Child neurology, also known as pediatric neurology, specializes in the diagnosis and management of neurologic conditions in infants, children, and adolescents. Child neurologists have special competence in the genetic and metabolic problems, malformations, and developmental problems of childhood, including epilepsy, cerebral palsy, muscular dystrophy, mental retardation, autism, Tourette’s syndrome, Batten’s disease, neurofibromatosis, learning disabilities, complex metabolic disorders, and a host of nerve and muscle diseases.

Child neurologists act as consultants to primary care physicians as well as provide continuing care for chronic neurological conditions. Like other pediatric specialties, it is a specialty that requires the ability to work with patients who may have limited or nonexistent verbal skills. Neurology has close links with psychiatry, with which it maintains a combined certification board.
Profile
The following information reflects responses from 34 child neurologists who completed the 2003 Pathway Physician's Survey.

A. Respondents by types of areas

- Large City: 38.24%
- Metropolitan City: 35.29%
- Small City: 20.59%
- Rural: 2.94%
- Other: 2.94%

B. Respondents by gender

- Male: 71.88%
- Female: 28.13%

C. Respondents by years in practice

- 1-5 yrs: 28.13%
- 6-10 yrs: 28.13%
- 11-15 yrs: 28.13%
- 16-25 yrs: 28.13%
- 26-30 yrs: 28.13%
- More than 30 yrs: 28.13%

Perspectives

A. Respondents' satisfaction with current specialty/area of work

- Very satisfied: 28.13%
- Somewhat satisfied: 28.13%
- Neither satisfied nor dissatisfied: 28.13%
- Somewhat dissatisfied: 28.13%
- Very dissatisfied: 28.13%
B. Would you choose this specialty again?

- **Yes**: 82.35%
- **No**: 2.94%

C. Respondents by practice environment

- **Academic institution**: 20 responses
- **Affiliated w/group**: 8 responses
- **Business/industry**: 4 responses
- **Hospital**: 24 responses
- **Community**: 4 responses
- **Academic med ctr**: 16 responses
- **Hospital other**: 2 responses
- **Managed care**: 4 responses
- **HMO**: 4 responses
- **IPA**: 2 responses
- **PPO**: 2 responses
- **Mgr care**: 2 responses
- **Solo practitioner**: 8 responses
- **Practice other**: 2 responses

D. Respondents' satisfaction with practice environment

- **Very satisfied**: 12 responses
- **Somewhat satisfied**: 16 responses
- **Neither satisfied nor dissatisfied**: 4 responses
- **Somewhat dissatisfied**: 4 responses
- **Very dissatisfied**: 2 responses
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?

<table>
<thead>
<tr>
<th>Rating</th>
<th>Weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>No time at all</td>
<td>Not at all important</td>
</tr>
<tr>
<td>Most of my time</td>
<td>Very important</td>
</tr>
</tbody>
</table>

σ = 2.25

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

<table>
<thead>
<tr>
<th>Rating</th>
<th>Weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short Term</td>
<td>Not at all important</td>
</tr>
<tr>
<td>Long Term</td>
<td>Very important</td>
</tr>
</tbody>
</table>

σ = 1.46

C. Autonomy: To what extent do you have the final word on the treatment of your patients?

<table>
<thead>
<tr>
<th>Rating</th>
<th>Weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very limited autonomy</td>
<td>Not at all important</td>
</tr>
<tr>
<td>Great deal of autonomy</td>
<td>Very important</td>
</tr>
</tbody>
</table>

σ = 1.22
D. **Diversity**: How much routine (similar work) or diversity (different tasks/activities) is involved in your work?

- **Rating**
  - Great deal of routine: 7.4
  - Great deal of diversity: 3.9
  - Rating: 0-10
  - Weighting: 0-5
  - Weighting: 0-5
  - Standard deviation: σ = 1.55
  - Standard deviation: σ = 0.79

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)?

- **Rating**
  - Very little flexibility: 6.0
  - A great deal of flexibility: 4.2
  - Rating: 0-10
  - Weighting: 0-5
  - Weighting: 0-5
  - Standard deviation: σ = 2.41
  - Standard deviation: σ = 0.84

F. **Expertise**: How broad is the scope of your work?

- **Rating**
  - Narrow expertise: 5.7
  - Broad Expertise: 4.4
  - Rating: 0-10
  - Weighting: 0-5
  - Weighting: 0-5
  - Standard deviation: σ = 2.70
  - Standard deviation: σ = 0.66
G. Income satisfaction: Compared to all physicians, do you feel you are fairly compensated for the amount of time and effort you spend?

Rating

<table>
<thead>
<tr>
<th>Very dissatisfied</th>
<th>Highly satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Rating</td>
<td>σ = 2.20</td>
</tr>
</tbody>
</table>

Weighting

<table>
<thead>
<tr>
<th>Not at all important</th>
<th>Very important</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Weighting</td>
<td>σ = 0.75</td>
</tr>
</tbody>
</table>

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

Rating

<table>
<thead>
<tr>
<th>Little opportunity</th>
<th>Great deal of opportunity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Rating</td>
<td>σ = 2.19</td>
</tr>
</tbody>
</table>

Weighting

<table>
<thead>
<tr>
<th>Not at all important</th>
<th>Very important</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Weighting</td>
<td>σ = 1.05</td>
</tr>
</tbody>
</table>

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

Rating

<table>
<thead>
<tr>
<th>Very little, often &quot;wait and see&quot;</th>
<th>A great deal, outcomes usually clear</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Rating</td>
<td>σ = 2.10</td>
</tr>
</tbody>
</table>

Weighting

<table>
<thead>
<tr>
<th>Not at all important</th>
<th>Very important</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Weighting</td>
<td>σ = 0.98</td>
</tr>
</tbody>
</table>
J. Clinical decision-making: On what basis are your clinical decisions made?

- **Rating**: 7.2
- **Weighting**: 3.8

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

- **Rating**: 7.8
- **Weighting**: 4.2

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**: 7.8
- **Weighting**: 3.8
M. Manual/mechanical activities: How often do you use manual/mechanical activities for highly skilled tasks (i.e., following procedures, performing operations)?

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).

O. Responsibility: How much responsibility do you assume for patient outcomes in your work?
**P. Schedule:** What type of schedule do you have in your work?

- **Rating:** 4.1
- **Weighting:** 2.3
- **Standard Deviation (σ):** 2.04

**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)?

- **Rating:** 8.3
- **Weighting:** 3.9
- **Standard Deviation (σ):** 2.01

**R. Sense of accomplishment:** To what extent does your work provide the opportunity to see end results?

- **Rating:** 8.3
- **Weighting:** 4.6
- **Standard Deviation (σ):** 1.34

**Weighting Standard Deviation (σ):**

- Not at all important
- Very important
Weekly distribution of time
According to the survey, child neurologists 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>32.15</td>
</tr>
<tr>
<td>On-call (in contact)</td>
<td>9.75</td>
</tr>
<tr>
<td>On-call (available)</td>
<td>53.17</td>
</tr>
<tr>
<td>Administrative</td>
<td>6.86</td>
</tr>
<tr>
<td>Professional travel</td>
<td>5.23</td>
</tr>
<tr>
<td>Continuing education</td>
<td>3.33</td>
</tr>
<tr>
<td>Community service</td>
<td>2.00</td>
</tr>
<tr>
<td>Research</td>
<td>13.75</td>
</tr>
<tr>
<td>Other professional</td>
<td>8.37</td>
</tr>
</tbody>
</table>

Patient profile

A. Patient encounters per week

![Bar chart showing the number of patients per encounter type: Ambulatory, Inpatient, Nursing Home, Telephone, Terminally Ill, Other Encounters.]

B. Patient characteristics

By age
- Infants (0-2 yrs): 24.19%
- Children (3-18 yrs): 59.85%
- Adults (19-64 yrs): 16.32%
- Older adults (65+ yrs): 3.91%

By race
- Underrepresented minority (URM): 26.35%
- Non-URM: 73.65%

By type of insurance
- Medicaid/Medicare: 38.74%
- Uninsured: 7.45%
- Other: 53.81%

Percentage of patient encounters that deal with:
- Routine check-ups: 17.36%
- Acute illness: 22.69%
- Chronic illness: 72.27%
- Terminal illness: 5.26%

Percentage of time per patient encounter devoted to:
- Acute conditions: 27.50%
- Chronic conditions: 66.56%
- Preventive health: 15.81%

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>Headache</td>
<td>47</td>
</tr>
<tr>
<td>Stroke</td>
<td>36</td>
</tr>
<tr>
<td>Seizures</td>
<td>34</td>
</tr>
<tr>
<td>Neuromuscular disorders</td>
<td>23</td>
</tr>
<tr>
<td>Pain (Neck and back)</td>
<td>22</td>
</tr>
</tbody>
</table>
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
   - Patient contact/interaction (2)
   - Dealing with families under stress
   - Frustrated families

2. Continuity of Care
   - Life-long caring for patient in the context of their family

3. Autonomy
   - Diversity
   - Variety of challenges

5. Personal Time
   - Lifestyle after residency
   - Amount of free time
   - Family

6. Expertise

7. Income Satisfaction
   - If being paid adequately is a priority, child neurology is not a good field unless you are salaried. Most are on Medicaid, and reimbursement is poor. As a private practice child neurologist, I couldn't support myself if it weren't for my husband's income
   - Income/income potential/reimbursement (4)
   - Compensation is relative low for complexity of work
   - Consider indebtedness as incomes tends to be at the lower end of the spectrum

8. Creativity

9. Certainty of Outcomes
   - Ability to tolerate uncertainty of outcomes
   - Uncertain outcomes

10. Clinical Decision Making
11. Patient Decision Making

12. Interacting with Other Physicians/Members of Health-care Team
   - Interaction with basic scientists

13. Manual /Mechanical Activities
   - Satisfaction with non-procedure driven specialty

14. Pressure
   - Demands for appointments due to limited number of subspecialty physicians
   - Emotionally demanding

15. Responsibility

16. Schedule
   - Hours spent in patient care
   - Consider what call you will have

17. Security

18. Sense of Accomplishment

19. Patient Characteristics
   - Complexity of patients/diseases
   - Neediness of patients
   - Consider the patient population you wish to treat, ie: elderly (large percentage Medicare) vs. pediatric (a much needed specialization in neurology)

20. Types of Illnesses
   - Dealing with significant acute and chronic illnesses (5)

21. Practice Environment
   - Practice Location/environment (2)

22. Health Care Environment
   - There are all kinds of papers to complete--Rxes for diapers, baby formula, school-requested medications, diagnoses, insurance companies, SSI, Medicaid, Children’s Special Health Care. Time-consuming for essentially no return for you.

23. Personality/Temperament
   - Enjoying working with children/families (3)
   - Intellectual/intellectual curiosity (2)
   - Ability to keep up with changes in diagnosis and treatment
   - Interest in the complexity and new advances of understanding the nervous system
   - Long-term lifestyle (hours worked, schedule)
• Adaptability
• Ability to deal with children (2)
• Ability to be empathetic with families and their issues
• Energy level
• Commitment to patients
• Love of interpersonal relationship with parents and children

24. Miscellaneous Comments
• Do what you enjoy
• High demand
• Field is blossoming
• You will not only be treating the child, you will be supporting the parents--and parents worry more about their children than themselves.
• Flexibility
• Independence
• Long term satisfaction
• Length of training (2)
• Personal interest
• Consider sub specialization
• Chase personal fulfillment, not the dollar
• Academic vs. private career
• Be able to deal with challenging, open-ended problems
• Day-to-day variety of activities
• Numerous opportunities
• Satisfaction involved in pediatric neurology
• Exciting scientific breakthroughs/recent advances (2)
• Intellectual stimulation
• Overlaps development
• Opportunity to make a difference in the lives of patients and families
• Geographic impact of practice choice
• Under-represented specialty
• Sub specialization
• Length of training
• Intellectual challenge (2)
• Demand
• Enjoyment of clinical science