PULMONARY/CRITICAL CARE MEDICINE

Pulmonary/critical care medicine is a broad subspecialty that now includes the diagnosis and management of disorders of the lungs, upper airways, thoracic cavity, and chest wall as well as the management of patients in intensive care units. The pulmonary specialist has expertise in neoplastic, inflammatory, and infectious disorders of the lung parenchyma, pleura and airways; pulmonary vascular disease and its effect on the cardiovascular system; and detection and prevention of occupational and environmental causes of lung disease. Other specialized areas include respiratory failure and sleep-disordered breathing.

Critical care physicians generally work in the intensive care units of hospitals and focus on critical illnesses and conditions (e.g., acute and chronic pulmonary disorders, trauma, and heart attacks). Most are internists specializing in pulmonary medicine and manage mechanical ventilators, place pulmonary artery catheters, and perform bronchoscopies; however, some intensivists specialize in anesthesiology, pediatrics, or surgery. The specialty spans the various phases of treatment, from the ambulance to the emergency room, surgical suite, and intensive- and cardiac care units. Critical care physicians must be familiar with the surgical and medical problems that put patients in the intensive care unit. They must also know the cardiovascular, fluid and respiratory management that is required to maintain critically ill patients. The care of critically ill patients raises many complicated ethical and social issues, and the intensivist must be competent in such areas such as end-of-life decisions, advance directives, estimating prognosis, and counseling of patients and their families.

Outside of the ICU, pulmonologists treat a diverse clinical population and can work in private practices or in various hospital settings, including the respiratory therapy department, the pulmonary function laboratory, or the intensive care unit. An in-depth knowledge of internal medicine is useful to these physicians, because pulmonary medicine touches upon other subspecialties.
Profile
The following information reflects responses from 28 pulmonologists who completed the 2003 Pathway Physician's Survey.

A. Respondents by types of areas

B. Respondents by gender

C. Respondents by years in practice

Perspectives

A. Respondents’ satisfaction with current specialty/area of work
**B. Would you choose this specialty again?**

![Pie chart showing satisfaction levels]
- **Very satisfied**: 82.14%
- **Somewhat satisfied**: 10.71%
- **Neither satisfied nor dissatisfied**: 7.14%
- **Somewhat dissatisfied**: 10.71%
- **Very dissatisfied**: 7.14%

**C. Respondents by practice environment**

![Bar chart showing number of responses by practice environment]

**D. Respondents’ satisfaction with practice environment**

![Bar chart showing satisfaction levels by practice environment]
- **Very satisfied**: 8
- **Somewhat satisfied**: 16
- **Neither satisfied nor dissatisfied**: 2
- **Somewhat dissatisfied**: 1
- **Very dissatisfied**: 0
Rating and Weighting of Critical Factors
Critical Factors represent significant aspects of physicians’ experiences in their practices. The rating represents their assessment of their current practice characteristics, while the weighting represents the importance of each factor to physicians.

A. Caring for patients: How much time do you spend directly seeing and caring for patients?

B. Continuity of care: How much continuity of care do you have with patients, (i.e., the length of patient relationships)?

C. Autonomy: To what extent do you have the final word on the treatment of your patients?
D. Diversity: How much routine (similar work) or diversity (different tasks/activities) is involved in your work?

E. Personal time: Does your work allow you to control the scheduling and amount of time you spend on personal activities, (i.e., family, leisure)?

F. Expertise: How broad is the scope of your work?
G. Income satisfaction: Compared to all physicians, do you feel you are fairly compensated for the amount of time and effort you spend?

<table>
<thead>
<tr>
<th>Rating</th>
<th>σ = 2.28</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very dissatisfied</td>
<td>5.2</td>
</tr>
</tbody>
</table>

Weighting

<table>
<thead>
<tr>
<th>Weighting</th>
<th>σ = 0.80</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all important</td>
<td>4.1</td>
</tr>
</tbody>
</table>

H. Creativity: To what extent does your work provide opportunity for creativity?

<table>
<thead>
<tr>
<th>Rating</th>
<th>σ = 1.62</th>
</tr>
</thead>
<tbody>
<tr>
<td>Little opportunity</td>
<td>7.4</td>
</tr>
</tbody>
</table>

Weighting

<table>
<thead>
<tr>
<th>Weighting</th>
<th>σ = 0.84</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all important</td>
<td>4.0</td>
</tr>
</tbody>
</table>

I. Certainty of outcomes: How much certainty of clinical outcomes does your work provide?

<table>
<thead>
<tr>
<th>Rating</th>
<th>σ = 1.42</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very little, often &quot;wait and see&quot;</td>
<td>6.6</td>
</tr>
</tbody>
</table>

Weighting

<table>
<thead>
<tr>
<th>Weighting</th>
<th>σ = 0.92</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all important</td>
<td>3.5</td>
</tr>
</tbody>
</table>
J. Clinical decision-making: On what basis are your clinical decisions made?

Rating: Based on prior evidence of clinical outcomes
\[ \sigma = 1.20 \]

Weighting: Little opportunity to a great deal
\[ \sigma = 0.69 \]

K. Patient decision-making: To what extent do your patients have input into decisions about their health care?

Rating: Application of theory to a situation
\[ \sigma = 1.40 \]

Weighting: Not at all important to a great deal of opportunity
\[ \sigma = 0.77 \]

L. Interacting with other physicians/members of health-care team: To what extent does your work provide opportunities for you to interact with other physicians/ members of a health-care team?

Rating: A great deal
\[ \sigma = 1.59 \]

Weighting: Not at all important to a great deal
\[ \sigma = 0.67 \]
M. Manual/mechanical activities: How often do you use manual/mechanical activities for highly skilled tasks (i.e., following procedures, performing operations)?

Rating  
\[ \sigma = 1.45 \]

Weighting  
\[ \sigma = 0.90 \]

N. Pressure: How much pressure do you have in your work (i.e., dealing with clinical crises, need for immediate decisions about patients, dealing with multiple patients simultaneously).

Rating  
\[ \sigma = 1.25 \]

Weighting  
\[ \sigma = 0.78 \]

O. Responsibility: How much responsibility do you assume for patient outcomes in your work?

Rating  
\[ \sigma = 1.06 \]

Weighting  
\[ \sigma = 0.73 \]
P. Schedule: What type of schedule do you have in your work?

Q. Security: How much professional security do you have in your position, (i.e., know where you stand and are certain of your future professionally, will there be a need for your services in the future)?

R. Sense of accomplishment: To what extent does your work provide the opportunity to see end results?
Weekly distribution of time
According to the survey, pulmonologists spend their week as follows:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Average Hours per week (may overlap)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient care activities</td>
<td>41.75</td>
</tr>
<tr>
<td>On-call(in contact)</td>
<td>24.64</td>
</tr>
<tr>
<td>On-call(available)</td>
<td>58.23</td>
</tr>
<tr>
<td>Administrative</td>
<td>5.42</td>
</tr>
<tr>
<td>Professional travel</td>
<td>5.24</td>
</tr>
<tr>
<td>Continuing education</td>
<td>3.38</td>
</tr>
<tr>
<td>Community service</td>
<td>1.88</td>
</tr>
<tr>
<td>Research</td>
<td>14.33</td>
</tr>
<tr>
<td>Other professional</td>
<td>5.76</td>
</tr>
</tbody>
</table>

Patient profile

A. Patient encounters per week

B. Patient characteristics

By age

<table>
<thead>
<tr>
<th>Age Group</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infants(0-2 yrs)</td>
<td>0.58</td>
</tr>
<tr>
<td>Children(3-18 yrs)</td>
<td>3.00</td>
</tr>
<tr>
<td>Adults(19-64 yrs)</td>
<td>56.25</td>
</tr>
<tr>
<td>Older adults(65+ yrs)</td>
<td>41.96</td>
</tr>
</tbody>
</table>

By race

<table>
<thead>
<tr>
<th>Race</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underrepresented minority (URM)</td>
<td>26.24</td>
</tr>
<tr>
<td>Non-URM</td>
<td>73.75</td>
</tr>
</tbody>
</table>

By type of insurance

<table>
<thead>
<tr>
<th>Insurance Type</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medicaid/Medicare</td>
<td>51.11</td>
</tr>
<tr>
<td>Uninsured</td>
<td>18.52</td>
</tr>
<tr>
<td>Other</td>
<td>30.37</td>
</tr>
</tbody>
</table>

Percentage of patient encounters that deal with:

<table>
<thead>
<tr>
<th>Condition</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Routine check-ups</td>
<td>17.08</td>
</tr>
<tr>
<td>Acute illness</td>
<td>46.79</td>
</tr>
<tr>
<td>Chronic illness</td>
<td>43.68</td>
</tr>
<tr>
<td>Terminal illness</td>
<td>10.86</td>
</tr>
</tbody>
</table>

Percentage of time per patient encounter devoted to:

<table>
<thead>
<tr>
<th>Condition</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute conditions</td>
<td>47.50</td>
</tr>
<tr>
<td>Chronic conditions</td>
<td>43.93</td>
</tr>
<tr>
<td>Preventitive health</td>
<td>14.44</td>
</tr>
</tbody>
</table>

C. Five types of illnesses/conditions most frequently encountered

<table>
<thead>
<tr>
<th>Illness/Condition</th>
<th>Number of responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic obstructive pulmonary disease</td>
<td>25</td>
</tr>
<tr>
<td>Asthma</td>
<td>20</td>
</tr>
<tr>
<td>Respiratory Failure</td>
<td>13</td>
</tr>
<tr>
<td>Pneumonia</td>
<td>12</td>
</tr>
<tr>
<td>Lung cancer</td>
<td>11</td>
</tr>
</tbody>
</table>
Specialty: Pulmonary/Critical Care
Total survey responses: 28

Summary of comments for question: List up to three other factors, if any, you would advise students to consider carefully before selecting your specialty?
Physicians who completed the Pathway Physician’s Survey, 2003, submitted the following comments. The majority of comments are categorized by the Critical Factors that are rated and weighted in another section. Numbers in parentheses indicate the total number of responses for a particular comment.

1. Caring for Patients

2. Continuity of Care

3. Autonomy
   - Diversity of expertise necessary

4. Diversity

5. Personal Time
   - Personal time
   - Personal interests
   - Family life
   - Lifestyle

6. Expertise
   - Ability to do research
   - Good knowledge base
   - Intellectual stimulation

7. Income Satisfaction
   - Economic pressure
   - Limited income potential
   - Monetary accomplishment

8. Creativity

9. Certainty of Outcomes
   - Unpredictable outcomes
   - Unpredictability of cases

10. Clinical Decision Making
    - Must be comfortable making important decisions in critical care, with uncertain outcomes

11. Patient Decision Making
12. Interacting with Other Physicians/Members of Health-care Team
   • Temperament of physician group in specialty
   • Colleagues
   • Partner/collegial support and advice

13. Manual /Mechanical Activities
   • Procedural skills

14. Pressure
   • Stress level (2)

15. Responsibility

16. Schedule
   • Time commitment
   • Time constraints
   • In-house call requirement
   • Must be prepared for unpredictable hours of work
   • Long hours
   • Work hours

17. Security
   • Demand for the specialty (2)
   • Job market

18. Sense of Accomplishment

19. Patient Characteristics
   • Type of patient
   • Outpatient vs. inpatient mix (2)

20. Types of Illnesses
   • Dealing with death/critically ill patients and their families
   • Illnesses are often incurable

21. Practice Environment
   • Private practice vs. academics

22. Health Care Environment
   • Future restriction on resource priorities for patients

23. Personality/Temperament
   • Passion
   • Commitment
• Personal capabilities
• Comfort in dealing with the terminally ill
• Flexibility
• Humbleness
• Empathy for patients- especially for the very ill

24. Miscellaneous Comments
• Academic involvement
• Spousal/family support
• Personal objectives
• Interest (2)
• Training record of program
• Research possibility
• Sacrifice
• State of the art care
• Enjoying what you do
• Location
• Impact of technology on care
• Availability of mentors
• Professional isolation
• Involvement
• Network
• Career/long term goals (2)
• Creating your own niche
• Commitment of programs to its trainees