EMERGENCY DEPARTMENT USE FOR NONEMERGENT HEALTH CONDITIONS

National Rural Health Association Annual Meeting
San Diego, CA, May 27, 2004

Study Sponsors:
Northland Healthcare Alliance
ND Community Access Program
Dakota Medical Foundation
Centers for Disease Control and Prevention (# U58/CCU822794-2-0)

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This project is supported by Cooperative Agreement # U58/CCU822794-2-0 from the Centers for Disease Control and Prevention (CDC). Its contents are solely the responsibility of the authors and do not necessarily represent the official views of CDC.

Center for Rural Health
University of North Dakota
School of Medicine and Health Sciences

Where: Grand Forks, ND
When: Established over 20 years ago

Focused on Access, Financing & Quality Through:

- Health services research
- Health policy
- Education
- State & community health services development
- Information Resource

How: Through partnerships
BACKGROUND & SIGNIFICANCE

- In 2000, the nation’s 4,148 EDs had 107 million patient visits (most considered nonurgent) -- 4 visits for every 10 persons
- ED care for nonurgent health conditions – considered wasteful and expensive
- Frequent ED Users – a relatively small group of patients that accounts for disproportionate share of ED care

WHY DO PEOPLE SEEK CARE IN EDs FOR NONURGENT HEALTH CONDITIONS?

- Physician availability
- Less likely to be refused care due to inability to pay
- Avoid obstacles associated with clinic visits
- Receive prompt attention at night & on weekends
- Avoid taking time off from work or arranging for child care
DRAWBACKS TO ED USE FOR NONURGENT CARE

- Higher charges
- Long wait times
- Contribution to ED overcrowding
- May divert attention from severely ill/injured patients
- Discontinuity of care

METHODS

- 16 ND hospital emergency departments (EDs) were selected and targeted for study participation
- Selection was stratified by state quadrant and hospital’s community size (urban, large rural, small rural)
- Seven hospitals agreed to participate & sent computerized copies of their 2002 ED visit data
- Participating facilities: NE Quadrant - one urban, one large rural, one small rural; SE Quadrant - none; SW Quadrant - one urban, one large rural, one small rural; NW Quadrant - one large rural
- N=58,660 ED patient visits
RESEARCH QUESTIONS

• What are the principal payer sources for ND ED patients?
• To what extent do North Dakotans utilize EDs for non-emergent health conditions?
• Which payer sources account for the highest volume and rates of ED use for non-emergent conditions?
• How prevalent are ‘frequent ED users?’
• To what extent do North Dakotans utilize EDs for oral health-related conditions?

FIGURE 1. Patient’s Gender

Male, 27492, 47%
Female, 31126, 53%
FIGURE 2. Patient’s Ethnicity

- Unknown: 41.7%
- White or Unknown: 30.6%
- White: 23.8%
- Native American: 3.5%
- Other: 0.2%
- Black: 0.1%

FIGURE 3. Age Group

- ED Patients
- 2000 Census - ND
FIGURE 4. Age Group by Gender

FIGURE 5. Patient's Primary Payer (N=58,660)
ED Visits by Emergent/Non-Emergent Category

NYU EMERGENCY DEPARTMENT CLASSIFICATION ALGORITHM [V2.0]
NYU ED CLASSIFICATION ALGORITHM

- **Non-Emergent** - The patient's initial complaint, presenting symptoms, vital signs, medical history, and age indicated that immediate medical care was not required within 12 hours.

- **Emergent/Primary Care Treatable** - Based on information in the record, treatment was required within 12 hours, but care could have been provided effectively and safely in a primary care setting. The complaint did not require continuous observation, and no procedures were performed or resources used that are not available in a primary care setting (e.g., CAT scan or certain lab tests).

- **Emergent - ED Care Needed - Preventable/Avoidable** - Emergency department care was required based on the complaint or procedures performed/resources used, but the emergent nature of the condition was potentially preventable/avoidable if timely and effective ambulatory care had been received during the episode of illness (e.g., the flare-ups of asthma, diabetes, congestive heart failure, etc.).

- **Emergent - ED Care Needed - Not Preventable/Avoidable** - Emergency department care was required and ambulatory care treatment could not have prevented the condition (e.g., trauma, appendicitis, myocardial infarction, etc.).


**FIGURE 6. ED Visits by Algorithm Category (N=58,660)**

<table>
<thead>
<tr>
<th>Category</th>
<th>Useable Cases (N=25,871)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Injury</td>
<td>31.2%</td>
</tr>
<tr>
<td>Psych</td>
<td>1.9%</td>
</tr>
<tr>
<td>Drug/Alcohol</td>
<td>1.5%</td>
</tr>
<tr>
<td>Unclassified</td>
<td>21.3%</td>
</tr>
<tr>
<td>Non-Emergent</td>
<td>16.3%</td>
</tr>
<tr>
<td>Emergent/PC Treatable</td>
<td>15.8%</td>
</tr>
<tr>
<td>Emergent--Preventable</td>
<td>3.3%</td>
</tr>
<tr>
<td>Emergent--Not Preventable</td>
<td>8.6%</td>
</tr>
</tbody>
</table>
FIGURE 7. ED Use Profile by Visit Type (N=25,871)

Nonemergent, 9537, 37%
Emergent ED Care Needed, Not Preventable/Avoidable, 5051, 20%
Emergent ED Care Needed, Preventable/Avoidable, 2040, 8%
Emergent, Primary Care Treatable, 9243, 36%

FIGURE 8. ED Use Profile by Visit Type, Ages 0-17 (N=6,773)

Nonemergent, 2387, 35%
Emergent ED Care Needed, Not Preventable/Avoidable, 804, 12%
Emergent ED Care Needed, Preventable/Avoidable, 650, 9%
Emergent-Primary Care Treatable, 2952, 44%
FIGURE 9. ED Use Profile by Visit Type, Ages 18-64 (N=14,334)

Nonemergent, 5908, 41%
Emergent ED Care Needed, Not Preventable/Avoidable, 2906, 20%
Emergent ED Care Needed-Preventable/Avoidable, 863, 6%
Emergent-Primary Care Treatable, 4657, 33%

FIGURE 10. ED Use Profile by Visit Type, Ages 65+ (N=4,443)

Nonemergent, 1163, 26%
Emergent ED Care Needed, Not Preventable/Avoidable, 1294, 29%
Emergent ED Care Needed-Preventable/Avoidable, 519, 12%
Emergent-Primary Care Treatable, 1467, 33%
FIGURE 11. Non-Emergent ED Visits by Payer Source

- Self-Pay: 26%
- Commercial: 31%
- Medicaid: 23%
- Medicare: 12%
- W. Comp: 3%
- IHS/PHS: 3%
- Unk/Other: 2%

FIGURE 12. Non-Emergent ED Visits Within Payer Source

- W. Comp: 68.6
- Commercial: 39.4
- Champus: 39.0
- Medicaid: 38.6
- IHS/PHS: 38.1
- Unknown: 36.9
- Self-Pay: 36.0
- Medicare: 27.0
ED Visit Frequency Per Patient

FIGURE 13. Number of ED Visits Per Patient (N=39,377)

Range=1-52; Mean=1.3; Median=1; Std Dev=.14
FIGURE 14. Gender by User Frequency Category (N=39,346)

FIGURE 15. Mean Age of Frequent ED Users* within Each Payer Group
FIGURE 16. Distribution of Frequent ED Users (N=1,205) Across Payer Groups

- Medicaid: 35%
- Commercial: 27%
- Self-Pay: 10%
- IHS/PHS: 6%
- WC: 2%
- Unknown/Other: 1%

FIGURE 17. Patients within Payer Group that are Frequent ED Users

- Medicaid: 7.7%
- Commercial: 4.7%
- Unknown: 2.7%
- WC: 1.2%
- Other: 1.1%
- Self-Pay: 1.0%
- Auto: 0.5%

*4+ Visits
FIGURE 18. Urgency of ED Visits by User Frequency Category (N=39,377)

Oral Health-Related Conditions
FIGURE 19. ED Visits for Oral Health-Related Diseases/Conditions (N=658)

- Jaws: 6%
- Oral soft tissues: 8%
- Gingival/periodontal: 8%
- Pulp/periapical: 27%
- Other-teeth/support: 40%
- Other: 11%

FIGURE 20. Oral Health-Related ED Visits by Age Group

- Age Group 0-9: 8%
- Age Group 10-19: 9.7%
- Age Group 20-29: 30.7%
- Age Group 30-39: 25.1%
- Age Group 40-49: 15%
- Age Group 50-59: 7.8%
- Age Group 60-69: 1.7%
- Age Group 70-79: 2.1%
- Age Group 80+: 0.9%
PRINCIPAL FINDINGS

- More than one-third (37%) of ED visits were nonurgent; an additional 36% were ‘emergent –preventable with primary care’

- ED use for nonurgent health conditions:
  - Commercial insurance (32.4%), self-payers (25.6%) and Medicaid (22.7%) contributed the largest patient volume
  - Worker’s Comp had the highest % of its enrollees (68.6%)

- 3% of all patients were ‘frequent ED users’
  - Medicaid enrollees comprised the largest volume of frequent ED users (34.1%)
  - IHS/PHS (7.8%) and Medicaid (7.7%) had the highest % of their enrollees

- 1% of all ED visits were oral health-related
  - Self-payers and Medicaid comprised nearly two-thirds (65.9%) of these cases
IMPLICATIONS

- Consumer Education
- Health Promotion & Primary/Secondary Prevention
- Examine ND rates/patterns of uninsurance and underinsurance; barriers to adequate insurance coverage
- Assess potential avenues for increasing access to preventive dental care for low-income North Dakotans

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