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).

66 participants began the “Advance Practice Providers” specialty section and 65 completed the section. A breakdown of the information gathered from these participants is provided in this report.

I. “Advance Practice Provider” Specialty Section Participants

Role of Participants:

Participants were asked, “Which best describes you? (please choose one).” Based on the 66 participants who started the APP COP 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>0</td>
<td>65 (8.7%)</td>
</tr>
<tr>
<td>Physician/Primarily Clinical</td>
<td>7 (10.6%)</td>
<td>316 (42.4%)</td>
</tr>
<tr>
<td>Surgeon/Primarily Research</td>
<td>2 (3.0%)</td>
<td>12 (1.6%)</td>
</tr>
<tr>
<td>Surgeon/Primarily Clinical</td>
<td>2 (3.0%)</td>
<td>45 (6.0%)</td>
</tr>
<tr>
<td>Administrator</td>
<td>7 (10.6%)</td>
<td>34 (4.6%)</td>
</tr>
<tr>
<td>Advanced Practice Provider</td>
<td>37 (56.1%)</td>
<td>43 (5.8%)</td>
</tr>
<tr>
<td>Histocompatibility Specialist</td>
<td>3 (4.5%)</td>
<td>23 (3.1%)</td>
</tr>
<tr>
<td>Nurse/Transplant Coordinator</td>
<td>0</td>
<td>16 (2.1%)</td>
</tr>
<tr>
<td>Pharmacist</td>
<td>4 (6.1%)</td>
<td>104 (14.0%)</td>
</tr>
<tr>
<td>Psychologist/Psychiatrist</td>
<td>0</td>
<td>12 (1.6%)</td>
</tr>
<tr>
<td>Social Worker</td>
<td>2 (3.0%)</td>
<td>19 (2.6%)</td>
</tr>
<tr>
<td>Researcher/Scientist</td>
<td>2 (3.0%)</td>
<td>37 (5.0%)</td>
</tr>
<tr>
<td>Other</td>
<td>0</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 66 participants who started the APP COP 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>26 (39.4%)</td>
<td>427 (57.3%)</td>
</tr>
<tr>
<td>Government or Military</td>
<td>0</td>
<td>9 (1.2%)</td>
</tr>
<tr>
<td>Hospital</td>
<td>32 (48.5%)</td>
<td>256 (34.4%)</td>
</tr>
<tr>
<td>Industry</td>
<td>3 (4.5%)</td>
<td>16 (2.1%)</td>
</tr>
<tr>
<td>Organ Procurement Organization</td>
<td>1 (1.5%)</td>
<td>15 (2.0%)</td>
</tr>
<tr>
<td>Stand-alone Private Practice</td>
<td>4 (6.1%)</td>
<td>13 (1.7%)</td>
</tr>
<tr>
<td>Other</td>
<td>0</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 66 participants who started the APP COP 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>0</td>
<td>5 (0.7%)</td>
</tr>
<tr>
<td>In training (resident)</td>
<td>1 (1.5%)</td>
<td>16 (2.1%)</td>
</tr>
<tr>
<td>In training (fellow)</td>
<td>3 (4.5%)</td>
<td>46 (6.2%)</td>
</tr>
<tr>
<td>&lt;5 years</td>
<td>15 (22.7%)</td>
<td>182 (24.4%)</td>
</tr>
<tr>
<td>6-10 years</td>
<td>15 (22.7%)</td>
<td>147 (19.7%)</td>
</tr>
<tr>
<td>11-15 years</td>
<td>8 (12.1%)</td>
<td>123 (16.5%)</td>
</tr>
<tr>
<td>16-20 years</td>
<td>8 (12.1%)</td>
<td>81 (10.9%)</td>
</tr>
<tr>
<td>21+ years</td>
<td>16 (24.2%)</td>
<td>145 (19.7%)</td>
</tr>
</tbody>
</table>
II. APP COP’s “Advance Practice Provider” Specialty Section Data

A list of important and timely topics was created for the 2020 Needs Assessment Survey specialty sections by APP COP Leadership and the AST Education Committee. Participants were asked to “Rate each Advance Practice Provider 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.”

Here are the results from the 65 participants who completed this specialty section.

APP COP 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).

1. (Tied) Post-transplant management protocols: 2.8
   (Tied) Management of immunosuppression in the setting of acute infectious complications and malignancy: 2.8
2. How to optimize APPs working at the top of their scope of practice: 2.78
3. Management of multi-organ transplant recipients: 2.74
4. Update on interventions to reduce readmissions: 2.71
5. Vaccines and optimizing immune response before and after transplantation – what is the ideal timing and schedule for vaccines in transplant recipients?: 2.63
6. Management of the failing kidney allograft: 2.6
7. Transplant candidate selection: 2.58
8. How to manage transplant patients in outreach settings.: 2.55
9. Are there different roles for Advanced Practice Providers that are organ specific?: 2.54
10. (Tied) APP role in the interdisciplinary team: 2.51
    (Tied) APP role in research and publishing: how to get started: 2.51
11. Role in the outpatient transplant clinics - What are my responsibilities?: 2.48
12. Waitlist management: 2.32
13. Pediatric patients: when and how to transition to adult care: 2

APP COP 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 65 results).

1. How to optimize APPs working at the top of their scope of practice: 55
2. (Tied) Post-transplant management protocols: 53
   (Tied) Management of immunosuppression in the setting of acute infectious complications and malignancy: 53
4. (Tied) Management of multi-organ transplant recipients: 51
   (Tied) Update on interventions to reduce readmissions: 51
6. Management of the failing kidney allograft: 49
7. How to manage transplant patients in outreach settings.: 46
8. (Tied) Vaccines and optimizing immune response before and after transplantation – what is the ideal timing and schedule for vaccines in transplant recipients?: 45
   (Tied) Are there different roles for Advanced Practice Providers that are organ specific?: 45
10. (Tied) Transplant candidate selection: 42
    (Tied) APP role in research and publishing: how to get started: 42
12. Role in the outpatient transplant clinics - What are my responsibilities?: 40
13. APP role in the interdisciplinary team: 38
14. Waitlist management: 32
15. Pediatric patients: when and how to transition to adult care: 26
APP COP Specialty Topics – “Not interested” Only: The following topics received the highest number of “Not interested” results (out of 65 results).

- Pediatric patients: when and how to transition to adult care: 26
- Waitlist management: 11
- Management of the failing kidney allograft: 10
- How to manage transplant patients in outreach settings: 10
- Are there different roles for Advanced Practice Providers that are organ specific?: 10

Please see the following charts for a topic-by-topic breakdown of participant interest by category selected.

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.
**Post-transplant management protocols**

- Not interested, 1.54%
- Interested but have sufficient knowledge, 16.92%
- Interested & want/need to learn more, 81.54%

**Transplant candidate selection**

- Not interested, 6.15%
- Interested but have sufficient knowledge, 29.23%
- Interested & want/need to learn more, 64.62%
Waitlist management

- Not interested, 16.92%
- Interested but have sufficient knowledge, 33.85%
- Interested & want/need to learn more, 49.23%

Management of the failing kidney allograft

- Not interested, 15.38%
- Interested but have sufficient knowledge, 9.23%
- Interested & want/need to learn more, 75.38%
**Management of multi-organ transplant recipients**

- Not interested, 4.62%
- Interested but have sufficient knowledge, 16.92%
- Interested & want/need to learn more, 78.46%

**APP role in the interdisciplinary team**

- Not interested, 7.69%
- Interested but have sufficient knowledge, 33.85%
- Interested & want/need to learn more, 58.46%
How to optimize APPs working at the top of their scope of practice

- Interested & want/need to learn more, 84.62%
- Interested but have sufficient knowledge, 9.23%
- Not interested, 6.15%

APP role in research and publishing: how to get started

- Interested & want/need to learn more, 64.62%
- Interested but have sufficient knowledge, 21.54%
- Not interested, 13.85%
Management of immunosuppression in the setting of acute infectious complications and malignancy

- Not interested, 1.54%
- Interested but have sufficient knowledge, 16.92%
- Interested & want/need to learn more, 81.54%

Vaccines and optimizing immune response before and after transplantation – what is the ideal timing and schedule for vaccines in transplant recipients?

- Not interested, 6.15%
- Interested but have sufficient knowledge, 24.62%
- Interested & want/need to learn more, 69.23%
How to manage transplant patients in outreach settings.

- Not interested, 15.38%
- Interested but have sufficient knowledge, 13.85%
- Interested & want/need to learn more, 70.77%

Pediatric patients: when and how to transition to adult care

- Not interested, 40.00%
- Interested & want/need to learn more, 20.00%
- Interested but have sufficient knowledge, 20.00%
Update on interventions to reduce readmissions

- Not interested, 7.69%
- Interested but have sufficient knowledge, 13.85%
- Interested & want/need to learn more, 78.46%

Role in the outpatient transplant clinics – What are my responsibilities?

- Not interested, 13.85%
- Interested but have sufficient knowledge, 24.62%
- Interested & want/need to learn more, 61.54%
Are there different roles for Advanced Practice Providers that are organ specific?

Not interested, 15.38%

Interested but have sufficient knowledge, 15.38%

Interested & want/need to learn more, 69.23%