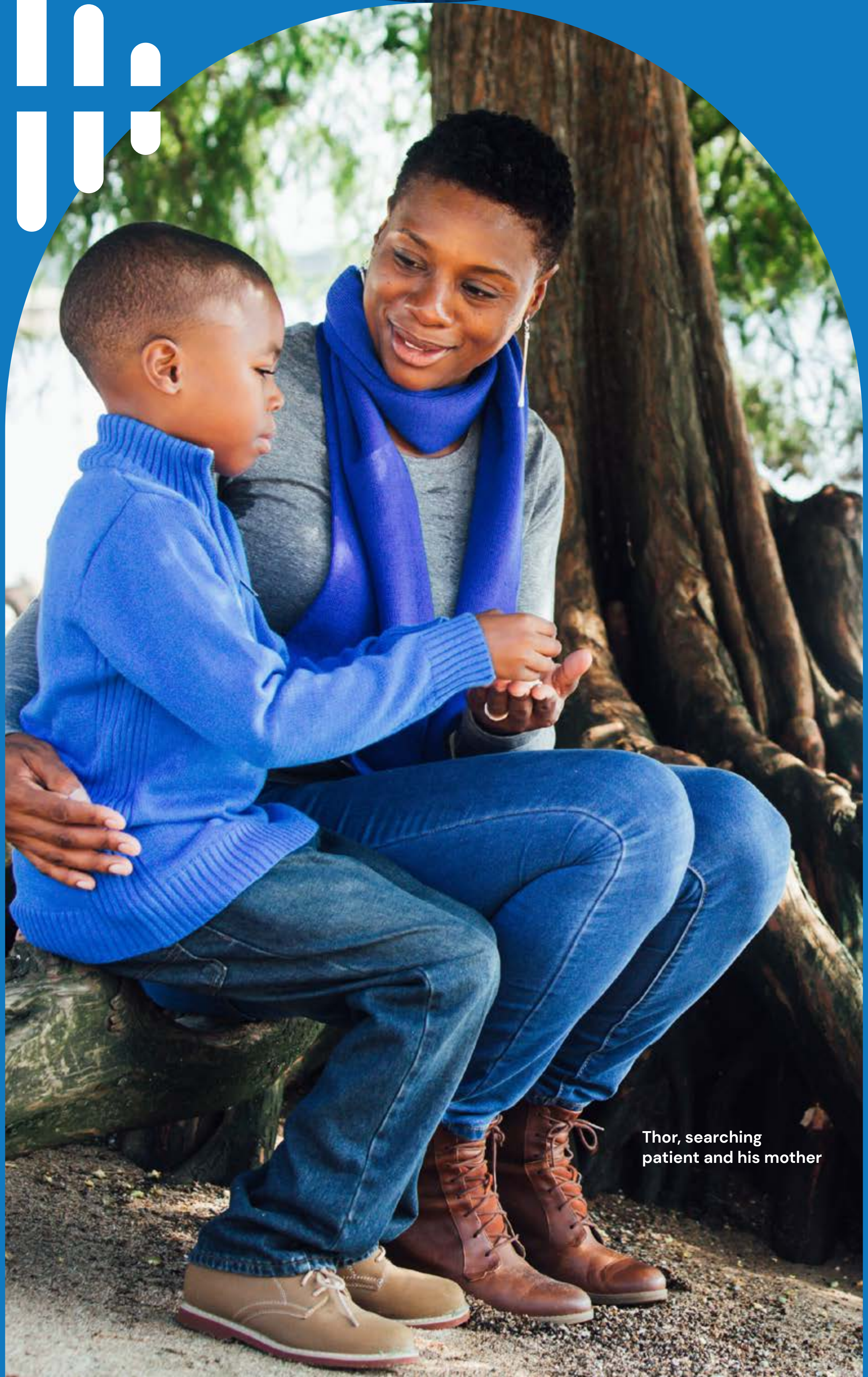


Service Opportunities

Service across the cell therapy network can be further improved by reducing the complexities on transplant centers. There are opportunities to improve on two key service metrics: increasing donor availability at confirmatory typing (CT) and meeting first requested collection date (we fail to meet the first requested collection dates more than a third of the time). Improving on both of these key metrics will benefit our transplant center partners and patients.







Thor, searching patient and his mother

OUR VISION

Create a world where **every** patient can receive their life-saving cell therapy.

How do we get there?

Our vision describes our overarching long-term goal. It asks, “Where are we going?”

Our strategy describes how we will achieve our vision. It’s about making choices and creating focus. In order to achieve our vision, we have three strategic pillars to drive our ideas, actions and focus for the next five years.

The next three pages introduce our initial ideas on how to achieve our three strategic pillars.

Accelerate Progress

Advance the cell therapy ecosystem to provide cures so all patients thrive

World-Class Partner

Deliver best in class service as the essential partner in cell therapy

Expand Access

Remove the barriers for equitable access to life-saving cell therapies

Accelerate Progress

Advance the cell therapy ecosystem to provide cures so all patients thrive

Transplant for All

Only 66% of patients currently have an 8/8 match on the registry and that dips to 29% for African American/Black patients. It is impossible to register our way out of the lack of existence of donors for all patients.

THE IDEA

Develop a platform protocol containing adaptive platform studies of mismatched unrelated donor transplants to ultimately improve MMUD transplant outcomes, resulting in MMUD becoming standard of care. The platform protocol will decrease development time, increase speed to completion and enable rapid insertion of new interventions as ideas emerge.

Right Treatment to the Right Patient

There is a substantial gap in understanding which patients diagnosed with AML (or MDS) will be cured by a cell therapy. Upwards of 30% of all AML and MDS transplant recipients will experience a relapse post-transplant.

THE IDEA

Develop a national framework for assessment of AML measurable residual disease in allogeneic transplantation with standardized testing, advanced analytical approaches (AI and machine learning) and development of fit-for-purpose genomic testing strategies. Identify patients at highest risk for post-transplant complications (like relapse) and support development of new strategies to minimize risk and put more patients on a path to survive and thrive after cell therapy.

World-Class Partner

Deliver best in class service as the essential partner in cell therapy

Modernize the Customer Experience

Our current over-reliance on manual processes causes inefficiencies, sub-optimal customer service and scaling constraints to accommodate future growth and superior customer satisfaction.

THE IDEA

Develop digital tools to allow customers to effortlessly access relevant content in real-time as well as select, order and track progress of product throughout the entire process. Develop mobile, modernized donor scheduling capabilities for apheresis and marrow collection. Create courier and product tracking via an app with scanning capabilities (i.e., be the Nordstrom and Amazon of cell therapy.)

Next Generation Search

Current donor matching decision support and donor availability information puts excess burden on transplant center (TC) coordinators and physicians, delaying the delivery of life-saving products to patients.

THE IDEA

Build out a suite of advanced decision-support services, including search strategy advice and curated search into a solution that applies the latest evidence about availability, while recommending the optimal cell source for all patients. Over time, take learnings from this service to further build out self-service tools, allowing TCs to do similar analyses themselves.

Expand Access

Remove the barriers for equitable access to life-saving cell therapies

Transform Standard of Care – AML Registry

Only 5% of patients diagnosed with AML receive a transplant. There is a substantial gap in understanding which patients at diagnosis with AML (or MDS) would benefit from cellular therapy and/or are referred for transplant consultation.

THE IDEA

Reimagine standard-of-care for AML patients with early intervention. Upon diagnosis, develop a designated center in communities for AML patients to connect with for a full understanding of all options while capturing patient data for the creation of an AML registry to capture end-to-end patient journey data.

Breaking the Insurance Barriers

Insurance is complex and is often a barrier across the transplantation journey. One study found that patients with government-sponsored insurance were 50% less likely to get to transplant than patients with private insurance.

THE IDEA

Define a strategy to best position NMDP to influence change and reduce complexity for patients and providers including:

- Scan insurance coverage with a state-by-state analysis to determine greatest opportunities for Medicaid. Implement a state-by-state strategy based on opportunities.
- Conduct research to understand patient and provider gaps around insurance barriers through patient claims data, TC study on insurance barriers and health services research.
- Implement internal billing system changes to support TC needs surrounding insurance coverage.

Our Expected Results

The three strategic pillars are expected to drive the following results:

Lives impacted

10,000

Increase Equity by

2x

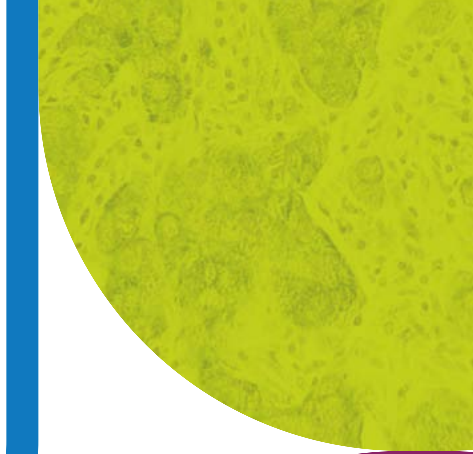
Increase Service level

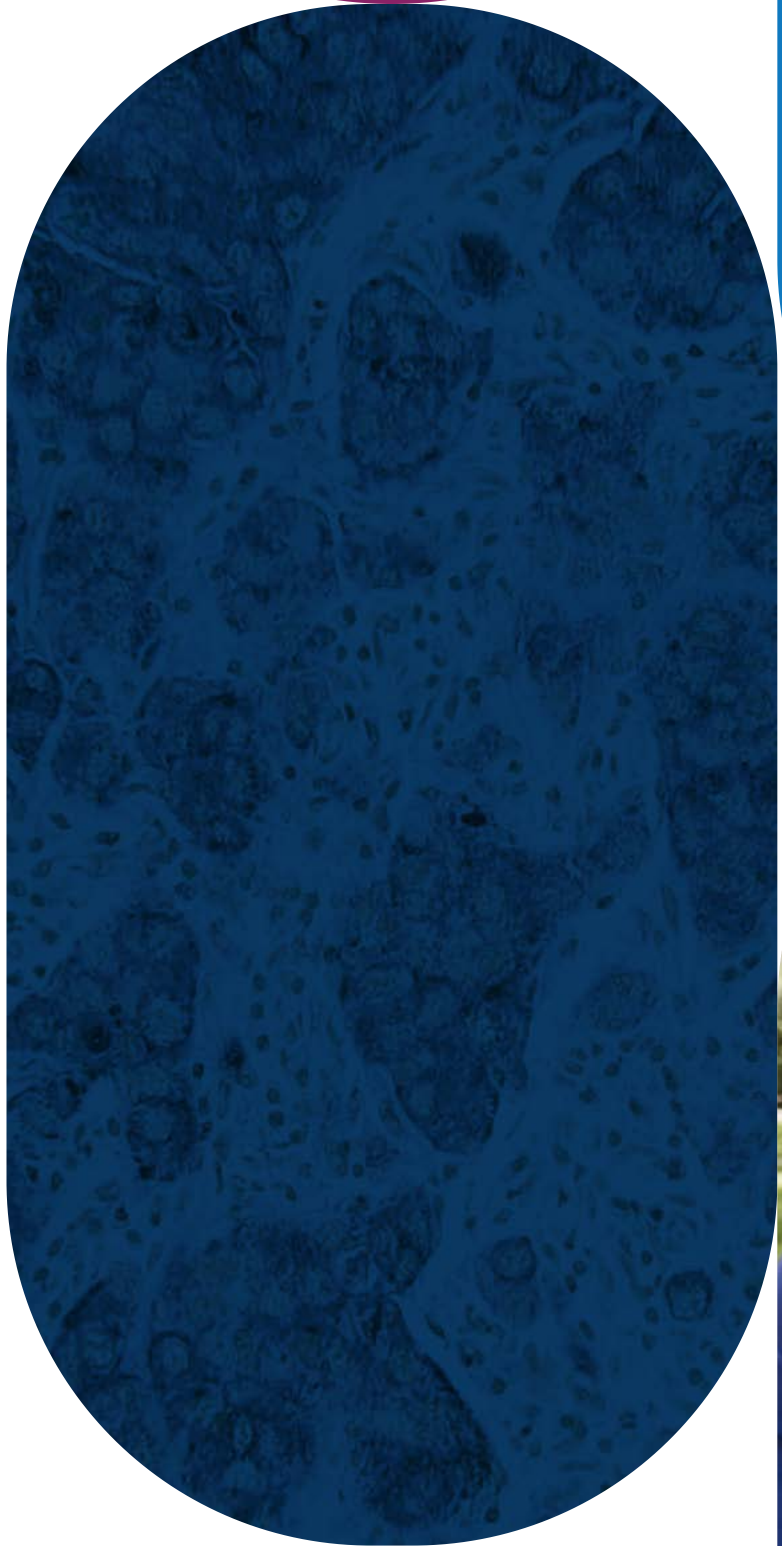
25%

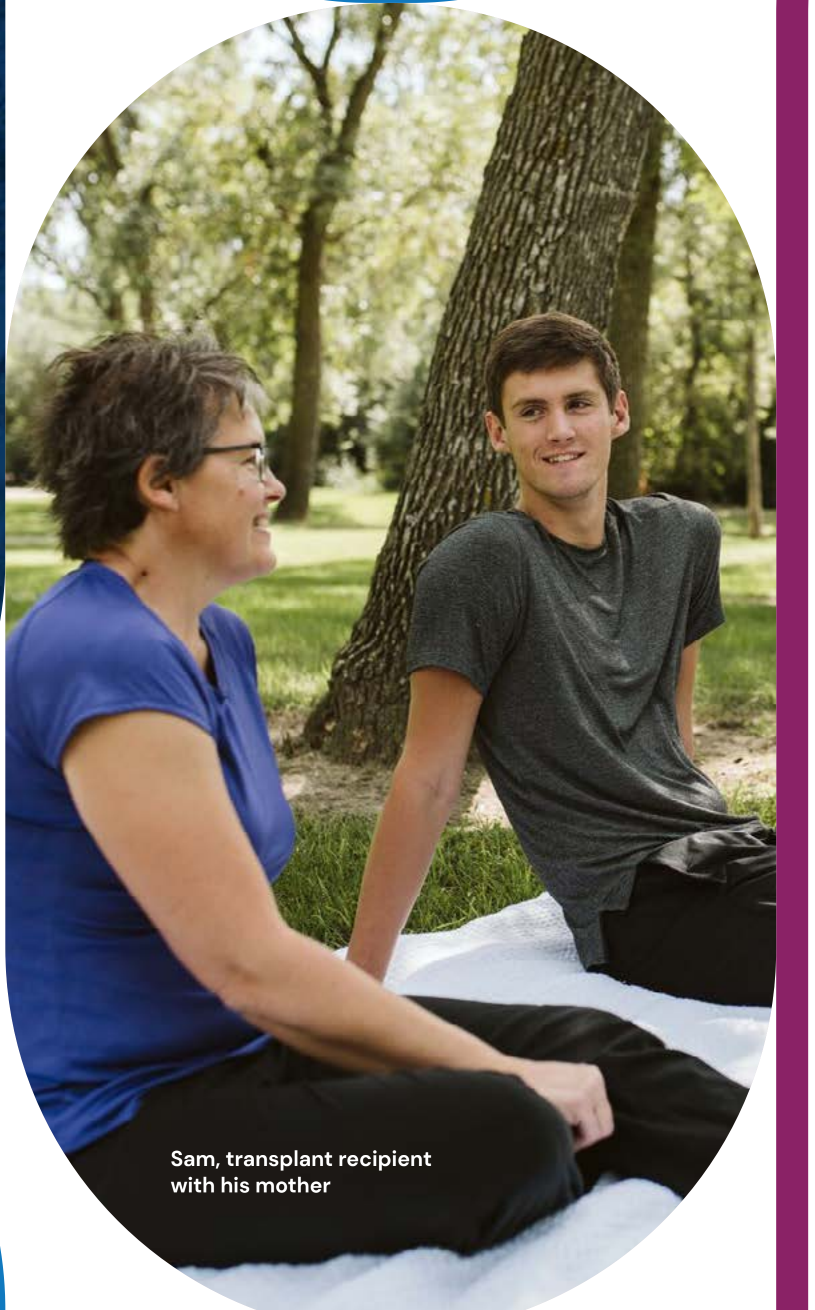
Improve all patient outcomes irrespective of HLA match

Exceed established reserves target by

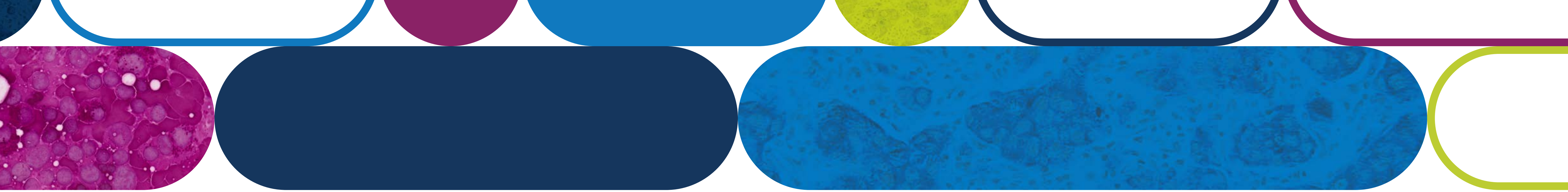
10%







Sam, transplant recipient with his mother



Operationalizing the Strategic Plan

As we move through the next five years, we will operationalize our strategic plan through our annual metrics (Lives, Service, Thrive, Equity and Sustainability). These annual organizational metrics will intentionally ladder up to the strategic vision and our long-term measures of success.

Departments will establish their plans and goals to drive these annual targets and therefore the long-term goals. Each year, strategic initiatives will be assessed against the greatest impact to the strategic pillars. This discipline to ensure alignment and momentum will keep us on track to deliver for our patients, partners, contributors and employees.

NMDP Financial Principles

Our goal is to build a sustainable business model that ensures we save lives now and for generations to come. Each dollar we generate returns to support the execution of our strategic vision. Our financial principles include:

- Establish a 3–8% annual operating net income (ONI) as a percentage of revenue to ensure reinvestment into existing operations and ability to fully fund strategic investments
- Ensure all projects have a favorable cost/benefit analysis averaging 2:1 return over the next five years
- Leverage medical CPI as a benchmark for pricing
- Remain within established reserves corridor with a goal of exceeding established reserves target by 10% in five years
- Target long-term returns to exceed established benchmark in our investment portfolio
- Develop appropriate allocation between core business, emerging businesses and innovation on new products/services

Risks and Mitigations

Adoption of MMUD Transplant

RISK

Inability to influence transplant centers regarding benefits of MMUD, leading to a decline in unrelated donor transplant and ethnically diverse transplants

MITIGATION

- Maximize accrual driving familiarity with the protocol
- Focus efforts to publish outcomes and advantages

Donor availability

RISK

Inability to recruit and cultivate donors who are easily converted from member to donor which directly impacts patient needs, pushing transplant centers to other therapies

MITIGATION

- Create member engagement initiatives include recommits, integration with optimal registry modeling and elimination of donor barriers
- Next Generation Search which is focused on delivering available donors at confirmatory typing

Emerging therapies

RISK

Slow or unable to respond to or support/develop emerging therapies

MITIGATION

- Implement long-range planning to innovate and develop new streams of products and services
- Expand BioTherapies for allogeneic cell therapies and its potential commercialization

Registry composition

RISK

Access to transplant limited by less-than-optimal registry composition that fails to serve an increasingly diverse set of patients

MITIGATION

- Adjust registry composition to optimize utilization for MMUD transplant growth
- Focus targeted recruitment to increase the number of young ethnically diverse donors

Employee engagement

RISK

Inability to execute on our operational and strategic initiatives due to a significant decrease in employee engagement

MITIGATION

- Maintain leadership commitment to people, development and team health
- Focus strategic pillar activities on the most important work (and therefore stopping other activities) to impact patients

Our Opportunity to Lead

At NMDP, we have a tremendous responsibility and a sacred trust to innovate, persevere and succeed as we advance the opportunities and outcomes for patients facing blood cancer and disorders.

Our touchstone is **patients first, employees always**. That mindset keeps our team of uncommon caliber valued and aligned so we are focused on saving lives and finding cures for all patients.

JJ, transplant recipient and grant recipient

FIND CURES. SAVE LIVES.