

Emergency Room Utilization for Non-Emergent Conditions: Hillsborough County Health Care Plan, County and the State of Florida, 2009

Prepared for the Hillsborough County Health Care Plan
Study Committee
December 2010

Drs. Alfred Mbah and Donna Petersen
USF College of Public Health

Purpose of the Study

- To determine emergency use patterns for Hillsborough County Health Care Plan (HCHCP) members, compared to all Hillsborough County residents and all State of Florida residents
- Data obtained from the Florida Agency for Health Care Administration and the HCHCP for calendar year 2009
- As suggested, the NYU Algorithm was used to determine emergent vs. non-emergent ER use
- Literature review conducted prior to data analysis

Background

- Earlier analyses suggested that the vast majority (90.2%) of HCHCP members utilize the ER 3 or fewer times per year
 - 1 visit, n = 4,376 (61.3%)
 - 2 visits, n = 2, 878 (20.2%)
 - 3 visits, n = 1,872 (8.7%)
- However, a few individuals (n = 17, .03%) visited the ER a total of 499 times in 2009
- Note that 20,284 (73.9% of all unduplicated members) had no visit to the ER in 2009

Background

- The review of the literature suggested that ER visits are increasing across the country and the increase is expected to continue
- Floridians appear to utilize the ER for what are called “primary care sensitive conditions” (i.e. non-emergent) at a greater rate than the rest of the country

Background

- Overall, lower income, advanced age and chronic illness contribute to higher rates of ER use
- However, uninsured persons use the ER at the same rates as insured persons; persons on publicly funded programs use the ER at higher rates than either of these groups

Background

- Though there are many calls in the literature for better access to primary care and better coordination between primary care and ER providers, intervention studies have had disappointing results
- Studies suggest that people use the ER because it is convenient, accessible and perceived to be of high quality
- Further, it may be the only source of care for persons with complex/chronic or mental health conditions

Background

- Patients and providers differ on what conditions warrant a visit to the ER
- One study in a large urban hospital indicated that 82% of patients classified by triage nurses as non-urgent believed that their condition was urgent
- A study in Maine indicated the majority of visits were for sore throats, URI's or pain (headache, back pain, pain in limbs)

Background

- The HCHCP provides coverage for adults, 19-65 years of age who have no other source of health care coverage
- The HCHCP contracts with provider networks to provide a set of services including primary care, ER, hospital and prescription drug services

Background

- Payment to plan-affiliated hospitals for ER visits is capped by the plan – total of \$4 million per year
- However, medical services provided secondary to an ER visit can be and are billed, as are hospital admissions resulting from an ER visit

Analysis

- Two sources of data
 - HCHCP
 - Comprehensive data-base including data on members, service utilization and costs
 - Florida Agency for Health Care Administration
 - Aggregate data of ER visits and hospital admissions
 - No individual-level data available
- We selected only for adults 19-65 and for ER visits that did not result in an inpatient admission

Analysis

- We were asked to calculate crude ER utilization without admission rates – challenging because the denominators are different (HCHCP members are a distinct subset of the general population)

State of Florida	Hillsborough County	HCHCP
3,531,492 visits	234,203 visits	14,300 visits
312.8 per 1,000 population aged 19-65	307.5 per 1,000 population aged 19-65	521.4 per 1,000 members

Analysis

Total ER visits with and without admission, Florida 2009

	Inpatient admission through ER N (%)	ER visit without inpatient admission N (%)	Total ER Visit N
HCHCP	3,324 (18.86)	14,300 (81.14)	17,624
Hillsborough	8,659 (3.57)	234,203 (96.43)	242,862
Florida	192,618 (5.17)	3,531,492 (94.83)	3,724,110

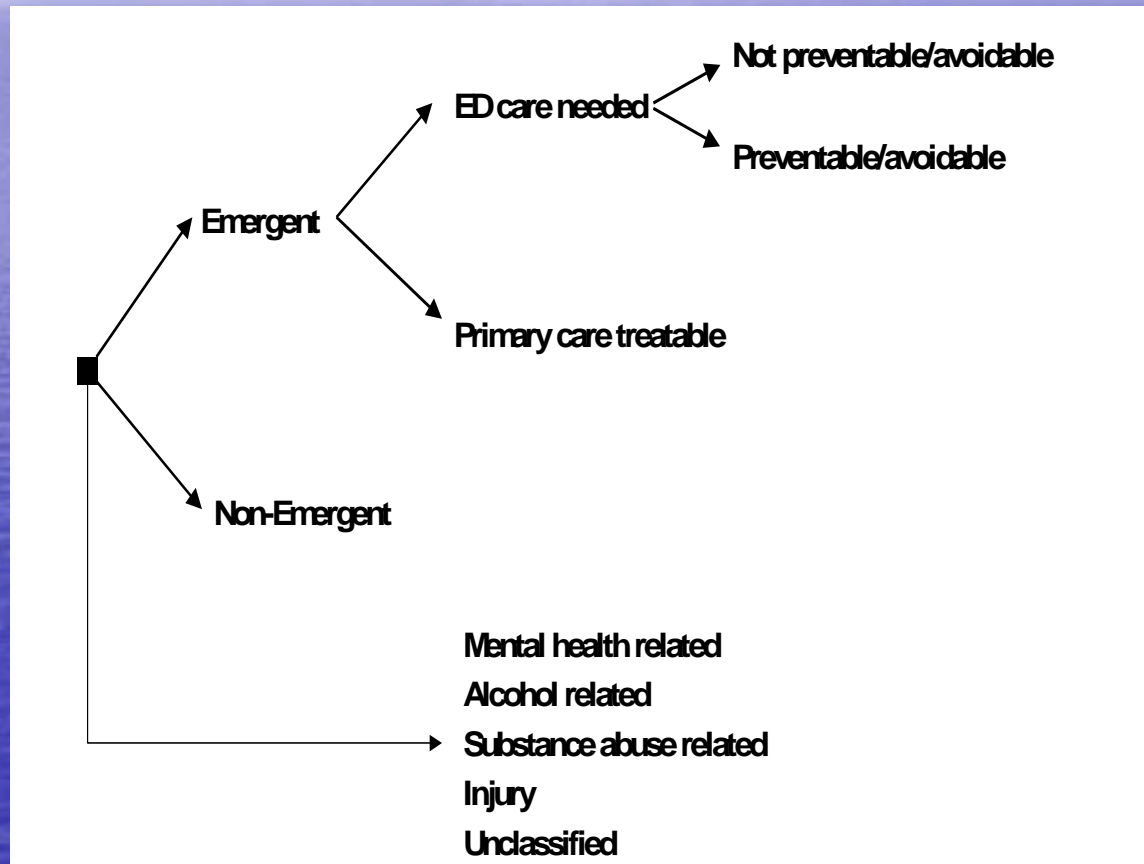
NYU Algorithm: Primary Care Sensitive Conditions

- Non-emergent: 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: treatment required within 12 hours but could have been provided in primary care setting
- Emergent/preventable/avoidable: ER care required but only because timely and effective primary care was not received

NYU Algorithm: Emergent

- Emergent/not preventable/avoidable: ER care needed and primary care could not have prevented the condition
- Injury
- Mental Health
- Alcohol Related
- Drug Related
- Not classified

NYU Algorithm



Results

- Overall, HCHCP members' ER utilization mirrors that of the general population of the county and the state
- That is, there does not seem to be anything inherent in the plan that changes ER utilization behavior
- Higher rate of use and the higher inpatient admit rate could be due to the nature of the population (low income, possibly in poorer health) and not due to anything in the plan itself

Classification of ER visits without admission using NYU algorithm, adults 19-65, 2009

	HCHCP N = 14,300	Hillsborough N = 234,203	State of Florida N = 3,531,492
Potentially avoidable ER visits	57.2	54.9	54.6
Non-emergent	30.6	29.2	30.3
Emergent, primary care treatable	23.4	22.9	21.6
Emergent/preventable/avoidable	3.3	2.8	2.7
Emergent, not preventable	6.7	8.1	7.3
Injury	17.9	22.2	22.2
Mental Health Related	3.0	1.7	1.6
Alcohol Related	1.9	0.9	0.9
Drug Related	0.3	0.2	0.2
Not classified	13.1	12.1	13.2

Results

- Compared to county and state populations, HCHCP members who were non-white, male and over 35 had more ER visits without admission overall
- When considering ER visits by non-emergent/emergent classifications, males, persons over 35 and whites had higher utilization for non-emergent conditions

Results

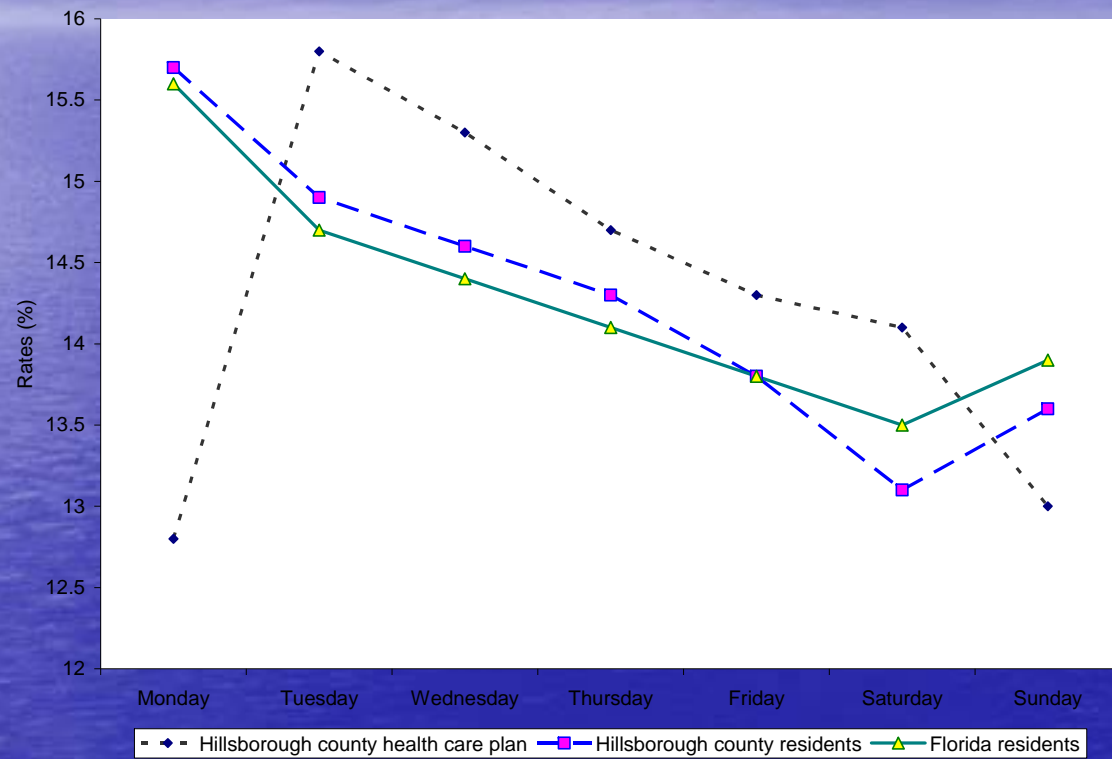
- When examined by payer source, compared to county and state residents, HCHCP members utilized the ER for non-emergent conditions slightly *less often* than Medicaid recipients and slightly *more often* than uninsured, Medicare or privately insured patients

Results

- When comparing primary diagnosis for non-emergent ER visits, HCHCP members and County residents presented most frequently with Other Chest Pain, Headache and Abdominal Pain while across the State, Headache was #1, followed by Abdominal Pain, UTI and Other Chest Pain at #4

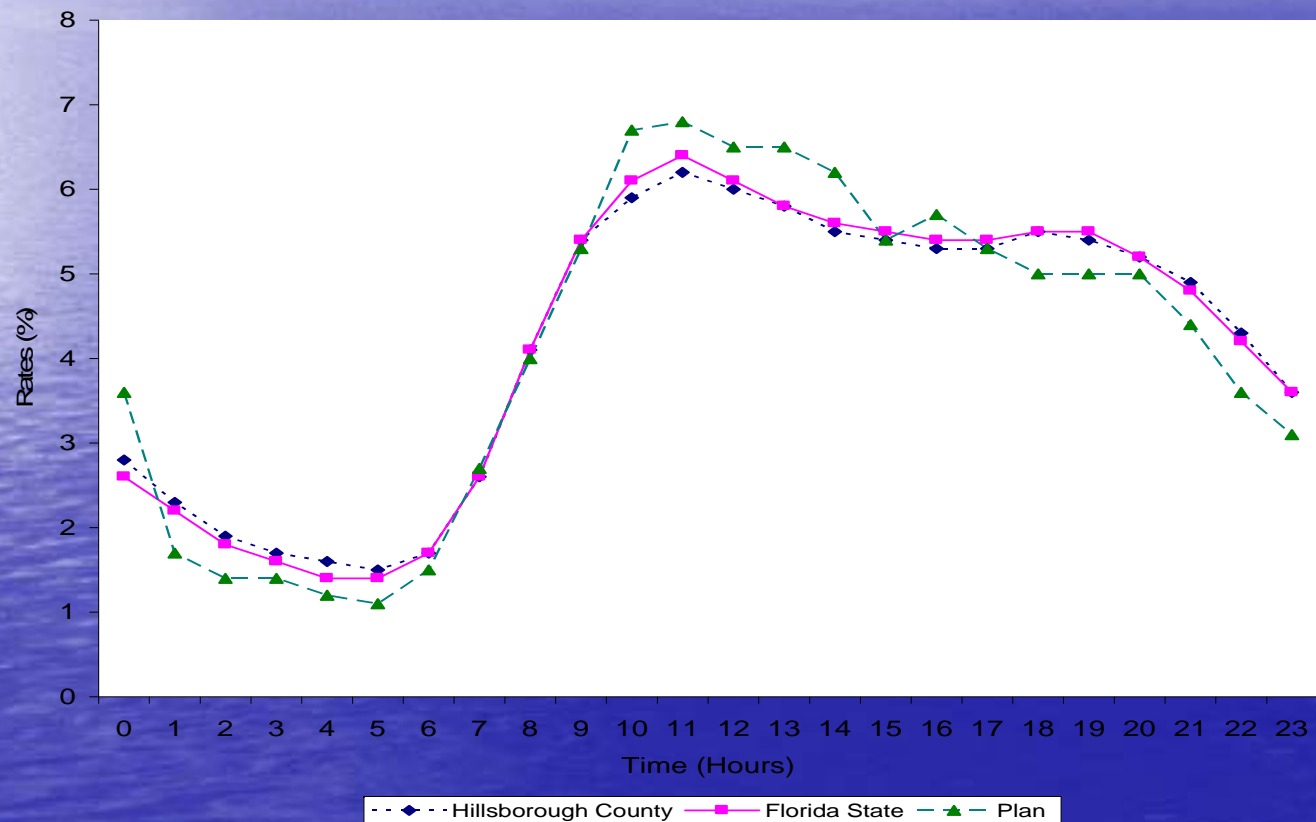
Results

All ER Visits in 2009 by day of the week



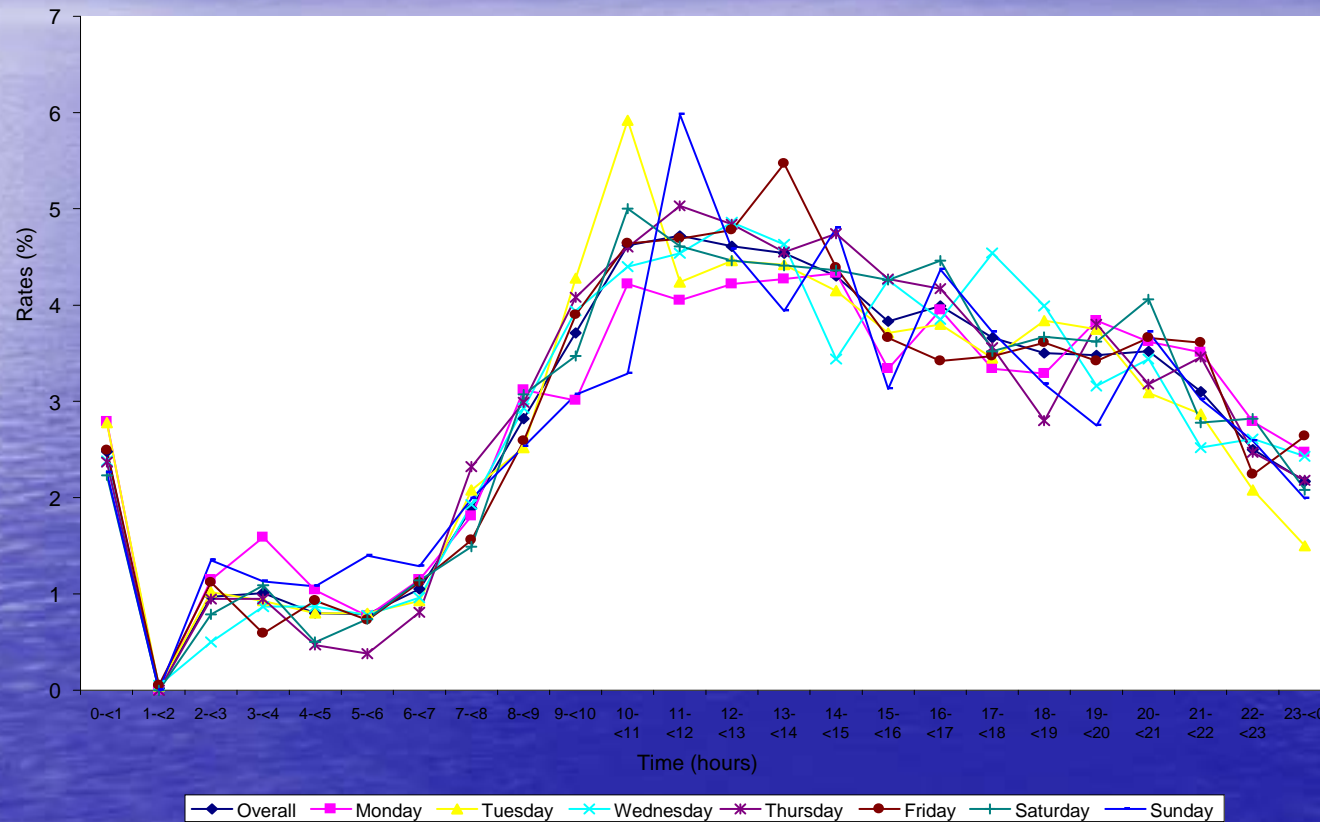
Results

Rates of all ER visits in 2009 by time of day



Results

Time of admission by day of week for Plan Members



Results

- As noted earlier, Facility ER charges are reimbursed through a \$4 million block payment arrangement
- Of \$4.3 million attributable to ER visits without admission 58% was spent on non-emergent visits

Conclusions

- Overall, high numbers of Florida residents, including HCHCP members, appear to use the ER as a substitute for primary care
- 57.2% of HCHCP members used the ER in 2009 for non-emergent care; 60% of payments to ER's were for non-emergent care
- 55% of county and state residents similarly utilized the ER for care that could have been received in a primary care setting

Conclusions

- The literature suggests that many people visit the ER for non-emergent care because
 - they erroneously believe their condition is of an urgent nature,
 - the ER is convenient, accessible and perceived to be of high quality,
 - they could not get a primary care appointment,
 - they have conditions not easily treated elsewhere (complex/chronic, mental health).

Conclusions

- We found HCHCP members more likely than County and State residents to visit the ER on weekdays, particularly Tuesday, and less likely to visit on Sunday or Monday
- HCHCP members were less likely to visit the ER between 1-6am, more likely to visit between 9am and 2pm, and less likely to visit between 4-11pm (there was a slight increase at midnight), compared to State and County residents

Conclusions

- The higher rate of hospital admissions from the ER for HCHCP members suggests that they are sicker or that they are being referred to the ER for inpatient admission
- The just slightly higher rate of ER visits for non-emergent conditions and the day and time of visits suggests that HCHCP members may be utilizing the ER as a substitute for or in response to inaccessible primary care

Recommendations

- The problem of inappropriate ER use is a nationwide problem and a particular problem in Florida
- The HCHCP is unlikely on its own to effect change in these utilization patterns
- However, new system improvements in Plan operations may provide opportunities

Recommendations

- Greater access to data on plan members enrolled in each network provided to network administrators should facilitate monitoring of patient service utilization which and better communication among providers
- These are the kinds of improvements called for in the literature

Recommendations

- Greater access to more timely data should allow Networks to reach out to new or continuing members, introducing them to services, encouraging the use of preventive and primary care and sharing tips on how to best access network services
- Primary care providers can be notified about ER visits and can encourage follow-up in the primary care setting

Recommendations

- These system enhancements may well provide the opportunity for networks to develop more sophisticated care coordination services for their clients to possibly prevent visits to the ER for non-emergent conditions
- Should such services be developed, Plan administrators could build in incentives for networks that reduce non-emergent ER use

Recommendations

- While it is perhaps too much to ask the HCHCP to change the behavior of individuals who come in and out of the plan and who reflect the same use patterns as the general population, the HCHCP might be in a position to test new models given the emergence of Electronic Health Records and Accountable Networks through health care reform efforts

Recommendations

- Finally, in hindsight, the HCHCP provides much good to the citizens of the county
- It helps take care of low income populations without insurance, allowing them to continue to function and work toward self-sufficiency
- It protects health care institutions from excessive uncompensated care
- And it may well protect the general population from infectious diseases
- But it was not the answer to reducing ER use . . .

.

Thank you for the opportunity to contribute to critical discussions around the future of the Hillsborough County Health Care Plan.

It has been our privilege and our pleasure!

Dr. Alfred Mbah and Dr. Donna Petersen