Mini-Brief

Update to Refusal Codes

OPTN Data Advisory Committee

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Contents

Executive Summary	2
Background	3
Purpose	3
Proposal for Board Consideration	3
Collaborative Development Process	6
NOTA and Final Rule Analysis	7
Implementation Considerations	8
Post-implementation Monitoring	8
Conclusion	9
Refusal Codes	10
Appendix 1: List of Currently Implemented Refusal Codes	13
Appendix 2: Crosswalk of Currently Implemented and Proposed Refusal Codes	15

Update to Refusal Codes

Affected Policies: N/A Sponsoring Committee: Request for Community Input: March 8-21, 2021 Board of Directors Date:

Data Advisory June 14, 2021

Executive Summary

In response to feedback received from the transplant community and at the recommendation of the OPTN Ad Hoc Systems Performance Committee, the OPTN Data Advisory Committee is proposing updates to the list of options under the primary refusal and secondary refusal reason code drop downs in the offer details form section of DonorNet®. Last revised in 2004, the new proposed list of refusal codes has incorporated multiple rounds of feedback received from various stakeholder groups, OPTN committees, and the larger transplant community between 2019-2021. The updated list intends to further the strategic priority of increasing donor and recipient matching by improving the refusal reason data used for quality improvement, retrospective reviews, and real-time decision making. By providing more relevant and granular options, the insights gathered will be more actionable and improve upon the current list by reducing the overutilization of the refusal code "donor age or quality" which accounted for 66% of the primary refusal reasons entered between July 2019 and June 2020.¹

¹Based on OPTN data as of September 18, 2020.

Background

Organ procurement organizations (OPOs) and transplant programs strive to place the right organ with the right candidate. On occasion, this means that a transplant program may choose to refuse certain organ offers for reasons related to the candidate, the donor, or OPO or transplant hospital operational issues. When this occurs, a refusal reason is required to be entered into the offer details form section of DonorNet[®]. An optional secondary refusal reason can also be submitted to further specify why the organ was declined. These reasons are labeled with numerical values that are referred to as refusal codes. Refusal codes are used by transplant programs and OPOs when reviewing acceptance practices as well as in research analysis to better understand why an organ was declined, to identify trends in acceptance behaviors, and to inform proposed solutions to increase acceptance rates and thereby reduce discards.

In June of 2019, the System Performance Committee (SPC) provided a recommendation to the Board of Directors to update the list of refusal codes.² The current list of refusal codes has not been updated since 2004 and data show the majority of the codes are underutilized. When reviewing primary refusal reasons between July 2019 and June 2020, 21 of the total 28 currently used refusal codes accounted for 5% of refusals while 66% of all refusal reasons were listed as "donor age or quality"³ (This data included only patient-specific refusals for offers prior to the last acceptor on matches with an acceptance.) SPC members identified a need for more granular data regarding reasons for refusals in order to improve the data collected and used for quality improvement, retrospective reviews, and real-time decision making. The SPC members agreed that improved collection of refusal codes would provide better data to guide offer acceptance and inform changes in practice.

The OPTN has also received community feedback that the current codes are outdated, too vague, and require clarification. Additionally, some codes cover multiple reasons for refusal, such as "age or quality." To address these concerns, and in light of the recommendations of the SPC, the Data Advisory Committee (DAC) has collaborated with OPTN committee members and the larger transplant community to develop an updated list of codes. These revisions do not change or add data collection, but provide a revised list of options that are more relevant, discrete, and mutually exclusive, to promote the collection of more actionable data.

Purpose

In order to improve data collection relating to organ offer refusals, the OPTN DAC provides the following recommendations to the OPTN Board of Directors on updating the list of options under the required primary refusal and optional secondary refusal reason code drop downs in the offer details form section of DonorNet[®].

Proposal for Board Consideration

Revising the list of refusal codes will support increased efficiency of the OPTN through better understanding of refusal behaviors. Offering members more relevant options for reporting why an offered organ is refused will provide more robust data to develop improved allocation strategies to reduce cold ischemic time, reduce number of discards, and increase the number of transplants. These

²OPTN, Ad Hoc Systems Performance Committee Report, June 2019,

https://optn.transplant.hrsa.gov/media/3015/201906_spc_boardreport.pdf (accessed April 7, 2021). ³Based on OPTN data as of September 18, 2020 revisions do not change or add data collection, but provide an updated list of options under the primary refusal and secondary refusal drop downs in the offer details form section of DonorNet[®].

Table 1: Updated Refusal Codes outlines the proposed list of updated refusal codes and descriptions as recommended by the OPTN DAC. The proposed refusal codes will be organized under the following headers in the drop down to allow the user to easily navigate to the most appropriate option.

Refusal Code	Description
Donor and Candidate Matching	
Donor age	Donor age is not clinically suitable for potential recipient
Organ size, specify **	Donor organ expected to be too large or small for potential recipient
Organ Specific Reasons	
Organ preservation: Unacceptable	Method or findings of organ preservation does not meet acceptable
method or findings	criteria (pump pressures, pumping issue, not pumped, on pump, etc.).
Organ anatomical damage or defect	Surgical damage, non-surgical trauma, diseased organ, organ vasculature, en bloc kidneys or any other anatomical reason
Actual or projected cold ischemic time too long	The actual or projected cold ischemic time is too long for the organ
Warm ischemic time too long	The warm ischemic time is too long for the organ
Biopsy not available	Organ biopsy not performed or results are not available
Organ biopsy results unacceptable	Organ biopsy results do not meet acceptable criteria
Organ specific test results not available, specify **	Organ specific test results not performed or results not available at the time of the organ offer (e.g., HIV NAT testing, cardiac catheter results, etc.). Do not use for unavailable biopsies.
Unacceptable organ specific test results, specify *	Organ specific test results do not meet acceptable criteria (e.g., low PaO2, high creatinine, low ejection fraction, or imaging findings). Do not use for unavailable biopsies.
Candidate Specific Reasons	
Candidate temporarily medically	Potential recipient temporarily too sick, medically contraindicated, or not
unsuitable	optimized to attempt transplant
Candidate transplanted or pending	Patient transplanted, transplant in progress, or other offer being
transplant	considered
Candidate's condition improved,	Potential recipient's condition has improved and transplant is currently
Candidate's condition improved, transplant not needed	Potential recipient's condition has improved and transplant is currently unnecessary
Candidate's condition improved, transplant not needed Candidate requires different	Potential recipient's condition has improved and transplant is currently unnecessary Potential recipient requires organ of a different laterality (e.g., right lung
Candidate's condition improved, transplant not needed Candidate requires different laterality	Potential recipient's condition has improved and transplant is currently unnecessary Potential recipient requires organ of a different laterality (e.g., right lung is specified)
Candidate's condition improved, transplant not needed Candidate requires different laterality Candidate requires multiple organ	Potential recipient's condition has improved and transplant is currently unnecessary Potential recipient requires organ of a different laterality (e.g., right lung is specified) Potential recipient requires a multiple organ transplant (e.g., heart
Candidate's condition improved, transplant not needed Candidate requires different laterality	Potential recipient's condition has improved and transplant is currently unnecessary Potential recipient requires organ of a different laterality (e.g., right lung is specified) Potential recipient requires a multiple organ transplant (e.g., heart offered without kidney) Transplant hospitals should use this refusal when refusing an organ offer due to a candidate related epidemic/pandemic reason (e.g., COVID-19). This may include reasons such as the candidate has a potential exposure, is symptomatic, is being tested, or has a positive test result. Do not use this code if the candidate is refusing all organ offers at this time due to
Candidate's condition improved, transplant not needed Candidate requires different laterality Candidate requires multiple organ transplant Epidemic/Pandemic - Candidate	Potential recipient's condition has improved and transplant is currently unnecessary Potential recipient requires organ of a different laterality (e.g., right lung is specified) Potential recipient requires a multiple organ transplant (e.g., heart offered without kidney) Transplant hospitals should use this refusal when refusing an organ offer due to a candidate related epidemic/pandemic reason (e.g., COVID-19). This may include reasons such as the candidate has a potential exposure, is symptomatic, is being tested, or has a positive test result. Do not use
Candidate's condition improved, transplant not needed Candidate requires different laterality Candidate requires multiple organ transplant	Potential recipient's condition has improved and transplant is currently unnecessary Potential recipient requires organ of a different laterality (e.g., right lung is specified) Potential recipient requires a multiple organ transplant (e.g., heart offered without kidney) Transplant hospitals should use this refusal when refusing an organ offer due to a candidate related epidemic/pandemic reason (e.g., COVID-19). This may include reasons such as the candidate has a potential exposure, is symptomatic, is being tested, or has a positive test result. Do not use this code if the candidate is refusing all organ offers at this time due to the pandemic.
Candidate's condition improved, transplant not needed Candidate requires different laterality Candidate requires multiple organ transplant Epidemic/Pandemic - Candidate Candidate temporarily ineligible due	Potential recipient's condition has improved and transplant is currently unnecessary Potential recipient requires organ of a different laterality (e.g., right lung is specified) Potential recipient requires a multiple organ transplant (e.g., heart offered without kidney) Transplant hospitals should use this refusal when refusing an organ offer due to a candidate related epidemic/pandemic reason (e.g., COVID-19). This may include reasons such as the candidate has a potential exposure, is symptomatic, is being tested, or has a positive test result. Do not use this code if the candidate is refusing all organ offers at this time due to the pandemic. Potential recipient is temporarily ineligible for transplant due to insurance

Table 1: Updated Refusal Codes

Refusal Code	Description
Histocompatibility Related Reasons	
No candidate serum for	No candidate serum for crossmatching
crossmatching	
Donor cells (or specimen) unavailable for crossmatching	No donor cells (or specimen) for crossmatching or no time to complete a crossmatch
Positive physical crossmatch	Physical crossmatch results between donor and potential recipient is positive
Positive virtual crossmatch/unacceptable antigens	Virtual crossmatch results between donor and potential recipient is positive or potential recipient has donor-specific antibodies that are considered contraindications to transplant
Number of HLA mismatches	Number of HLA mismatches between donor and potential recipient
unacceptable Disease Transmission Risk	unacceptable
Disease fransmission Risk	DUC visk factor for denor or other reasons related to social history //f.a
PHS risk factor or social history	PHS risk factor for donor or other reasons related to social history. (If a candidate refuses the offer for PHS risk criteria, please select "Candidate refused" as the refusal reason for the offer.)
Positive infectious disease screening test: CMV, HBV, HCV, etc.	CMV, HBV, HCV, HIV, HTLV, VDRL, etc. donor testing is positive
Donor infection/positive culture	Donor has an active infection or positive culture results (e.g., meningitis)
Malignancy or suspected malignancy	A malignancy or potential malignancy is suspected with the organ
Epidemic/Pandemic - Donor	Transplant hospitals should use this refusal code when refusing an organ offer due to a donor related epidemic/pandemic reason (e.g., COVID-19). This may include reasons such as donors with high exposure risk, no testing available, positive or indeterminate test results, or if a different specimen type is preferred.
Donor Specific Reasons	
Donor medical history, specify *	Donor medical history is not clinically suitable for potential recipient
Donor instability/high vasopressor usage	Donor has prolonged hemodynamic instability and/or requiring high vasopressor use
Prolonged downtime/CPR	Donor has experienced prolonged downtime or CPR
DCD donor neurological	DCD donor has high neurological function and is not expected to arrest in
function/not expected to arrest	time
Graft appearance/quality (VCA ONLY), specify **	Graft is unsuitable due to visible or quality reasons such as incompatible skin tone, tattoos, scars, bruising, ecchymosis, hematoma, or other
Logistics	
Resource time constraint (OPO, TXC, donor hospital, etc.)	Time constraint for transplant imposed by the OPO, TXC, donor hospital, etc.
Recovery team availability	Recovery team or local recovery team is unavailable to perform procedure (heavy workload, etc.)
Transplant team or facility	Transplant team is unavailable to perform transplant procedure (heavy
availability	workload, etc.)
Transportation availability	Transportation for the transplanted organ cannot be attained
Donor family time constraint	Time constraint imposed by the donor family
Exceeded policy defined response	Response was not received from center within the time period specified
time (OPO ONLY)	in policy
Other	
Disaster/emergency management consideration	Use only in the event of a natural disaster, regional emergency, etc. that is affecting the operations or recovery of organs.

Refusal Code	Description
Other, specify *	Use only if the refusal reason does not fit the above categories. Be sure to write in the other reason, UNOS staff will review the OTHER reason and may recode if necessary.

* When this field is selected as a refusal reason, a text box will appear requiring members to further specify the refusal reason

** When this field is selected as a refusal reason, a text box will appear allowing members an option to further specify the refusal reason

The list of refusal codes currently implemented are included in *Appendix 1: List of Currently Implemented Refusal Codes* and a table outlining changes and additions to increase granularity of data collection is included in *Appendix 2: Crosswalk of Currently Implemented and Proposed Refusal Codes*.

Refusal Codes Removed

The currently implemented codes *High CPRA*, *Donor ABO*, and *Kidney placed with Extra-renal* are removed from the proposed list. *High CPRA* was identified for removal due to infrequency of use (less than 0.01% between July 2019 and June 2020)⁴ and because high CPRA would most likely be dependent on a positive physical crossmatch which is another option that may be selected. Similarly, *Donor ABO*, a refusal code only used for liver offers, was found to be reported less than 0.05% of the time for liver offers when reviewing refusal reasons during that same time period. *Kidney placed with Extra-renal* was identified for removal due to infrequency of use for kidney offers, reported as the reason for refusal for 0.2% of refusals during the same period. Additionally, *Kidney placed with Extra-renal*, was determined to be duplicative of the current bypass code *Multi-organ placement* which would serve the same function.

Collaborative Development Process

The proposed list of updated refusal codes was presented to the following stakeholder groups between November 2019 and March 2020 in order to collect feedback and recommendations for continued revisions.

- DonorNet[®] Mobile Workgroup
- IT Customer Council
- OPTN Data Advisory Committee
- OPTN Membership and Professional Standards Committee
- OPTN Organ Procurement Organizations Committee
- OPTN Transplant Administrators Committee (TAC)
- OPTN Transplant Coordinators Committee (TCC)

In August 2020, a DAC sponsored workgroup was formed consisting of members representing the DAC, TAC, TCC, Vascularized Composite Allograft, and OPO Committees as well as the Board of Directors. The Refusal Codes and Late Turndowns Workgroup (Workgroup) met monthly to review the feedback collected and determine revisions to the proposed list accordingly. This revised list of refusal codes then went through another round of committee and community review between January and March 2021. The following stakeholder groups received presentations and were invited to provide feedback.

⁴Based on OPTN data as of September 18, 2020

- OPTN Heart Transplantation Committee
- OPTN Kidney Transplantation Committee
- OPTN Liver & Intestinal Organ Transplantation
- OPTN Lung Transplantation Committee
- OPTN Membership and Professional Standards Committee
- OPTN Operations and Safety Committee
- OPTN Organ Procurement Organizations Committee
- OPTN Pancreas Transplantation Committee
- OPTN Transplant Administrators Committee
- OPTN Transplant Coordinators Committee
- OPTN Vascularized Composite Allograft Transplantation Committee

Request for Feedback

To ensure that comments were received from the larger transplant community, a request for feedback to collect recommendations was posted to the OPTN website between March 8, 2021 and March 21, 2021. Members were invited to participate through targeted communications. The request for feedback received 108 responses that were primarily supportive of the proposed list and included recommendations for additional refusal codes or language revisions to increase clarity. Seven out of ten respondents indicated that they believed the proposed updated list provided codes that are relevant and easy to understand.

Additional codes recommended by both committee and community members included organ specific or operational reasons not currently captured. The Workgroup assessed whether the granularity of the suggested codes would provide meaningful insights or reduce the quality of data collection by overwhelming the user with too many options. The Workgroup considered if any recommended code could be combined with or fall under an existing proposed code, modifying the code's description as needed to ensure the user has guidance regarding which code is most appropriate to select. Feedback was also collected on how the proposed refusal codes are organized into categories and the list was modified to move the codes into categories that are most intuitive to the user (e.g., categorizing the refusal reason "Malignancy or suspected malignancy" under "Disease Transmission Risk" rather than "Organ Specific Reasons").

The Workgroup assessed the compiled feedback from both the OPTN committees and community between March and April 2021. The DAC reviewed the finalized list of refusal codes and descriptions in May 2021 and voted to recommend to the Board of Directors for approval.

NOTA and Final Rule Analysis

The OPTN Final Rule requires transplant programs to provide to the OPTN "reasons for refusal" of organ offers made to candidates registered at their programs⁵ and OPTN *Policy 18.3: Recording and Reporting the Outcomes of Organ Offers* requires these reasons to be reported to the OPTN. This proposal affects

⁵42 C.F.R. §121.7(b)(4).

the documentation of these required reasons for refusal by updating the list of available options that may be reported to the OPTN.

Implementation Considerations

Member Operations

Transplant programs and OPOs will need to be familiar with the updated list of refusal reasons and descriptions when submitting refusal reasons.

This proposal is not anticipated to affect the operations of histocompatibility laboratories.

OPTN Operations

A small OPTN implementation effort, estimated at 230 hours, includes offerings from Professional Education and Communications with support from Policy and Community Relations, and Member Quality to educate members about the updated list of refusal reasons.

A very large IT implementation effort, estimated at 1,665 hours, will include the modifications to the primary refusal and secondary refusal drop downs in the offer details form section of DonorNet[®].

Research anticipates a small effort, an estimated 250 ongoing hours, to monitor the use of updated refusal codes post-implementation.

Post-implementation Monitoring

The OPTN will analyze data beginning at three months after implementation of the new refusal codes, allowing for two months of data with the first review. In order to facilitate monthly updates, the results will be provided to the committee monthly via a standard report or dashboard for two years, with a presentation of updated results to the committee quarterly for the first year and at the end of year two.

The first two items below will be provided overall, by match organ type, size of program (small, medium, large) as defined by transplant volume in calendar year 2020, and relative location on match run. Stratifications of location on match run will be done by match organ type, and before or after the 90th percentile for rank of acceptances in calendar year 2020 for that organ type. The analysis will include:

- The percentage of patient-specific refusals by reason, to identify any code not being used or making up an unexpectedly high proportion of the total (new catch all code).
- Limiting to range refusals (center refusing for multiple patients at same time), the percentage by reason to identify any code making up an unexpectedly high proportion of the total (new catch all code).
- As this will require review of the cases (stratified only by match organ), where the "other/specify" text field was used to identify any reasons not currently in the list and making up a significant proportion of the total "others". This will identify any additional codes needing to be added to the updated list. Due to the manual effort required, this portion of the analysis will be updated quarterly during the first year, and once in year two of implementation.

Additionally, UNOS staff will provide feedback on questions received from members related to the new refusal codes.

Conclusion

In order to improve data collection to better inform assessments of refusal behaviors, this proposal intends to provide more relevant and detailed options for why a specific organ is refused for a specific candidate. This data will support improved organ acceptance practices and further the strategic priority to increase efficiency of donor and recipient matching.

The proposed refusal code list has been developed based on the feedback of various stakeholder groups, OPTN committee, and the larger transplant community.

1

Refusal Codes

RESOLVED, that DonorNet[®] refusal codes, as set forth below, are hereby approved, effective pending implementation and notice to OPTN members.

Refusal Code	Description
Donor and Candidate Matching	
Donor age	Donor age is not clinically suitable for potential recipient
Organ size, specify **	Donor organ expected to be too large or small for potential recipient
Organ Specific Reasons	
Organ preservation: Unacceptable	Method or findings of organ preservation does not meet acceptable
method or findings	criteria (pump pressures, pumping issue, not pumped, on pump, etc.).
Organ anatomical damage or defect	Surgical damage, non-surgical trauma, diseased organ, organ vasculature, en bloc kidneys or any other anatomical reason
Actual or projected cold ischemic time too long	The actual or projected cold ischemic time is too long for the organ
Warm ischemic time too long	The warm ischemic time is too long for the organ
Biopsy not available	Organ biopsy not performed or results are not available
Organ biopsy results unacceptable	Organ biopsy results do not meet acceptable criteria
Organ specific test results not available, specify **	Organ specific test results not performed or results not available at the time of the organ offer (e.g., HIV NAT testing, cardiac catheter results, etc.). Do not use for unavailable biopsies.
Unacceptable organ specific test results, specify *	Organ specific test results do not meet acceptable criteria (e.g., low PaO2, high creatinine, low ejection fraction, or imaging findings). Do not use for unavailable biopsies.
Candidate Specific Reasons	
Candidate temporarily medically	Potential recipient temporarily too sick, medically contraindicated, or not
unsuitable	optimized to attempt transplant
Candidate transplanted or pending	Patient transplanted, transplant in progress, or other offer being
transplant	considered
Candidate's condition improved, transplant not needed	Potential recipient's condition has improved and transplant is currently unnecessary
Candidate requires different laterality	Potential recipient requires organ of a different laterality (e.g., right lung is specified)
Candidate requires multiple organ transplant	Potential recipient requires a multiple organ transplant (e.g., heart offered without kidney)
Epidemic/Pandemic - Candidate	Transplant hospitals should use this refusal when refusing an organ offer due to a candidate related epidemic/pandemic reason (e.g., COVID-19). This may include reasons such as the candidate has a potential exposure, is symptomatic, is being tested, or has a positive test result. Do not use this code if the candidate is refusing all organ offers at this time due to the pandemic.
Candidate temporarily ineligible due	Potential recipient is temporarily ineligible for transplant due to insurance
to insurance or financial issue	or financial related reasons
Candidate unavailable	Potential recipient unavailable (e.g., traveling) or could not be contacted
Candidate refused	Potential recipient refused offered organ
Histocompatibility Polated Poacons	
Histocompatibility Related Reasons No candidate serum for	

Refusal Code	Description
Donor cells (or specimen)	No donor cells (or specimen) for crossmatching or no time to complete a
unavailable for crossmatching	crossmatch
	Physical crossmatch results between donor and potential recipient is
Positive physical crossmatch	positive
	Virtual crossmatch results between donor and potential recipient is
Positive virtual	positive or potential recipient has donor-specific antibodies that are
crossmatch/unacceptable antigens	considered contraindications to transplant
Number of HLA mismatches	Number of HLA mismatches between donor and potential recipient
unacceptable	unacceptable
Disease Transmission Risk	
	PHS risk factor for donor or other reasons related to social history. (If a
PHS risk factor or social history	candidate refuses the offer for PHS risk criteria, please select "Candidate
	refused" as the refusal reason for the offer.)
Positive infectious disease screening	
test: CMV, HBV, HCV, etc.	CMV, HBV, HCV, HIV, HTLV, VDRL, etc. donor testing is positive
Donor infection/positive culture	Donor has an active infection or positive culture results (e.g., meningitis)
Malignancy or suspected	
malignancy	A malignancy or potential malignancy is suspected with the organ
	Transplant hospitals should use this refusal code when refusing an organ
	offer due to a donor related epidemic/pandemic reason (e.g., COVID-19).
Epidemic/Pandemic - Donor	This may include reasons such as donors with high exposure risk, no
	testing available, positive or indeterminate test results, or if a different
	specimen type is preferred.
Donor Specific Reasons	
Donor medical history, specify *	Donor medical history is not clinically suitable for potential recipient
Donor instability/high vasopressor	Donor has prolonged hemodynamic instability and/or requiring high
usage	vasopressor use
Prolonged downtime/CPR	Donor has experienced prolonged downtime or CPR
_	time
	Graft is unsuitable due to visible or quality reasons such as incompatible
ONLY), specify **	skin tone, tattoos, scars, bruising, ecchymosis, hematoma, or other
	Time constraint for transplant imposed by the OPO, TXC, donor hospital,
-	etc.
	Recovery team or local recovery team is unavailable to perform
Recovery team availability	procedure (heavy workload, etc.)
Transplant team or facility	Transplant team is unavailable to perform transplant procedure (heavy
availability	workload, etc.)
Transportation availability	Transportation for the transplanted organ cannot be attained
Donor family time constraint	Time constraint imposed by the donor family
Exceeded policy defined response	Response was not received from center within the time period specified
time (OPO ONLY)	in policy
Other	
Disaster/emergency management	Use only in the event of a natural disaster, regional emergency, etc. that
consideration	is affecting the operations or recovery of organs
	Use only if the refusal reason does not fit the above categories. Be sure to
	write in the other reason, UNOS staff will review the OTHER reason and
Other, specify *	
Prolonged downtime/CPRDCD donor neurologicalfunction/not expected to arrestGraft appearance/quality (VCAONLY), specify **LogisticsResource time constraint (OPO, TXC, donor hospital, etc.)Recovery team availabilityTransplant team or facility availabilityTransportation availabilityDonor family time constraintExceeded policy defined response time (OPO ONLY)OtherDisaster/emergency management consideration	Donor has experienced prolonged downtime or CPR DCD donor has high neurological function and is not expected to arrest time Graft is unsuitable due to visible or quality reasons such as incompatil skin tone, tattoos, scars, bruising, ecchymosis, hematoma, or other Time constraint for transplant imposed by the OPO, TXC, donor hospir etc. Recovery team or local recovery team is unavailable to perform procedure (heavy workload, etc.) Transplant team is unavailable to perform transplant procedure (heav workload, etc.) Transportation for the transplanted organ cannot be attained Time constraint imposed by the donor family Response was not received from center within the time period specifi in policy Use only in the event of a natural disaster, regional emergency, etc. th is affecting the operations or recovery of organs Use only if the refusal reason does not fit the above categories. Be sur-



Refusal Code	Description
Recommended Removal	
High CPRA; High PRA	Recommend removal due to infrequency of use (less than 0.01% between July 2019 and June 2020) and because it would most likely be dependent on a positive physical crossmatch which is another option that may be selected
Donor ABO	Recommend removal - only used for liver offers, was found to be reported less than 0.05% of the time for liver offers when reviewing refusal reasons during that same time period
Kidney placed with extra-renal	Recommend for removal due to infrequency of use for kidney offers, reported as the reason for refusal for 0.2% of refusals during the same period. Additionally, Kidney placed with Extra-renal, was determined to be duplicative of the current bypass code Multi-organ placement which would serve the same function.
* When this field is selected as a refusal reason, a text box will appear requiring members to further specify the refusal reason ** When this field is selected as a refusal reason, a text box will appear allowing members an option to further specify the	

refusal reason

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Appendix 1: List of Currently Implemented Refusal Codes

Refusal Code	Description	
Candidate-Related Reasons		
Patient's condition improved,	Potential recipient's condition has improved and transplant is currently	
transplant not needed	unnecessary	
Patient ill, unavailable, refused, or	Potential recipient too sick to attempt transplant at the time of offer	
temporarily unsuitable	cannot be located, refused transplant, or is temporarily unsuitable for	
	transplant	
Multiple organ transplant or	Either the potential recipient requires a multiple organ transplant or an	
different laterality is required	organ of a different laterality is required (e.g., right lung is specified)	
Patient txed, tx in progress, or	Patient transplanted, transplant in progress, or other offer being	
other offer being considered	considered	
Histocompatibility-Related		
Reasons		
Positive crossmatch	Crossmatch results between donor and potential recipient positive	
Number of HLA mismatches	Number of HLA mismatches between donor and potential recipient	
unacceptable	unacceptable	
No serum for crossmatching	No serum for crossmatching	
Unacceptable antigens	Donor has HLA antigens that are unacceptable to the potential recipient	
High PRA	Potential recipient has high PRA and most likely would have a positive	
	crossmatch	
High CPRA	Potential recipient is highly sensitized and most likely would have positive	
-	crossmatch	
Program-Related Reasons		
Heavy workload	Program unable to accept an organ at this time due to heavy workload	
Exceeded one-hour response Time	Response was not received from center within the one-hour time period	
	specified in policy	
Surgeon unavailable	Surgeon unavailable to perform transplant procedure	
Distance to travel or ship	Too far for the organ recovery team to travel or too far to ship	
Operational - transplant center	Transplant center refused due to transportation, logistics, inclement	
	weather issues, or unable to travel for procurement	
Donor-Related Reasons		
	Donor age, hypertension, prolonged hypotension, high vasopressor/	
Donor age or quality	medication dosage, cardiac arrest, evidence of infection/positive cultures,	
	non-heart beating, etiology of death, donor unstable, donor diabetes,	
	other medical history	
Donor size/weight	Donor too large or small, weight incompatible with potential recipient	
Donor ABO	Donor ABO group incompatible / unacceptable	
	[Only available for LIVER offers; will not display for other organ types]	
Donor social history	CDC high risk donor or other reasons related to social history	
Positive serological tests	CMV, HBV, HCV, HIV, HTLV, VDRL, etc. donor testing is positive	
Organ preservation	Method/quality of preservation, length of cold ischemic time, length of	
	warm ischemic time	
Organ anatomical damage or defect	Surgical damage, non-surgical trauma, diseased organ, organ vasculature,	
	en bloc kidney's or any other anatomical reason	
Organ-specific donor issue	Testing unavailable, not done or unacceptable, abnormal biopsy, or other	
	organ-specific reason	



Refusal Code	Description
COVID-19 Related reasons	
COVID-19: candidate-related reason	Transplant hospitals should use this refusal when refusing an organ offer due to a candidate related COVID-19 reason. This may include reasons such as the candidate has a potential exposure, is symptomatic, is being tested, or has a positive test result. Do not use this code if the candidate is refusing all organ offers at this time due to the pandemic. In that instance, inactive the candidate using the inactive reason COVID-19 precaution.
COVID-19: donor-related reason	Transplant hospitals should use this refusal code when refusing an organ offer due to a donor-related COVID-19 reason. This may include reasons such as donors with high exposure risk, no testing available, positive or indeterminate test results, or if a different specimen type (nasal vs. BAL) is preferred.
COVID-19: OPO or transplant hospital operational issue	Transplant hospitals should use this refusal code when refusing an organ offer due to COVID-19 related operational issues at either the OPO or the transplant hospital. This may include organ recovery scheduling issues, OR or ICU bed shortages, personnel shortages, or other ancillary service support issues.
Other	
Kidney placed with extra-renal	Potential recipient was bypassed in order to place the kidney with the extra-renal organ recipient from the same donor
Other Specify	Use only if the refusal reason does not fit the above categories. Be sure to write in the other reason, UNOS staff will review the OTHER reason and may recode if necessary

Appendix 2: Crosswalk of Currently Implemented and Proposed Refusal Codes

Current Refusal Code(s)	Proposed Codes
Patient's condition improved, transplant not	Candidate's condition improved, transplant not needed
needed	
Patient ill, unavailable, refused, or temporarily	Candidate temporarily medically unsuitable; Candidate
unsuitable	unavailable; Candidate refused
Multiple organ transplant or different laterality	Candidate requires different laterality; Candidate requires
is required	multiple organ transplant
Patient txed, tx in progress, or other offer	Candidate transplanted or pending transplant
being considered	
Positive crossmatch; Unacceptable antigens	Positive physical crossmatch; Positive virtual
	crossmatch/unacceptable antigens
Number of HLA mismatches unacceptable	Number of HLA mismatches unacceptable
No serum for crossmatching	Donor cells (or specimen) unavailable for crossmatching; No
	candidate serum for crossmatching
High CPRA; High PRA	Removed
Heavy workload; Surgeon unavailable:	Recovery team availability; Resource time constraint (OPO, TXC,
Operational - transplant center	donor hospital, etc.); Transplant team or facility availability
Exceeded one-hour response time	Exceeded policy defined response time
Distance to travel or ship	Actual or projected cold ischemic time too high
Donor age or quality	Donor age; Donor instability/high vasopressor usage; Donor
	medical history, specify *; Prolonged downtime/CPR; Warm
	ischemic time too high; Graft appearance/quality (VCA ONLY),
	specify **
Donor size/weight	Organ size, specify**
Donor ABO	Removed
Donor social history	PHS risk factor or social history
Positive serological tests	Donor infection/positive culture; Positive infectious disease
	screening test: HCV, HBV, CMV, etc.
Organ preservation	Organ preservation: Unacceptable method or findings
Organ anatomical damage or defect	Organ anatomical damage or defect; Organ biopsy results
	unacceptable
Organ-specific donor issue	Biopsy not available; Malignancy or suspected malignancy;
	Organ specific test results not available, specify **;
	Unacceptable organ specific test results , specify *
COVID-19: candidate-related reason	Epidemic/Pandemic - Candidate
COVID-19: donor-related reason	Epidemic/Pandemic - Donor
COVID-19: OPO or transplant hospital	Transplant team or facility availability
operational issue	
Kidney placed with Extra-renal	Removed
Other Specify	Other, specify *

* When this field is selected as a refusal reason, a text box will appear requiring members to further specify the refusal reason ** When this field is selected as a refusal reason, a text box will appear allowing members an option to further specify the refusal reason

New refusal codes: Candidate temporarily ineligible due to insurance or financial issue; DCD donor neurological function/not expected to arrest; Transportation availability; Donor family time constraint; Disaster/emergency management consideration