The 2020 AST Education Needs Assessment Survey was distributed to all AST members from February 6 to March 6, 2020. The survey included a topical specialty section based on each of AST’s Communities of Practice (COP).

316 participants began the “Kidney and Pancreas” specialty section and 289 completed the section. A breakdown of the information gathered from these participants is provided in this report.

I. “Kidney and Pancreas” Specialty Section Participants

Role of Participants:

Participants were asked, “Which best describes you? (please choose one).” Based on the 316 participants who started the KPCOP specialty section, the chart below outlines the roles that were represented (results from all participants in the survey are provided for comparison).

<table>
<thead>
<tr>
<th>Role</th>
<th>Specialty Participants</th>
<th>Overall Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physician/Primarily Research</td>
<td>23 (7.3%)</td>
<td>65 (8.7%)</td>
</tr>
<tr>
<td>Physician/Primarily Clinical</td>
<td>128 (40.5%)</td>
<td>316 (42.4%)</td>
</tr>
<tr>
<td>Surgeon/Primarily Research</td>
<td>2 (0.6%)</td>
<td>12 (1.6%)</td>
</tr>
<tr>
<td>Surgeon/Primarily Clinical</td>
<td>25 (7.9%)</td>
<td>45 (6.0%)</td>
</tr>
<tr>
<td>Administrator</td>
<td>18 (5.7%)</td>
<td>34 (4.6%)</td>
</tr>
<tr>
<td>Advanced Practice Provider</td>
<td>24 (7.6%)</td>
<td>43 (5.8%)</td>
</tr>
<tr>
<td>Histocompatibility Specialist</td>
<td>7 (2.2%)</td>
<td>23 (3.1%)</td>
</tr>
<tr>
<td>Nurse/Transplant Coordinator</td>
<td>9 (2.9%)</td>
<td>16 (2.1%)</td>
</tr>
<tr>
<td>Pharmacist</td>
<td>55 (17.4%)</td>
<td>104 (14.0%)</td>
</tr>
<tr>
<td>Psychologist/Psychiatrist</td>
<td>2 (0.6%)</td>
<td>12 (1.6%)</td>
</tr>
<tr>
<td>Social Worker</td>
<td>9 (2.9%)</td>
<td>19 (2.6%)</td>
</tr>
<tr>
<td>Researcher/Scientist</td>
<td>8 (2.5%)</td>
<td>37 (5.0%)</td>
</tr>
<tr>
<td>Other</td>
<td>6 (1.9%)</td>
<td>19 (2.6%)</td>
</tr>
</tbody>
</table>
**Affiliation of Participants:**

Participants were asked what is their "Affiliation (please choose one.)" Based on the 316 participants who started the KPCOP specialty section, the chart below outlines the affiliations that were represented (results from all participants in the survey are provided for comparison).

<table>
<thead>
<tr>
<th>Affiliation</th>
<th>Specialty Participants</th>
<th>Overall Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic</td>
<td>168 (53.2%)</td>
<td>427 (57.3%)</td>
</tr>
<tr>
<td>Government or Military</td>
<td>2 (0.6%)</td>
<td>9 (1.2%)</td>
</tr>
<tr>
<td>Hospital</td>
<td>127 (40.2%)</td>
<td>256 (34.4%)</td>
</tr>
<tr>
<td>Industry</td>
<td>5 (1.6%)</td>
<td>16 (2.1%)</td>
</tr>
<tr>
<td>Organ Procurement Organization</td>
<td>2 (0.6%)</td>
<td>15 (2.0%)</td>
</tr>
<tr>
<td>Stand-alone Private Practice</td>
<td>8 (2.5%)</td>
<td>13 (1.7%)</td>
</tr>
<tr>
<td>Other</td>
<td>4 (1.3%)</td>
<td>9 (1.2%)</td>
</tr>
</tbody>
</table>

**Experience Level of Participants:**

Participants were asked to “Please enter your level of experience/years in practice.” Based on the 316 participants who started the KPCOP specialty section, the chart below outlines the levels of experience that were represented (results from all participants in the survey are provided for comparison).

<table>
<thead>
<tr>
<th>Level of Experience</th>
<th>Specialty Participants</th>
<th>Overall Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not yet in training</td>
<td>1 (0.3%)</td>
<td>5 (0.7%)</td>
</tr>
<tr>
<td>In training (resident)</td>
<td>7 (2.2%)</td>
<td>16 (2.1%)</td>
</tr>
<tr>
<td>In training (fellow)</td>
<td>20 (6.3%)</td>
<td>46 (6.2%)</td>
</tr>
<tr>
<td>&lt;5 years</td>
<td>88 (27.9%)</td>
<td>182 (24.4%)</td>
</tr>
<tr>
<td>6-10 years</td>
<td>58 (18.4%)</td>
<td>147 (19.7%)</td>
</tr>
<tr>
<td>11-15 years</td>
<td>38 (12.0%)</td>
<td>123 (16.5%)</td>
</tr>
<tr>
<td>16-20 years</td>
<td>32 (10.1%)</td>
<td>81 (10.9%)</td>
</tr>
<tr>
<td>21+ years</td>
<td>72 (22.8%)</td>
<td>145 (19.7%)</td>
</tr>
</tbody>
</table>
II. KPCOP’s “Kidney and Pancreas” Specialty Section Data

KPCOP Topic Lists:

A list of important and timely topics was created for the 2020 Needs Assessment Survey specialty sections by KPCOP Leadership and the AST Education Committee. Participants were asked to “Rate each educational topic’s importance to you” as either 1) “Not interested,” 2) “Interested but have sufficient knowledge” or 3) “Interested & want/need to learn more.”

A separate list was created for both Kidney and Pancreas topics. Each member who selected the “Kidney and Pancreas” specialty was asked to provide feedback on both lists.

Below are the results from the 289 participants who completed this specialty section. Kidney and Pancreas topic results will be listed separately to mirror the format of the survey.

KPCOP (Kidney) Specialty Topics – Overall Ranking: The topic list has been ranked below based on a weighted mean score of up to 3.0, with “Interested & want/need to learn more” weighted highest, “Interested but have sufficient knowledge” weighted next highest, and “Not interested” weighted lowest (out of 289 results).

1. Donor specific antibodies monitoring and treatment strategies (including managing patients with de novo DSA and stable allograft function): 2.66
2. Chronic humoral rejection management: 2.65
3. Tools to improve medication adherence in high risk patient populations: 2.64
4. Immunosuppression management in the setting of acute infections and malignancy: 2.63
5. Common virus and fungal complications post-transplantation: 2.59
7. Evaluation and management of a failing allograft: 2.53
8. Increased risk transplant candidates (i.e. HIV, Amyloidosis, etc.): 2.51
9. Risk stratify and manage cardiovascular complications pre and post transplantation: 2.46
10. Strategies following the loss of Medicare 3 years after transplant: 2.40
11. Cancer surveillance following transplant: 2.37
12. Evaluation, use of KDPI > 85 donors and immunosuppression in older recipients: 2.36
13. Cardiovascular evaluation and management of patients on the kidney transplant waiting list: 2.34
15. Wait list management: 2.25

KPCOP (Pancreas) Specialty Topics – Overall Ranking: The topic list has been ranked below based on a weighted mean score of up to 3.0, with “Interested & want/need to learn more” weighted highest, “Interested but have sufficient knowledge” weighted next highest, and “Not interested” weighted lowest (out of 289 results).

1. Simultaneous pancreas/kidney vs pancreas after living donor kidney transplant: 2.26
2. Pancreas transplantation versus medical therapy: 2.25
3. Cardiovascular evaluation of pancreas transplant candidates: 2.01
4. Strategies to grow a pancreas transplant program: 1.96
KPCOP (Kidney) Specialty Topics – “Interested and want/need to learn more” Only: The topic list has been ranked below based exclusively on the number of “Interested and want/need to learn more” results (out of 289 results).

1. Chronic humoral rejection management: 220
2. (Tied) Tools to improve medication adherence in high risk patient populations: 217
   (Tied) Donor specific antibodies monitoring and treatment strategies (including managing patients with de novo DSA and stable allograft function): 217
3. Immunosuppression management in the setting of acute infections and malignancy: 203
5. Increased risk transplant candidates (i.e. HIV, Amyloidosis, etc.): 195
6. Strategies following the loss of Medicare 3 years after transplant: 185
7. Evaluation and management of a failing allograft: 184
8. Risk stratify and manage cardiovascular complications pre and post transplantation: 180
9. Strategies to grow a pancreas transplant program: 23

KPCOP (Pancreas) Specialty Topics – “Interested and want/need to learn more” Only: The topic list has been ranked below based exclusively on the number of “Interested and want/need to learn more” results (out of 289 results).

1. Pancreas transplantation versus medical therapy: 165
2. Simultaneous pancreas/kidney vs pancreas after living donor kidney transplant: 158
3. Cardiovascular evaluation of pancreas transplant candidates: 119
4. Strategies to grow a pancreas transplant program: 23

KPCOP (Kidney) Specialty Topics – “Not interested” Only: The following topics received the highest number of “Not interested” results (out of 289 results).

- Wait list management: 84
- Bone: hyperparathyroidism and osteopenia/osteoporosis management post-transplant: 71
- Strategies following the loss of Medicare 3 years after transplant: 69
- Cardiovascular evaluation and management of patients on the kidney transplant waiting list: 63
- Evaluation, use of KDPI > 85 donors and immunosuppression in older recipients: 62
- Cancer surveillance following transplant: 60

KPCOP (Pancreas) Specialty Topics – “Not interested” Only: The following topics received the highest number of “Not interested” results (out of 289 results).

- Strategies to grow a pancreas transplant program: 138
- Cardiovascular evaluation of pancreas transplant candidates: 117
- Pancreas transplantation versus medical therapy: 94
- Simultaneous pancreas/kidney vs pancreas after living donor kidney transplant: 82
**KPCOP Question on Applying New Knowledge for Patient Care:** Participants were asked “What would your practice need to apply new knowledge for the goal of improving patient care? (Check all that apply).” Here are the results.

<table>
<thead>
<tr>
<th>Need</th>
<th>No# of Times Selected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trained pharmacist</td>
<td>91</td>
</tr>
<tr>
<td>Additional nursing staff for patient education</td>
<td>121</td>
</tr>
<tr>
<td>Physician assistant</td>
<td>62</td>
</tr>
<tr>
<td>Other*</td>
<td>21</td>
</tr>
</tbody>
</table>

* “Other” types of need listed by participants included:

- [Other] Clinical psychologist
- [Other] more access to transplant cardiology
- [Other] more pediatric and adolescent-focused materials
- [Other] More quality improvement specialists
- [Other] UNOS
- [Other] Quality Coordinator
- [Other] Nurse practitioner
- [Other] resources for educational development
- [Other] Physicians
- [Other] Additional transplant nephrologists, APPs and nurses.
- [Other] Additional physicians
- [Other] Patient facilitator and dedicated IT person
- [Other] Social worker
- [Other] Nurse educator
- [Other] Research technical assistance
- [Other] I think overall, we need more hospital staff in general for various aspect of transplant. For example, the more education APPs can get, the more education they can provide in addition to the transplant coordinators, pharmacist, etc. Another huge area at least where I work is that patients aren't mobilizing frequently and the main complaint from nursing staff is the lack of staff/time. I think if we can apply new knowledge to even the nursing staff, everyone can reinforce education so the patient succeeds pre and post-transplant
  - [Other] More time!
  - [Other] transplant coordinator assistant
  - [Other] Mir RN coordination and 2 NPs
  - [Other] Trained sub-specialty pathologist
  - [Other] Psychologist

---

Please see the pie charts on the following pages for a topic-by-topic breakdown of participant interest in each topic.

If you have follow-up questions, or would like additional details on a result, please contact the AST Education Program Manager, Brian Valeria (bvaleria@myast.org) for more information.
2020 Education Needs Assessment: Kidney Topics
Evaluation, use of KDPI > 85 donors and immunosuppression in older recipients

- Not interested, 21.45%
- Interested but have sufficient knowledge, 21.11%
- Interested & want/need to learn more, 57.44%

Common virus and fungal complications post-transplantation

- Not interested, 8.65%
- Interested but have sufficient knowledge, 23.88%
- Interested & want/need to learn more, 67.47%
Wait list management

Not interested, 29.07%
Interested but have sufficient knowledge, 16.96%
Interested & want/need to learn more, 53.98%

Risk stratify and manage cardiovascular complications pre and post transplantation

Not interested, 16.26%
Interested but have sufficient knowledge, 21.45%
Interested & want/need to learn more, 62.28%
Donor specific antibodies monitoring and treatment strategies (including managing patients with de novo DSA and stable allograft function)

- Not interested: 8.65%
- Interested but have sufficient knowledge: 16.26%
- Interested & want/need to learn more: 75.09%

Chronic humoral rejection management

- Not interested: 10.73%
- Interested but have sufficient knowledge: 13.15%
- Interested & want/need to learn more: 76.12%
Tools to improve medication adherence in high risk patient populations

Not interested, 11.07%
Interested but have sufficient knowledge, 13.84%
Interested & want/need to learn more, 75.09%

Recurrent kidney disease post-transplantation: monitor and treat

Not interested, 12.80%
Interested but have sufficient knowledge, 19.38%
Interested & want/need to learn more, 67.82%
Bone: hyperparathyroidism and osteopenia/osteoporosis management post-transplant

- Not interested, 24.57%
- Interested but have sufficient knowledge, 21.80%
- Interested & want/need to learn more, 53.63%

Cancer surveillance following transplant

- Not interested, 20.76%
- Interested but have sufficient knowledge, 21.80%
- Interested & want/need to learn more, 57.44%
Strategies following the loss of Medicare 3 years after transplant

- Not interested, 23.88%
- Interested but have sufficient knowledge, 12.11%
- Interested & want/need to learn more, 64.01%

Cardiovascular evaluation and management of patients on the kidney transplant waiting list

- Not interested, 21.80%
- Interested but have sufficient knowledge, 22.84%
- Interested & want/need to learn more, 55.36%
Increased risk transplant candidates (i.e. HIV, Amyloidosis, etc.)

- Not interested, 16.61%
- Interested but have sufficient knowledge, 15.92%
- Interested & want/need to learn more, 67.47%
2020 Education Needs Assessment: Pancreas Topics
Simultaneous pancreas/kidney vs pancreas after living donor kidney transplant

- Not interested, 28.37%
- Interested but have sufficient knowledge, 16.96%
- Interested & want/need to learn more, 54.67%

Strategies to grow a pancreas transplant program

- Not interested, 47.75%
- Interested but have sufficient knowledge, 9.69%
- Interested & want/need to learn more, 42.56%
Cardiovascular evaluation of pancreas transplant candidates

Not interested, 40.48%
Interested but have sufficient knowledge, 18.34%
Interested & want/need to learn more, 41.18%

Pancreas transplantation versus medical therapy

Not interested, 32.53%
Interested but have sufficient knowledge, 10.38%
Interested & want/need to learn more, 57.09%