Real-World Referral Patterns of PAH Patients to PHA-Accredited Comprehensive Care Centers in the State of Texas 2019-2020

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Disclosures

- Grants/Research Support: ACCP CHEST grant, research grant from United Therapeutics
- Consultant: United Therapeutics, J&J, Bayer, Gossamer Bio, Liquidia Technologies
- Speaker’s Bureau: Bayer, United Therapeutics, Bayer (honorarium received by Houston Methodist Hospital Foundation)
- Clinical trial support: United Therapeutics, J&J, Gossamer Bio, Altavant Sciences, Liquidia Technologies, Boehringer Ingelheim, Novartis
Background & Purpose

- Guidelines on PH highlight the expertise of PH centers in the diagnosis and treatment of PH\textsuperscript{1,2}
  - PH centers offer a multi-disciplinary approach to diagnosis and treatment
  - Improved outcomes in mortality and hospitalization have been associated with care delivered to PAH patients at PH centers\textsuperscript{3}

- This analysis explores the pattern of referral of PAH patients in one geographic region to these specialized centers


Adapted from Humbert M et al. 2022
Methods (1)

- Retrospective analysis of Texas PAH patients receiving PAH-specific therapy who visited an adult PHA-accredited Center of Comprehensive Care¹ (CCC) in the state

- Data were drawn from the Clarivate Real World Data repository (medical claims database)

- Patient selection:
  - ≥ 18 years
  - ≥ 2 PH diagnosis code (416.0, I27.0, I27.21) ≥ 30 days apart
  - PAH-specific medication
  - ≥ 2 medical claims of any type in both 2019 and 2020
  - Resident of Texas

¹ Patients with multiple PH diagnostic codes and/or a diagnosis of erectile dysfunction were excluded

¹https://phassociation.org/phcarecenters
Methods (2)

- Patients with ≥ 1 medical claim associated with an adult Texas CCC* were designated “CCC patients”
- This proportion was compared to the total number of Texas PAH patients

Rationale for selecting the Texas CCCs as a proxy for analysis:

- Geography
- PHA CCC designation identifies centers as having special expertise in PAH

*Houston Methodist Lung Center (Houston) & Pulmonary Hypertension Program UT Southwestern Medical Center (Dallas)
Results (1)

PAH Patient Demographics*

<table>
<thead>
<tr>
<th>Sex</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>399 (79)</td>
</tr>
<tr>
<td>Male</td>
<td>104 (21)</td>
</tr>
</tbody>
</table>

Age

<table>
<thead>
<tr>
<th>Age</th>
<th>Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median</td>
<td>67</td>
</tr>
</tbody>
</table>

35% of Texas PAH patients visited an PHA-accredited CCC in Texas over the two-year period

*Texas, 2019-2020, N=503
## Results (2)

### CCC vs. Non-CCC Patient Demographics

(Texas, 2019 – 2020, N=503)

<table>
<thead>
<tr>
<th></th>
<th>CCC (n = 176)</th>
<th>Non-CCC (n = 327)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>149 (85)</td>
<td>250 (76)</td>
</tr>
<tr>
<td>Male</td>
<td>27 (15)</td>
<td>77 (24)</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Median</td>
<td>60</td>
<td>69</td>
</tr>
</tbody>
</table>

Compared to non-CCC patients, CCC patients were younger and more predominantly female.
Conclusions & Clinical Implications

- This real-world data suggests that PH centers may be underutilized
- Additional research is needed to:
  - Understand national referral patterns
  - Identify and reduce barriers to PH center access
- A growing number of PH centers have been formed in the U.S., increasing the opportunity for the community to partner with these centers

Limitations: Data was pulled using ICD codes, a small cohort limited to a single state, and the exclusion of non-CCC designated expert centers