



# Challenges Providing Donor Hematopoietic Products Globally During COVID-19

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# Disclosures

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- Full time employee of NMDP/Be The Match
- No other relevant disclosures

# More than 33 Years of Global Leadership at NMDP

**100,000+**

total stem cell transplants facilitated

**6,600+**

annual stem cell transplants

**22 million**

donors in the world's most diverse registry

**200+**

research studies underway annually

**1,000+**

employees strong

**\$450M**

annual revenue



# COVID-19 Impacts

- **Flight Delays and Cancellations**
  - Flights to and from the US reduced by over 80%
  - Unpredictability of flights and high cancellation rates
- **Travel Barriers**
  - Restrictions on foreign nationals entering the U.S.
  - Border closures and other global restrictions
- **Low Courier Availability**
  - 80% drop in courier availability (domestic & international)
  - International couriers unable to bring product into U.S.
- **Donor Concerns and Safety**
  - Experienced lower donor availability rates
  - Donors afraid to travel or enter healthcare settings

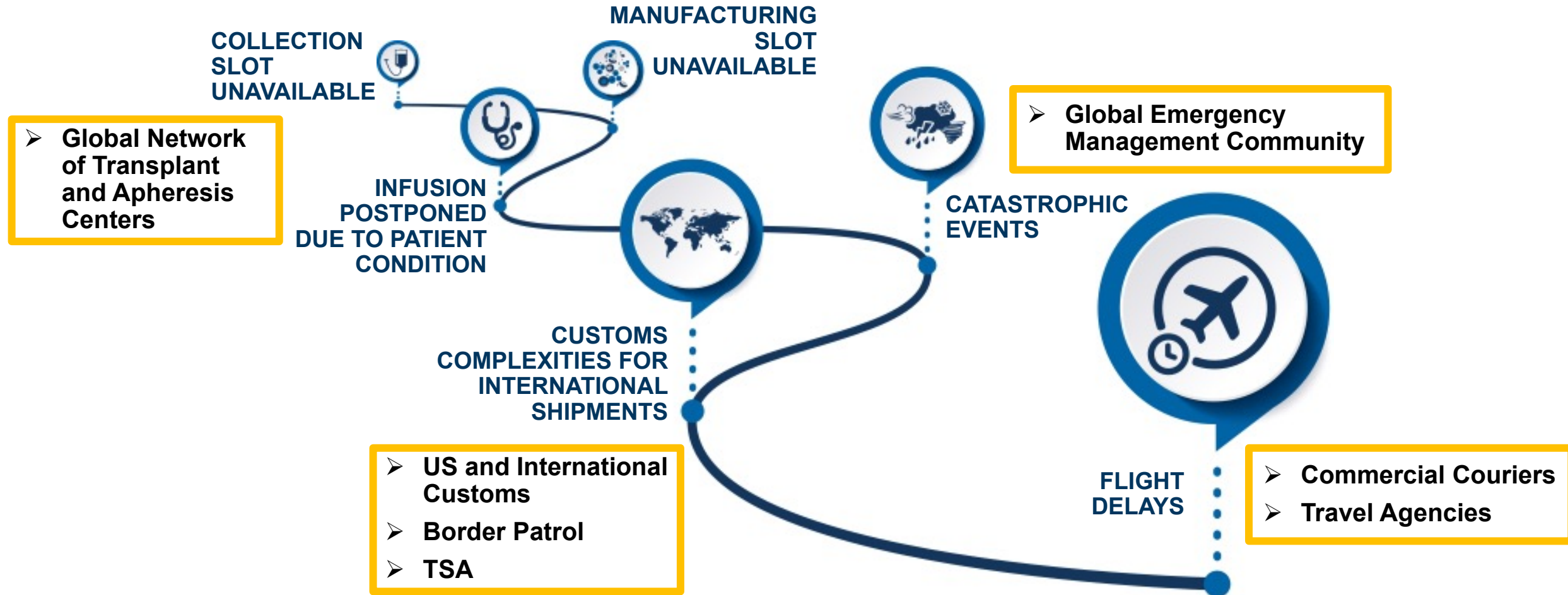


One courier's  
itinerary went through

**22**  
**ITERATIONS**  
between product  
pick-up & delivery



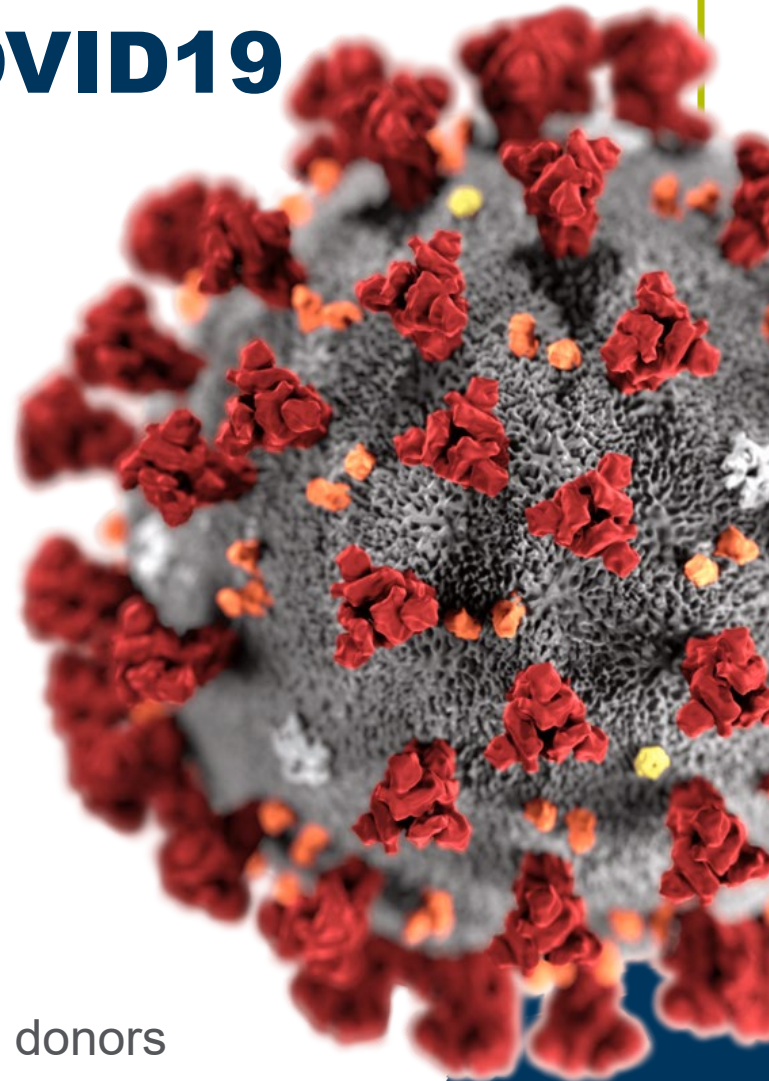
# Orchestrating cell therapy logistics is complex and susceptible to variability





# Maintaining core business during COVID19

- **Leveraged Strong Relationships & Global Partnerships**
  - Obtained CDC waiver
  - Gained access to private aircraft
  - Collaborated with international partners on key decisions
- **Implemented Hub-and-Spoke Logistics Model**
  - Leveraged cargo flights to transport products from EU to US
  - Recruited and trained new couriers
- **Ensured Donor Safety**
  - Limited in-person appointments & provided PPE
  - Reduced donor travel to collection centers
- **Enhanced Services for Transplant Centers & Patients**
  - Reduced workup and collection fees for related donors
  - Facilitated free in-home HLA typing for patients and their related donors
  - Increased financial support for patients



# Hitting Record Numbers During COVID-19

11,596

TRANSPORTATION LEGS  
COMPLETED

7,398

TRANSPORTS  
COMPLETED

99.9%

DELIVERY SUCCESS

March 2020 – March 2021

# Partnering to Make the Impossible Possible

# 7,163

cell therapies facilitated

(March 2020 – March 2021)

**No patient went without their  
life-saving therapy!**



Lucy, blood stem cell  
transplant recipient



# NMDP COVID-19 Response

## Cryopreservation

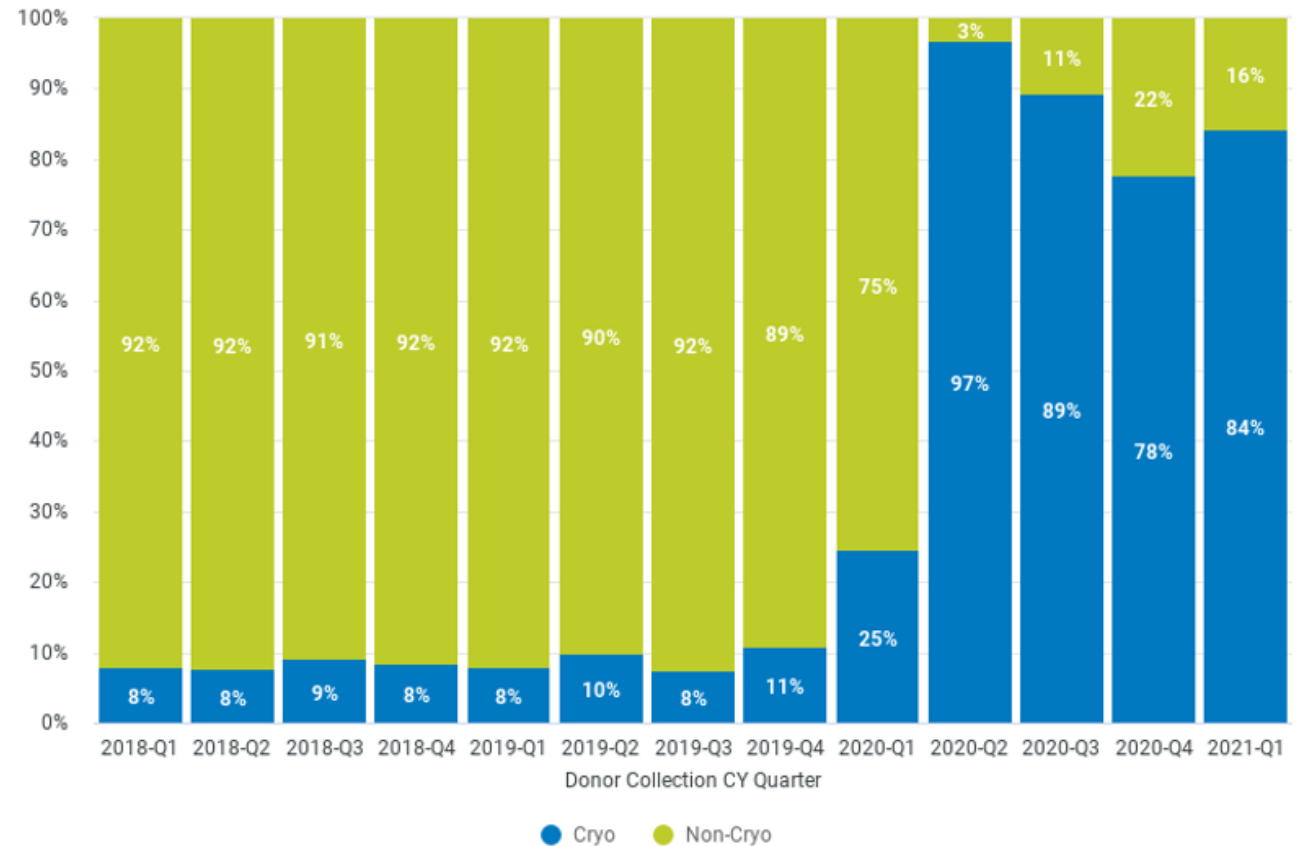
### Situation

- Demand for transplant remained throughout the pandemic
- Cryopreservation required with limited exceptions from March - Aug 2020
- 95% of cryopreservation occurs at the patient's transplant center

### Be The Match BioBank

- NMDP cryopreservation service to ensure all donor collections can be frozen, if needed for transplant
- Examples: Urgent border lockdowns, cell therapy lab capacity, and Texas winter storms

Percentage of U.S. NMDP/BTM Donor HPC Products Cryopreserved Prior to Transplant



# BioBank FY21 Q1-Q2 Summary



Our cryopreservation service for delivering high-quality PBSC and marrow products, providing a predictable time to patient transplant and a convenient donation pathway for donors.

	Oct	Nov	Dec	Jan	Feb	Mar	FYTD
URD Transplants	449	494	449	440	458	525	<b>2815</b>
<b>BioBank Collections</b>	<b>1</b>	<b>5</b>	<b>9</b>	<b>15</b>	<b>11</b>	<b>19</b>	<b>60</b>
BioBank Transplants	1	3	2	12	8	14	<b>40</b>
% of URD Collections	0.2%	1.0%	2.0%	3.4%	2.4%	3.6%	<b>2.1%</b>
% of URD Transplants	0.2%	0.6%	0.4%	2.7%	1.7%	2.7%	<b>1.4%</b>

\*Q2 transplants representative of future activity, Q1 volumes were low and supported many int'l TCs

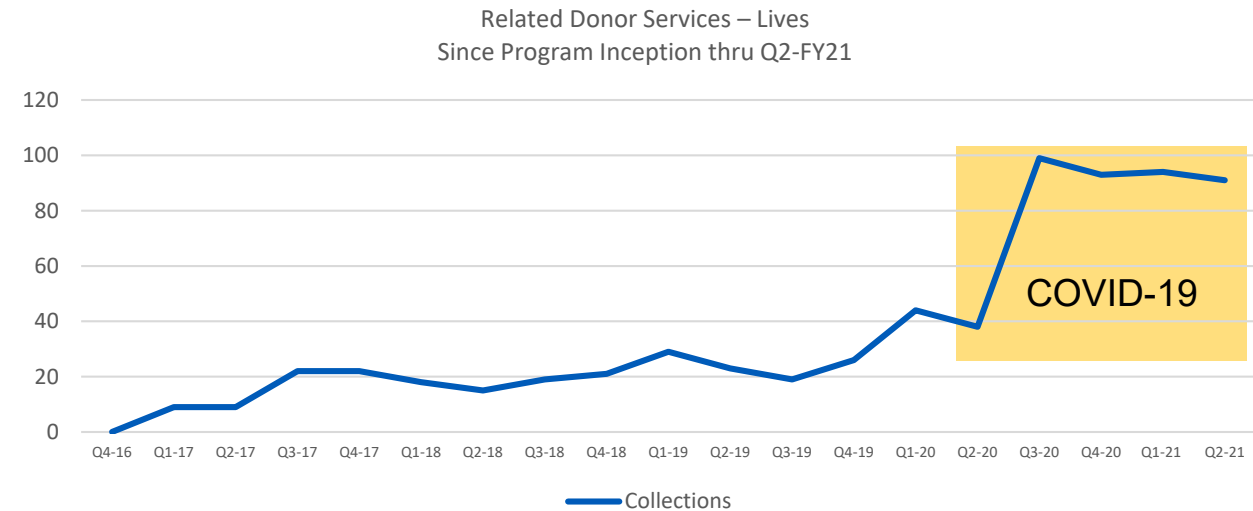
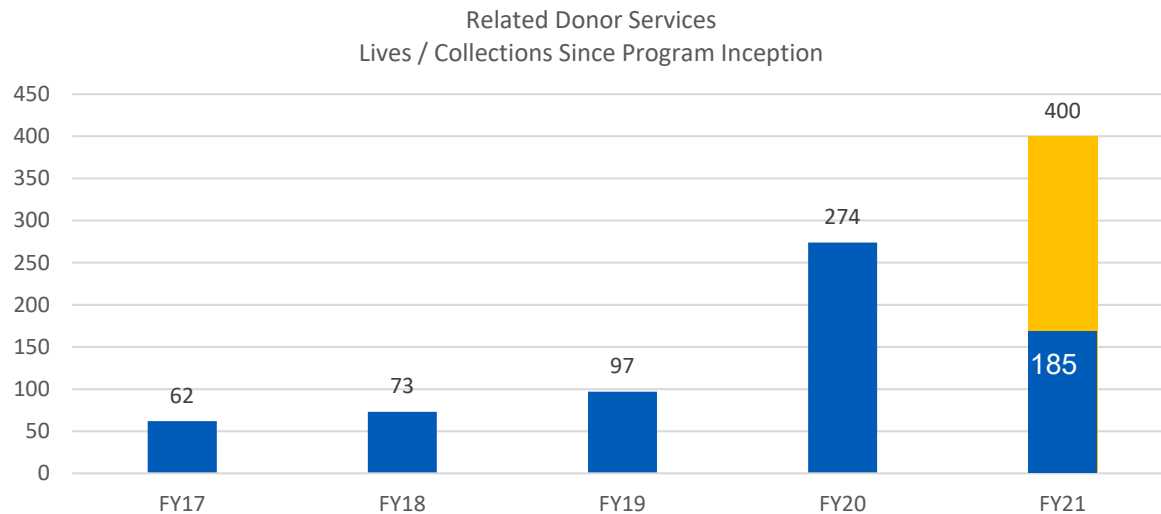
# Clinical Impact of Cryopreservation

- Still uncertain. Our research program (CIBMTR) has rapidly published 3 papers on the subject
  - Hamadani et al, BBMT, 2020; Eapen et al, BBMT, 2020; Hsu et al, JTCT, 2021
  - Other groups have published showing either no major impact or decreased T-cell chimerism
- May be differential impact based on graft source
- Should try to provide fresh bone marrow for patients with bone marrow failure syndromes if at all feasible
- More data are needed; NMDP/CIBMTR study currently underway to assess impact in patients transplanted during pandemic (N=968)

# Related Donor Services Activity

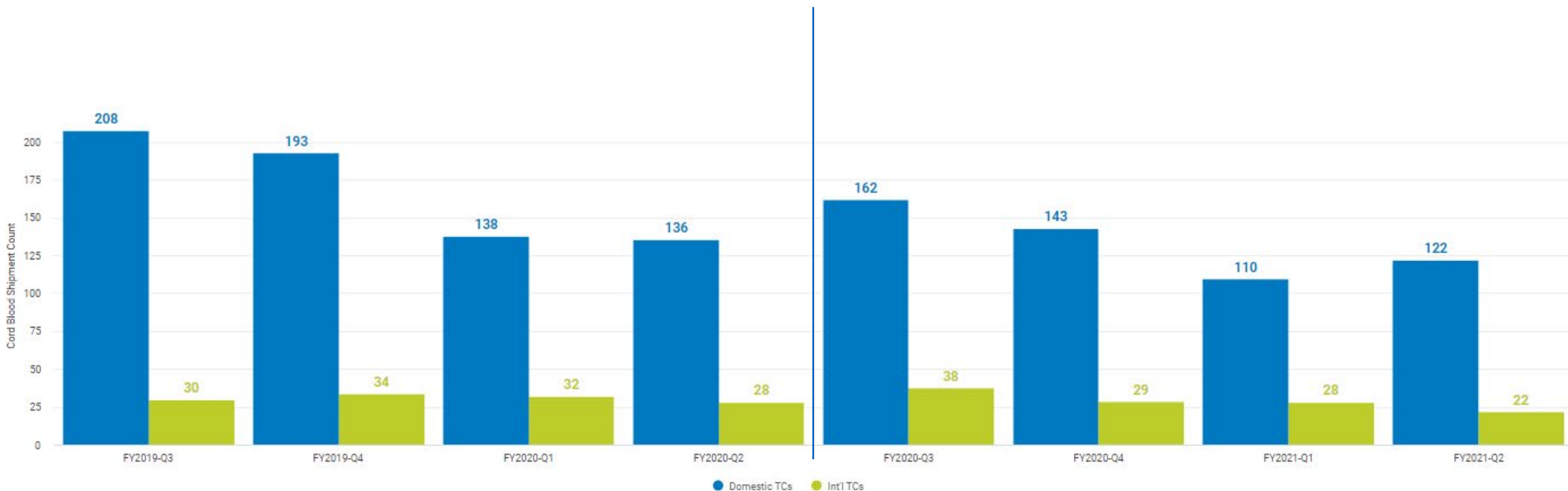
## Results:

- Increased lives impacted by 182% year-over-year from FY19 to FY20
- On pace to grow by ~46% in FY21
- Network utilization of RDS has increased by 33% since Q1 FY20



# Cord Blood Shipment Counts by Fiscal Quarter

*(Last 8 Complete Fiscal Quarters)*





# Conclusions

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- Willingness of volunteer donors to put themselves in harms way during a global crisis to save a life continues to amaze us. They are the true heroes!
- Multiple stories of heroic efforts to deliver donor grafts to patients in need throughout the pandemic abound.
- Donors continue to be willing to donate products solely for research and development purposes during the pandemic.
- Our organization, together with our donors, network of transplant centers, donor centers, other registries, collection/apheresis centers, and industry partners have been willing to do whatever it takes to safely meet the ongoing demand for donor derived cellular products.

**Our Be The Match One Forum  
video tells the story best**