



**American Board for
Transplant Certification**
Certified Clinical Transplant Coordinator (CCTC)
Examination Specifications

1. Evaluation and Preparation for Transplant

A. Education

1. Instruct on risks, benefits, alternatives of transplantation and live donation
2. Review indications and contraindications of transplantation and live donation
3. Emphasize the importance of commitment for the candidate to long-term post-transplant follow-up
4. Discuss with the potential living donor and/or transplant candidate the
 - a. evaluation/selection process (e.g., medical, psychosocial, financial)
 - b. donor selection criteria (e.g., PHS increased risk, Donation after Circulatory Death)
 - c. transplant recipient and living donor surgical procedures
 - d. potential transplant drug regimen and effects
 - e. signs/symptoms of infection and organ rejection
 - f. diagnostic surveillance of rejection and infection
 - g. potential short-term and long-term complications
 - h. patient and graft survival
 - i. donor/recipient confidentiality
5. Respond to the individual educational needs of the living donor, candidate, and support system (e.g., age, culture, cognitive)

B. Data Collection and Evaluation, and Recommendations

1. Obtain and review
 - a. medical and surgical history, and physical examination
 - b. laboratory data (e.g., histocompatibility, serology)
 - c. diagnostic studies (e.g., radiology, pathology)
2. Recommend consultations (e.g., infectious disease, psychosocial, dietitian)

C. Suitability Assessment and Determination of the Potential Transplant Candidate and Living Donor

1. Identify multi-disciplinary recommendations (e.g., psychosocial, social work, dietitian, pharmacology, financial)
2. Assess donor and/or candidate suitability and adherence
3. Present findings and make recommendations to the transplant team regarding donor and/or candidate suitability
4. Communicate the team's recommendations to a candidate and/or living donor (e.g., behavior modification, social/financial issues)
5. Facilitate
 - a. additional procedures and tests based on the team's recommendations (e.g., CT scan, cholecystectomy, arteriogram)
 - b. coordination of care for additional testing or protocols as indicated (e.g., PRA desensitization, incompatible ABO)

D. Wait List Management

1. List a candidate per OPTN policies
2. Verify listing documentation for accuracy



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3. Maintain effective communication with candidate and local care provider
4. Maintain listing status per OPTN policies
 - a. document and record updated diagnostic and lab results (e.g., PRA, MELD, weight variance)
 - b. recognize potential problems and/or changes in eligibility criteria during the waiting period
 - c. amend listing status as indicated
5. Remove candidate or recipient from wait list per OPTN policies

E. Candidate/Deceased Donor Selection Criteria:

1. Identify exclusion criteria for potential donor organs and candidates
2. Communicate donor information (e.g., demographics, ABO, anatomy, organ condition, medical and social history)
3. Review candidate's current medical condition and crossmatch status with physicians
4. Verify candidate's acceptance of a donor (e.g., PHS increased risk, Donation after Circulatory Death)

F. Living Donor and Candidate Preoperative Care

1. Notify staff in appropriate departments (e.g., pre-operative area, ICU, blood bank, admissions, research) of a potential transplant
2. Facilitate preoperative procedures (e.g., dialysis, final crossmatch, pre-op orders)
3. Inform the living donor and/or candidate (e.g., timing of surgical procedures, surgical consent)

2. Post-Transplant Care

A. Education

1. Educate transplant recipient and support system about
 - a. the transplant drug regimen and effects
 - b. applicable self-monitoring data (e.g., temperature, BP, weight)
 - c. signs and symptoms of infection and organ rejection
 - d. diagnostic surveillance of rejection and infection
 - e. potential short-term and long-term complications
 - f. transplant team personnel and roles
 - g. available support services (e.g., social worker, patient assistance, home health nursing, pharmacy)
 - h. recipient and graft survival
 - i. long-term health maintenance (e.g., cancer screening, bone health, behavior modification)
 - j. strategies involving health promotion, illness prevention, and injury (e.g., cancer screening, bone health, behavior modification)
 - k. adherence to follow-up visits and laboratory studies
 - l. reporting abnormalities to transplant center/primary care provider



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2. Educate living donor and support system about
 - a. immediate postsurgical care (e.g., wound care, activity limitations, pain management)
 - b. reporting abnormalities to transplant center/primary care provider
 - c. adherence to follow-up visits and laboratory studies
 - d. follow-up of required UNOS data (e.g., vital signs, laboratory results, demographics, health status)


B. Postoperative Monitoring, Evaluation, and Reporting


1. Evaluate abnormalities in
 - a. pertinent physical examination findings
 - b. laboratory values
 - c. diagnostic tests
2. Assess for complications
 - a. surgical
 - b. medical
 - c. immunologic
 - d. psychosocial issues
 - e. adverse effects of the drug regimen (e.g., drug interaction, poly-pharmacy risk)
 - f. long-term
3. Consult with the recipient's healthcare team to determine interventions for complications
4. Facilitate
 - a. additional laboratory and/or diagnostic studies
 - b. follow-up clinic visits
 - c. consultation (e.g., social work, psychologist)
 - d. outpatient therapies
 - e. hospital admission
 - f. discharge medications and renewals (e.g., prior authorization forms, medicine change for insurance reasons)
 - g. the patient's transition between healthcare settings (e.g., primary care provider, case managers)
5. Refer recipient for emergency evaluation and treatment
6. Report required data to the OPTN / UNET
7. Evaluate recipient's adherence with the treatment regimen
8. Reinforce need for health maintenance (e.g., cancer screening, behavior modification)
9. Facilitate a return to optimal health status (e.g., work, school)


Each multiple-choice item will be associated with one of the following organ specifications:


Secondary specifications for CCTC


Organ Specs
Kidney
Liver
Heart
Lung
Kidney-pancreas
Pancreas
Intestine
Heart-lung


 American Board for Transplant Certification Certified Clinical Transplant Nurse (CCTN) Examination Specifications*	Items			Total
	Cognitive Levels			
	Recall	Application	Analysis	
1. Pretransplantation Care	3	9	3	15
<ul style="list-style-type: none"> A. Evaluate End-Stage Organ Failure <ul style="list-style-type: none"> 1. History and physical assessment 2. Vital signs and / or hemodynamic parameters 3. Lab values 4. Diagnostic tests B. Monitor a Patient Awaiting Transplantation <ul style="list-style-type: none"> 1. Kidney 2. Liver 3. Pancreas 4. Heart 5. Lung 6. Intestines C. Provide Education to a Patient Awaiting Transplantation <ul style="list-style-type: none"> 1. Organ matching (e.g., HLA, living donor) 2. Wait list status (e.g., MELD/PELD, Lung Allocation Score, mechanical circulatory support, EPTS/KDPI) 3. Post-operative course <ul style="list-style-type: none"> a. Lines, tubes, and wires that will be inserted b. Incision care c. Pain management plan 4. Explanation of pre-operative tests / procedures 5. Medications and side effects 6. Immunizations 7. Health maintenance (e.g., physical activity, dental, eye, GYN, etc.) D. Provide Support for Psycho-social Issues <ul style="list-style-type: none"> 1. Changes in lifestyle and body image 2. Adherence to the plan of care (e.g., consequences of non-adherence) 3. Coping strategies while waiting 4. Financial implications 5. Support systems 6. Cultural / religious issues 7. Advance care planning / palliative care (e.g., POA, end-of-life, ethics, consults) 8. Advocating for patient and family in decision making 				

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	Recall	Application	Analysis	
E. Prepare Pre-Transplant Patient for Surgery <ol style="list-style-type: none"> 1. Administration of transplant-related medications as ordered 2. Implementation of desensitization procedures 3. Ensure consent for surgery has been obtained 				
2. Care Immediately Posttransplantation	8	10	20	38
A. Evaluate Objective Criteria <ol style="list-style-type: none"> 1. Vital signs 2. Hemodynamic monitoring 3. Cardiac monitoring 4. Tubes, lines, and wires (e.g., t-tubes, VAD lines, pumps) 5. Pain management 6. Neurological status 7. Volume status (e.g., intake / output, weight) B. Monitor Laboratory Results <ol style="list-style-type: none"> 1. Evidence of organ function <ol style="list-style-type: none"> a. kidney b. liver c. pancreas d. heart e. lung f. intestines 2. Evidence of other postoperative complications <ol style="list-style-type: none"> a. hematological (e.g., bleeding, clotting) b. infection c. fluid/electrolyte imbalance C. Assess for Complications, Intervene, or Evaluate Response to Intervention <ol style="list-style-type: none"> 1. Organ specific <ol style="list-style-type: none"> a. kidney (e.g., clots, leaks, dialysis therapy) b. liver (e.g., renal dysfunction, thrombosis, bile duct complications, effusions, cholestasis) c. pancreas (e.g., pancreatitis, thrombosis, cystitis) d. heart (e.g., arrhythmias, ventricular failure, tamponade, pacemaker) e. lung (e.g., pneumothorax, effusion, stenosis) f. intestines (e.g., stoma output) 				

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2. General <ul style="list-style-type: none"> a. Impaired wound healing b. Hypoglycemia and hyperglycemia c. Hypotension and hypertension d. Altered bowel function e. Altered nutrition f. Altered mobility / self-care deficit g. Respiratory h. Neurological (e.g., post-op delirium) i. Tubes, lines, and wires (e.g., malfunctions with t-tubes, VAD lines, pumps) D. Care for the Living Donor <ul style="list-style-type: none"> 1. Pain control 2. Psychological support 3. Complications 				
3. Transplantation Management	8	19	10	37
A. Evaluate Graft Function <ul style="list-style-type: none"> 1. Graft dysfunction (primary graft non-function, ATN, reperfusion injury) 2. Rejection surveillance (e.g., cellular rejection and antibody-mediated rejection) <ul style="list-style-type: none"> a. signs and symptoms of rejection (e.g., cellular and AMR) b. diagnostic testing (e.g., cellular and AMR) c. treatments 3. Post-biopsy monitoring and education B. Recognize Signs and Symptoms of Infections <ul style="list-style-type: none"> 1. Viral 2. Bacterial 3. Fungal 4. Protozoal 5. Parasites C. Infection Control <ul style="list-style-type: none"> 1. Implication of donor / recipient viral status (e.g., CMV, EBV, HSV) 2. Pharmacological measures (e.g., medications, immunizations) 3. Non-pharmacological measures (e.g., hand-washing, aspergillus precautions) 				

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	Cognitive Levels			Total
	Recall	Application	Analysis	
D. Monitor for Long Term Complications <ol style="list-style-type: none"> 1. Chronic rejection 2. Malignancies (e.g., skin cancer, Post-Transplant Lymphoproliferative Disorder) 3. Metabolic disorders (e.g., obesity, diabetes mellitus, dyslipidemia) 4. Chronic Kidney Disease 5. Cardiovascular disease (e.g., hypertension) 6. Bone disease (e.g., osteoporosis, hypovitamin D, parathyroid, AVN) 7. Transplant specific infections (e.g., BK Viremia) 8. Recurrent primary disease (e.g., IGA nephropathy, GN) E. Provide Support for Psycho-Social Issues <ol style="list-style-type: none"> 1. Changes in lifestyle and body image 2. Adherence to the plan of care (e.g., consequences of non-adherence) 3. Coping strategies and mental health with chronic disease (e.g., intervening for changes in mood, psychosis, anxiety, depression, PTSD) 4. Financial implications 5. Support systems 6. Cultural / religious issues 7. Advance care planning / palliative care (e.g., POA, end-of-life, ethics, consults) 8. Educating recipient and family regarding donor correspondence 				
4. Pharmacological Therapeutics	5	5	13	23
A. Administer Induction Agents and Immunosuppressive Drugs <ol style="list-style-type: none"> 1. Indications 2. Side effects 3. Interactions 4. Therapeutic levels 5. Effect on other lab values 6. Safe handling (for staff) B. Administer Transplant Related Non-Immunosuppressive Drugs <ol style="list-style-type: none"> 1. Indications 2. Side effects 3. Interactions 4. Therapeutic levels 5. Effect on other lab values 				

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	Cognitive Levels			Total
	Recall	Application	Analysis	
5. Education and Discharge	5	14	4	23
<ul style="list-style-type: none"> A. Discharge a Recipient Safely <ul style="list-style-type: none"> 1. Validating return-demonstration and recording of home regimen (e.g., vital signs, intake / output, glucose monitoring) 2. Reinforcing the medication regimen <ul style="list-style-type: none"> a. dose and frequency (e.g., missed doses) b. side effects c. interactions (e.g., other meds, over the counter, herbals, diet) d. financial issues e. refills (e.g., generic, brand) f. medication safety (for caregivers) 3. Reinforcing discharge instructions <ul style="list-style-type: none"> a. signs and symptoms of infection / rejection b. outpatient follow-up (e.g., primary care transition) c. infection control measures B. Ensure the Recipient Understands the Long-Term Care Plan <ul style="list-style-type: none"> 1. Immunizations 2. Physical activities 3. Sexuality, pregnancy, and birth control 4. Travel 5. Dietary changes (e.g., food safety and handling) 6. Emergency resources / disaster preparedness 7. Health maintenance (e.g., cancer screening, high-risk behaviors) 8. Return to work / school 9. Animal safety 				
6. Professional Responsibilities	6	8	0	14
<ul style="list-style-type: none"> A. Support Transplantation Practices and Education <ul style="list-style-type: none"> 1. Maintaining current transplant knowledge and skills 2. Educating other health care providers, new staff and nursing students, and the general public 3. Participating in quality assurance / performance improvement activities B. Act on Ethical/Legal Issues <ul style="list-style-type: none"> 1. Maintaining donor and recipient confidentiality 2. Addressing discrepancies between personal values and difficult candidate / recipient situations 3. Addressing ethical / moral dilemmas 				

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C. Articulate Advances in Organ Donation/Transplantation <ol style="list-style-type: none"> 1. Advocating for living donation (e.g., paired kidney donation) 2. Donation after cardiac death 3. Extended criteria (e.g., HCV, HIV, en bloc, incarceration) 4. New technologies to enhance transplant procedures and improve patient care (e.g., ex vivo lung perfusion, mechanical circulatory support) 				
Totals	35	65	50	150


- * Each test form will include 1 set of 25 unscored pretest items in addition to the 150 scored items.
3 hours of testing time.
Initial base form passing point by Angoff method to be approved by the ABTC.
Future passing points established through pre-equating.


CCTN Secondary Specifications

Content Domain	Total Items	General	Kidney	Liver	Heart	Lung	Pancreas	Intestine	Multi-organ
1. Pretransplantation Care	15	5-10	2-6	1-3	0-2	0-2	0-1	0-1	0-1
2. Care Immediately Posttransplantation	38	4-8	16-20	4-8	1-3	0-2	0-1	0-1	0-1
3. Transplantation Management	37	11-15	12-16	2-6	0-2	0-2	0-1	0-1	0-1
4. Pharmacological Therapeutics	23	9-23	0-5	0-3	0-1	0-1	0-1	0-1	0-1
5. Education and Discharge	23	10-23	0-5	0-3	0-1	0-1	0-1	0-1	0-1
6. Professional Responsibilities	14	6-14	0-3	0-2	0-1	0-1	0-1	0-1	0-1
Minimums	150	45	30	7	1	0	0	0	0
Maximums	150	93	55	25	10	9	6	6	6


Specifications by Recipient Age


Recipient Age	Items
pediatric	8
adult	142
	150

 American Board for Transplant Certification Certified Procurement Transplant Coordinator (CPTC) Detailed Content Outline*	Cognitive Level			Total
	Recall	Application	Analysis	
Items are linked to open cells.				
I. DONATION PROCESS SUPPORT	4	7	4	15
A. Predonation Activities	2	3	3	8
1. Establish clinical triggers to encourage timely referrals of potential donors from each hospital				
2. Develop collaborative relationships with key hospital staff and physicians at all levels that impact the donation process				
3. Follow up routinely on each potential referral				
4. Provide hospital-based education in collaboration with hospital development staff				
B. Postauthorization Activities	2	4	1	7
1. Refer to hospital profiles to identify key information in preparation for starting a case (for example, donation champions, policies)				
2. Determine the impact of other agencies on the donation process (for example, eye/tissue bank, other OPOs, medical examiner/coroner)				
3. Contribute to a formal process for timely follow-up communication (for example, post-donor case conference, unit visits, evaluation forms)				
II. DONOR IDENTIFICATION	11	17	8	36
A. Referral Management	3	3	1	7
1. Determine donor registry status				
2. Inform hospital staff of donor designation and subsequent donation process				
3. Assess family dynamics, availability of hospital support system, and family needs (for example, cultural, religious, physical, emotional, informational)				
4. Support hospital personnel throughout the donation process				
5. Record the outcome of donor referral				
B. Donor Determination	2	3	4	9
1. Confirm a plan of care that includes a decision to withdraw support (for example, patient, family, physician)				
2. Determine suitability for DCD				

 American Board for Transplant Certification Certified Procurement Transplant Coordinator (CPTC) Detailed Content Outline*	Cognitive Level			Total
	Recall	Application	Analysis	
3. Support the family throughout the donation process				
4. Confirm legal and hospital requirements for death declaration				
C. Authorization	6	11	3	20
1. Identify				
a. the legal next of kin in the absence of a donor designation to obtain authorization				
b. key individuals involved in authorization and end-of-life decisions (for example, family, friends, clergy, physician)				
2. Coordinate the authorization process in collaboration with hospital staff				
3. Assess a family's understanding of brain death				
4. Inform a family of donor designation and subsequent donation process				
5. Coordinate the donation request by facilitating an informed decision				
6. Document the outcome of the authorization conversation				
7. Confirm a properly executed authorization form (for example, next of kin, highest priority of authorization, directed donation) or donor disclosure form (for example, donor registry card, signed donor card)				
8. Complete the history questionnaire (for example, medical, social, behavioral, admission)				
9. Complete billing and expense information				
III. DONOR MANAGEMENT	16	21	23	60
A. Assessment	8	9	3	20
1. Initiate standing orders for baseline donor assessment				
2. Initiate the confidential donor record (for example, ABO verifications, lab data, serologies, hemodynamics, hemodilution status)				
3. Document the pre-hospital and hospital course (for example, down-time, injuries, hemodynamics, infection status)				
4. Perform a bedside assessment (for example, ventilator settings, vital signs, physical findings, neurologic examination)				

Items are linked to open cells.

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Items are linked to open cells.				
5. Obtain samples for				
a. tissue-typing				
b. serology				
c. laboratory values (for example, CBC, electrolytes, culture results, organ function tests)				
6. Evaluate diagnostic procedure results (for example, cardiac, pulmonary, pathology)				
7. Assess suitability of organs for donation				
B. Interventions	8	12	20	40
1. Initiate orders to optimize organ viability (for example, ventilator settings, infusions, pharmacological support)				
2. Optimize ongoing donor hemodynamic and pulmonary stability				
3. Treat acute and chronic clinical abnormalities				
IV. ALLOCATION AND RECOVERY	15	21	3	39
A. Allocation	7	10	0	17
1. Register a donor with OPTN				
2. Determine donor type (for example, SCD, ECD, DCD)				
3. Disclose current and past medical history and behavioral history				
4. Adhere to OPTN allocation policies				
5. Complete required documentation (for example, match-run list, Deceased Donor Registration)				
6. Coordinate OR times				
7. Arrange for transportation (for example, personnel, organs)				
8. Provide required documentation to agencies (for example, transplant centers, OPTN, tissue recovery)				
9. Place organ(s) for research and education				
B. Organ Recovery and Preservation	8	11	3	22
1. Ensure necessary surgical personnel and supplies are present				
2. Verify recovery surgeon credentials (for example, ACIN)				
3. Maintain donor stability during transport to the OR (for example, IV line patency, oxygenation, vital signs)				

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	Recall	Application	Analysis	
Items are linked to open cells.				
4. Support OR and anesthesia staff (for example, management and documentation guidelines, scrub and assist during recovery)				
5. Coordinate the activity and interaction of the recovery team(s)				
6. Ensure aseptic technique is used throughout the donor's time in the OR (for example, donor prep, organ packaging, preservation)				
7. Facilitate organ preservation (for example, solutions, equipment, ice, pulsatile preservation)				
8. Document data associated with organ recovery (for example, anatomy, flush, cross-clamp, warm time, biopsies, operative note)				
9. Ensure all organs and specimens are obtained, packaged, and labeled in accordance with current OPTN policies				
10. Complete post-mortem care				
11. Notify agencies and individuals of case completion (for example, tissue agency, family, funeral home, medical examiner/coroner)				
TOTAL	46	66	38	150

* Each new test form will include one 25-item pretest set (e.g., 1A, 2A).