





# **ACİL SERVİS KALABALIĞI**

Dr. İsa KILIÇASLAN Gazi Üniversitesi Tıp Fakültesi Acil Tıp Anabilim Dalı

A N T A L Y A - T U R K E Y

FEAT

The European Congress on Emergency Medicine

8th EPAT National Emergency Medicine Congress

The European Congress on Emergency Medicine Congress

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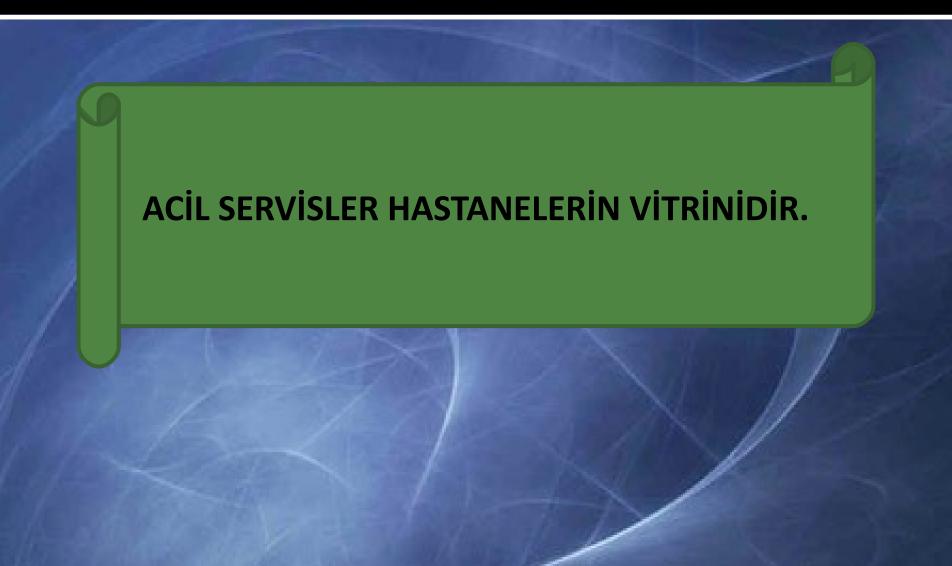
The European Congress on Emergency Medicine Congress

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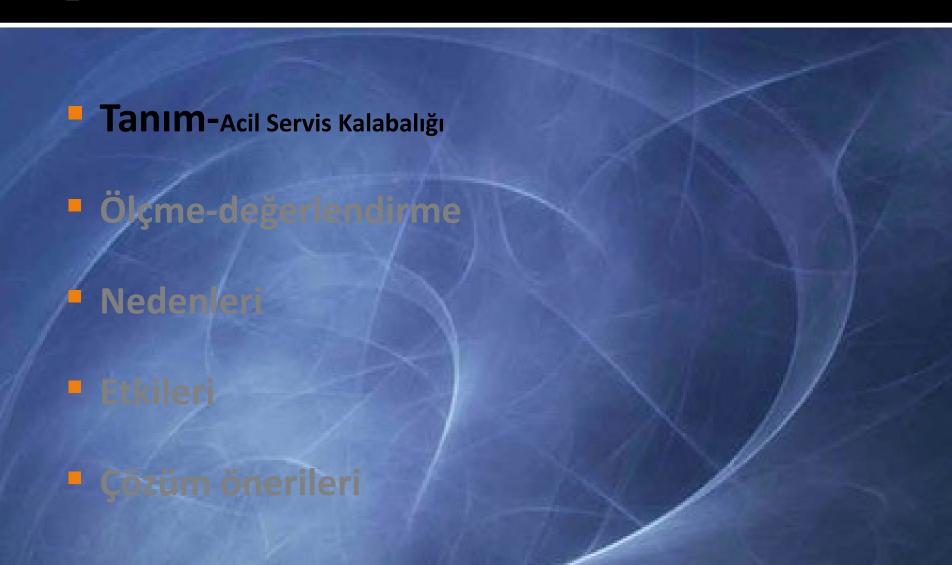
- Tanım-Acil Servis Kalabalığı
- Ölçme-değerlendirme
- Nedenleri
- Etkileri
- Çözüm önerileri

#### Systematic Review of Emergency Department Crowding: Causes, Effects, and Solutions

Nathan R. Hoot, PhD Dominik Aronsky, MD, PhD From the Department of Biomedical Informatics (Hoot, Aronsky) and the Department of Emergency Medicine (Aronsky), Vanderbilt University Medical Center, Nashville, TN.

Emergency department (ED) crowding represents an international crisis that may affect the quality and access of health care. We conducted a comprehensive PubMed search to identify articles that (1) studied causes, effects, or solutions of ED crowding; (2) described data collection and analysis methodology; (3) occurred in a general ED setting; and (4) focused on everyday crowding. Two independent reviewers identified the relevant articles by consensus. We applied a 5-level quality assessment tool to grade the methodology of each study. From 4,271 abstracts and 188 full-text articles, the reviewers identified 93 articles meeting the inclusion criteria. A total of 33 articles studied causes, 27 articles studied effects, and 40 articles studied solutions of ED crowding. Commonly studied causes of crowding included nonurgent visits, "frequent-flyer" patients, influenza season, inadequate staffing, inpatient boarding, and hospital bed shortages. Commonly studied effects of crowding included patient mortality, transport delays, treatment delays, ambulance diversion, patient elopement, and financial effect. Commonly studied solutions of crowding included additional personnel, observation units, hospital bed access, nonurgent referrals, ambulance diversion, destination control, crowding measures, and queuing theory. The results illustrated the complex, multifaceted characteristics of the ED crowding problem. Additional high-quality studies may provide valuable contributions toward better understanding and alleviating the daily crisis. This structured overview of the literature may help to identify future directions for the crowding research agenda. [Ann Emerg Med. 2008;52:126-136.]







## Acil Servis Kalabalığı

- Standart bir tanım ve ölçüt yok.
- Ancak yazarlar bu terimin tanımını; sıklıkla acil

servis ve hastanenin iç ve dışınc

faktörlere göre yapmışlar.

ACEP, 2002 "Mevcut acil servis



Acil servis kalabalık

Yataklı servisler dolu



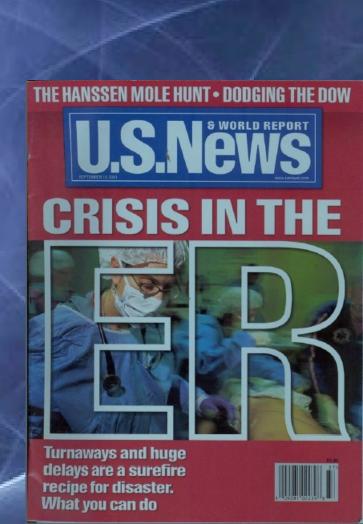


084024 www.fotosearch.com



# Dünya Ne Durumda?

Dünyada pek çok ülkesinde (ABD, Kanada, Avustralya, ispanya, ingiltere, Tayvan..) acil servis kalabalığı hasta güvenliğini tehdit etmekte ve insanların acil sağlık hizmetlerine ulasımını





## Milliyet gazetesi 8 Ocak 2007



#### Acil servisler komada!

N

Acil servislerin yoğunluklarına neden olan etkileri belirlemek için bir araştırma yapıldı. Hastaların üçte biri acil servise gelmesine gerek olmadığı halde geliyor. Eğitim düzeyi arttıkça uygunsuz kullanım da artıyor

#### Sükran Pakkan

Acil servislerin yoğunluklarına neden olan etkileri belirlemek amacıyla bir araştırma yapıldı. Araştırma kapsamında bir ay boyunca Dokuz Eylül Üniversitesi Hastanesi Acil Tıp Anabilim Dalı bünyesindeki acil servise başvuran 2 bin 533 hastanın demografik, sosyo-ekonomik ve hastalıklarına ilişkin durumları incelendi.



Yaşları 17 ile 101 arasında değişen hastaların yüzde 57.6'sını kadınlar oluşturdu. Araştırmaya göre hastaların yüzde 6.4'ü ambulansla, yüzde 60'ı ise özel aracıyla geliyor. Başvuruların en yoğun olduğu gün ise cumartesi.

#### Güvendiği için geliyor

Araştırmaya katılan hastaların yüzde 67.8'inin aciliyet açısından doğru servise başvurduğu ortaya çıkarken, yüzde 32.2'sinin aslında acil servise gelmesine gerek olmadığı görüldü. Gerekmediği halde acil servise gelenlerin yüzde 36.3'ünü kadınlar, yüzde 61.6'sını bekârlar oluşturyor. Acil servise gelerek doğru karar veren yaşlıların oranı ise yüzde 77.3.



Araştırma eğitim düzeyi arttıkça aciliyetin uygunsuzluğunun da arttığını ortaya çıkardı. Hastalar

içinde en az aciliyet, özel araçlarıyla ve evinden direkt olarak gelenlerde gözlendi. "Gerek olmadığı halde neden acil servise başvuruyorsunuz?" sorusuna, hastaların yüzde 48.9'u "Güvendiğim için" yanıtını verirken, yüzde 38'i "yakın olduğu için" yüzde 18.1'i "sosyal güvence kapsamında olduğu için" cevaplarını verdiler.

#### Yoğunluktan işlemiyor

Acil servislerin aşırı yoğunluğunun son yıllarda arttığını hatırlatan araştırma değerlendirmesinde şöyle denildi: "Acil servisler yoğunluk nedeniyle işlemez hale gelmekte, akut ve ciddi tıbbi bakım gerektiren hastaların bakımı aksamaktadır. Sağlık hizmetlerinin son derece yaygın ve erişilebilir olması tüm sağlık hizmetlerini olumlu yönde etkileyecek bir kavramdır. Acil servislere hasta başvurusunu sınırlandırmak ne kadar yanlış ise, acil servisleri de kötü kullanıma açık, her türlü hizmetin, her koşulda sağlandığı yerler haline getirmek de bir o kadar yanlış olacaktır."



## Gazi Üniversitesi ne durumda?

#### An Overcrowding Measurement Study in the Adult Emergency Department of Gazi University Hospital, Using the "National Emergency Departments Overcrowding Study" (Nedocs) Scale

Gazi Üniversitesi Hastanesi Erişkin Acil Servisinde "Ulusal Acil Servisler Kalabalık Çalışması (Nedocs)" Skalasını Kullanarak Kalabalık Ölçüm Çalışması

Mehmet Ergin<sup>1</sup>, Ahmet Demircan<sup>1</sup>, Ayfer Keleş<sup>1</sup>, Fikret Bildik<sup>1</sup>, Evin Aras<sup>2</sup>, Işıl Maral<sup>2</sup>, Gül Pamukçu<sup>1</sup>, Betül Özel<sup>1</sup>, Mehmet Karamercan<sup>1</sup>

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Department of Public Health, Faculty of Medicine, Gazi University, Ankara, Turkey

#### Abstract

**Objective:** To determine the causes of overcrowding in the Adult Emergency Department (ED) of Gazi University Hospital and assess the validation of the "National Emergency Departments Overcrowding System" (NEDOCS) scale among international EDs and EDs of various sizes.

**Materials and Methods:** Administrative data collected prospectively in the adult ED of a university-affiliated hospital in Ankara between March 31st and April 7th, 2008. A total of 918 patients who were 18 years and older and who had presented to the ED were included in the study. The factors causing overcrowding in the ED and the correlation between the NEDOCS scale and ED staff's perception for overcrowding were determined.

Results: The most important cause of overcrowding was determined to be the inability to transfer patients to inpatient beds in a timely manner. No significant difference was found for the perception of overcrowding among the ED staff. The coefficient of determination was quite low for the regression model, in which the NEDOCS scale was the independent variable and scores of the ED staff regarding the perception of overcrowding were dependent variables (R²=0.064). When the threshold value for the ED overcrowding was determined as 199, the sensitivity of the NEDOCS scale was measured at 92%; however, specificity was found to be quite low (32%). The area under the ROC curve was 0.617 and it was not statistically significant.

Conclusion: In order to explain the perception of overcrowding for the Adult ED staff at Gazi University Hospital, more variables were needed in addition to the NEDOCS components. (JAEM 2011; 10: 60-4)

Key words: Emergency department, overcrowding, NEDOCS

Received: 14.09.2010 Accepted: 18.09.2010

#### Özet

Amaç: Gazi Üniversitesi Hastanesi Erişkin Acil Servisinde yaşanan kalabalık nedenlerinin ortaya konması ve "National Emergency Departments Overcrowding System" (NEDOCS) skalasının uluslar arası ve değişik büyüklüklerde acil servislerde kullanım geçerliliğinin değerlendirilmesidir.

Gereç ve Yöntemler: 31 Mart ve 7 Nisan 2008 arasında Ankara' da bir fakülte hastanesi erişkin acil servisinde prospektif olarak toplanan veri incelendi. Çalışma süreci içerisinde acil servise başvuran 18 yaş ve üstü 918 hasta çalışmaya dâhil edildi. Acil serviste kalabalığa neden olan faktörler ve NEDOCS skalası ile acil servis çalışanlarının kalabalık algısı arasındaki ilişki tespit edildi.

Bulgular: Kalabalığa neden olan en önemli faktörün, yatış verilen hastaların hastane yataklarına transfer edilememesi olduğu görüldü. Acil servis çalışanlarının kalabalık algıları arasında istatistiksel olarak anlamlı bir fark yoktu. NE-DOCS skorunun bağımsız değişken, acil servis çalışanlarının kalabalık algısıyla ilgili verdikleri skorların bağımlı değişken olduğu regresyon modelinde belirtme katsayısı oldukça düşüktü (R²=0.064). Acil servis kalabalığı için eşik değeri 199 kabul edilirse, NEDOCS skalasının duyarlılığı %92 olmakta ancak seçicilik oldukça düşük çıkmaktadır (%32). ROC eğrisi altında kalan alan 0.617 olup; anlamlı bulunmadı.

Sonuç: Gazi Üniversitesi Hastanesi Erişkin Acil Servisi çalışanlarının kalabalık algısını açıklamak için NEDOCS bileşenlerine ek olarak başka değişkenlere ihtiyaç olduğu anlaşılmaktadır. (JAEM 2011; 10: 60-4)

Anahtar kelimeler: Acil servis, kalabalık, NEDOCS.

Alındığı Tarih: 14.09.2010 Kabul Tarihi: 18.09.2010



## Acil Servis Hasta Akışı ve

- Hastaların acil servislerde kaldıkları sürenin güvenilir şekilde saptanması
- Acil servis kalabalığının nedenlerinin saptanması
- Acil servis kalabalığının hasta bakım kalitesi üzerine etkisi
- Acil servis kalabalığını azaltacak girişimlerin değerlendirilmesi



SÜREÇ Throughput

SONUÇ

**Asplin BR**, Magid DJ, Rhodes KV, Solberg LI, Lurie N, Camargo CA Jr. A conceptual model of emergency department crowding. **Ann Emerg Med. 2003**;42(2):173-80.

American Journal of Emergency Medicine (2012) 30, 412–420



The American Journal of Emergency Medicine

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**Original Contribution** 

## The role of full capacity protocols on mitigating overcrowding in $EDs^{\stackrel{\star}{\sim},\stackrel{\star}{\sim}\stackrel{\star}{\sim}}$

Cristina Villa-Roel MD<sup>a,b</sup>, Xiaoyan Guo<sup>a</sup>, Brian R. Holroyd MD<sup>a</sup>, Grant Innes MD<sup>c</sup>, Lyndsey Wong MD<sup>d</sup>, Maria Ospina<sup>b,e</sup>, Michael Schull MD<sup>f</sup>, Benjamin Vandermeer<sup>g</sup>, Michael J. Bullard MD<sup>a</sup>, Brian H. Rowe MD<sup>a,b,g,\*</sup>

Received 15 September 2010; revised 26 November 2010; accepted 29 December 2010

#### Abstract

Objective: Overcrowding is an important issue facing many emergency departments (EDs). Access block (admitted patients occupying ED stretchers) is a leading contributor, and expeditions placement of admitted patients is an area of research interest. This review examined the ef protocols (FCPs) on mitigating ED overcrowding.

Methods: A comprehensive literature search was undertaken to identify p between 1966 and 2009. Intervention studies in which an FCP was used to in of stay and ED/hospital access block were included as a single program intervention. Two reviewers independently assessed citation relevance, in extracted data; because of limited data, pooling was not undertaken.

Results: From 14 446 potentially relevant studies, 2 abstracts from the san included. From 29 studies on systemwide intervention, 4 contained an FCP study was a single-center ED study using a before-after design; its methodol weak. One of the abstracts reported that an FCP was associated with less reduction) when compared with the comparison period; the other reported

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Accepted 29 April 2011

LİTERATÜR ne durumda?

## Kanıta Dayalı Tıp Ne Diyor?

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#### Original article

## Emergency department crowding: towards an agenda for evidence-based intervention

Zoë Slote Morris, <sup>1</sup> Adrian Boyle, <sup>2</sup> Kathleen Beniuk, <sup>1</sup> Susan Robinson<sup>2</sup>

#### **ABSTRACT**

**Objective** To determine the causes of emergency department (ED) crowding and to identify evidence-based solutions.

**Design** The review used a 'conceptual synthesis' approach to identify knowledge and opinion around the issue of ED crowding, not just effective interventions. Recommendations from the literature were classified according the quality of evidence and the extent to which they were under ED control.

**Data sources** SCOPUS and ISI were searched for studies of 'ED' AND 'crowding OR overcrowding' and backward citation retrieval was undertaken. To help identify sustematic review evidence of effective

times. <sup>12</sup> <sup>14</sup> The report from the Alberta Heritage Foundation for Medical Research, *Strategies to reduce emergency department overcrowding*, reviewed interventions with quantified outcomes. <sup>8</sup> However, in doing so it may have excluded studies that had substantive merit but were either poorly designed or where outcomes were difficult to measure. <sup>15</sup> While these reports make a welcome contribution, none provide a comprehensive conceptual or evidence base from which to proceed.

This paper reports findings from a broad review of existing literature on ED crowding and is designed to provide an assessment of what is currently known about ED crowding, its impact

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<sup>&</sup>lt;sup>e</sup>Institute of Health Economics, Edmonton, Alberta, Canada T5J 3N4

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guniversity of Alberta/Alberta Health Services Evidence-based Practice Centre, Edmonton, Alberta, Canada T6G 2J3



# Acil Servis Kalabalığı---Literatür

## Sıklıkla Çalışma Yapılan Nedenler

#### **GIRIŞ**

- Acil olmayan başvurular
- Mükerrer acil servis başvuruları
- · Grip sezonu

**Acil Servis** 

#### SÜREÇ

Yetersiz personel

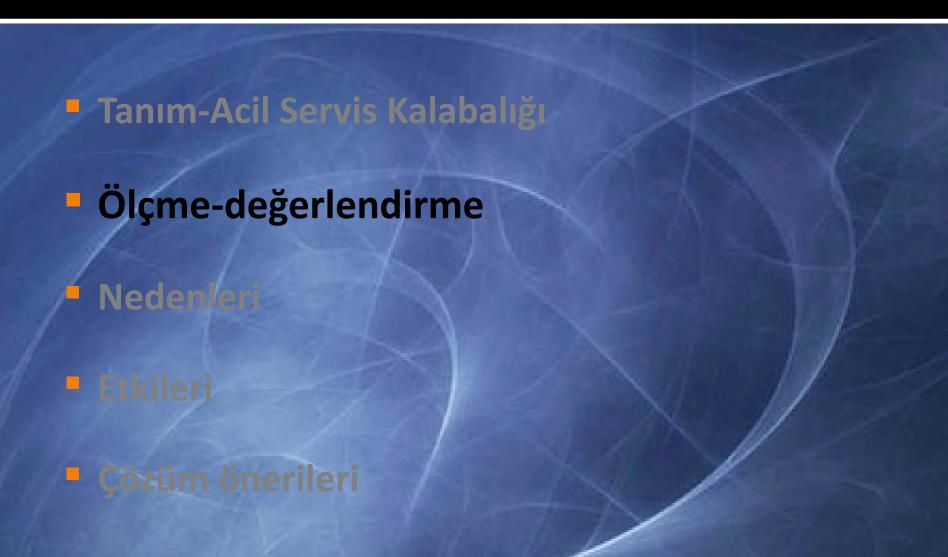
SONUÇ

- 'Hasta yatış blokajı
- 'Hastane yatak sayısının kısıklılığı

GİRİŞ Input SÜREÇ Throughput

SONUÇ







# Acil Servis Kalabalığı Ölçüm

#### Kriterleri

- \*2003 yılı, 70 uzman katılımı, 38 ölçüm noktası
  - Hasta talebi-(6)
  - Hasta kompleksitesi-(3)
  - Acil Servis Kapasitesi-(6)
  - Acil Servis İş Yükü-(6)
  - Acil Servis Verimliliği-(3)

\*Solberg LI et al. Emergency department crowding: consensus development of potential measures. Ann Emerg Med 2003;42:824-34.

nastane Napasitesi-(0)



# Acil Servis Kalabalığı Ölçümü

## <u>Skorlama Sistemleri</u>

TEMELİNDE
Asplin'in GİRİŞ-SÜREÇ-SONUÇ MODELİ

**Asplin BR**, Magid DJ, Rhodes KV, Solberg LI, Lurie N, Camargo CA Jr. A conceptual model of emergency department crowding. **Ann Emerg Med**. **2003**;42(2):173-80.

Acil Servis İş Yükü Emergency Department Work Index (EDWIN)

Bernstein SL et al., Acad Emerg Med 2003;10:938

Ulusal Acil
Servis Aşırı
Kalabalığı
Çalışması
National
Emergency
Department
Overcrowding

Weiss SJ et al. Acad Emerg Med 2004;11:38

Göstergelerinin Eş Zamanlı Acil Analizi Real-Time Emergency

Talep

Reeder TJ et.al. Acad Emerg Med 2004;10:1084

**Analysis of** 

**Demand** 

Acil Servis İşgal Oranı "Boarding burden,"

McCarthy ML et al., Ann Emerg Med 2008;51:11-24

Yata

k Oran

Acil Servis Kalabalık Skalası (EDCS) vd.







# Acil Servis Kalabalığı---Nedenler

#### **GIRIŞ**

- Acil servislere başvuran hasta sayısındaki artış
- · Acil olmayan başvurular
- Yaşlı hasta sayısının artışı—Ek hastalığı olan hasta sayısının artışı
- Mükerrer acil servis başvuruları
- · Grip sezonu

#### SÜREÇ

- Yeterli sayıda sağlık personelinin olmaması
- Dokümantasyon ihtiyacının artması....
- Radyoloji ve laboratuar hizmetlerindeki aksaklıklar
- Konsültasyon sürecinin etkinliği....

**SONUÇ** 

- 'Hasta yatış blokajı
- 'Hastane yatak sayısının kısıklılığı

GIRIŞ Input SÜREÇ Throughput

SONUÇ







# Acil Servis Kalabalığının Etkileri

Hastanın hastanede kalış süresi artar.

Hasta ölüm oranları 1.3 kat artıyor. Tedaviye bağlı gecikmelere bağlı mortalite ve morbiditenin %31 nedeni Acil servisten muayene olmadan ayrılan hasta sayısını arttırıyor.

#### Hasta Bakım Kalitesi

Hasta Güvenliği

Tıbbi Hatalar

10/24 13:09 PACKARDBELL-PC PACKARD BELL ScreenHunter

HEALTH POLICY AND CLINICAL PRACTICE/ORIGINAL RESEARCH

Crowding Delays Treatment and Lengthens Emergency Department Length of Stay, Even Among High-Acuity Patients

Melissa L. McCarthy, ScD Scott L. Zeger, PhD Ru Ding, MS Scott R. Levin, PhD Jeffrey S. Desmond, MD Jennifer Lee, MD Dominik Aronsky, MD, PhD From the Department of Emergency Medicine, Johns Hopkins University School of Medicine, Battimore, MD (McCarthy, Ding, Levin); the Department of Biostatistics, Johns Hopkins University Bloomberg School of Patick Health, Battimore, MD (Zeger); the Department of Emergency Medicine, University of Michigan School of Medicine, Aren Arbor, MI (Deamond); the Department of Emergency Medicine, George Washington University School of Medicine, Washington, DC (Lee); and the Department of Blomedical Informatics and the Department of Emergency Medicine, Vanderbit University Medical Centre, Nashville, TN (Wombly).

Study objective: We determine the effect of crowding on emergency department (ED) waiting room, treatment, and boarding times across multiple sites and aculty groups.

Methods: This was a retrospective cohort study that included ED visit and inpotent medicine country of data for a 1-year period at 4 EDs. We measured a rounding at 30 minute intensist incompliant each patient FD stay. We estimated the effect of crowding on waiting room time, treatment time, and boarding time separately using discrete time usually analysis with time-dependent crowding measures (e.g. number boarding, and inpatient medicine occupancy rate), controlling for patient demographic and clinical characteristics.

Results: Crowling substantially delayed patients' waiting room and boarding times but not treatment time. During the day shift, when the number boarding increased from the 50th to the 90th percentile, the adjusted median waiting room time (range 28 to 10 minutes) increased by 5% to 78% (range 33 to 82 minutes), and the adjusted median boarding time (range 290 to 626 minutes) increased by 15% to 47% (range 286 to 921 minutes), depending on the site. Crowding delayed the care of high-acuty level 2 patients at all sites. During crowded periods (le, 90%), the adjusted median waiting room times of high-acuty level 2 patients were 3% to 35% higher than during mornal periods, depending on the site and crowding measure.

Conclusion: Using discrete-time survival analysis, we were able to dynamically measure crowding throughout each patient's ED visit and demonstrate its detectious effect on the timeliness of emergency care, even for high-acuity patients. [Ann Emerg Med. 2009;xxxxxx.]

The Association Between Emergency Department Crowding and Adverse Cardiovascular Outcomes in Patients with Chest Pain

Jesse M. Pines, MD, MBA, MSCE, Charles V.Pollack Jr, MD, MA, Deborah B. Diercks, MD, Anna Marie Chang, MD, Frances S. Shofer, PhD, and Judd E. Hollander, MD

#### Abstract

Objectives: While emergency department (ED) crowding in a worthwise publism, few studies will demonst not an accordance aboves or rowding and restorance. The authors examined whether ED crowding was associated with adverse cardiovascular extensions in patients with clear pairs syndromes (thest pairs or skitch compliants of possible cardiac continues in patients with clear pairs syndromes (thest

Methodic A nitraspective analysis was performed for patients 200 years of age with cheet pais syndrome admitted to a tertiary care scariner, hospital from 1999 through 2006. The authors compared rates of impatient adverse extreme from ED triage to hospital sideshape, defined as delayed acute myocardial infection (AMI), heart failure, hypothesion, dyerhythmias, and carliae arrest, which occurred after ED arrival using the securities covered on measures.

Results: Among 4574 pointers, 251 8%) patients developed adverse entoness sider ED service, 301 (18%) had decounted state corresponsy syntrems (KeS, 3m ed 100ms, 27 GMS) had AMC (compared to less crowded times, ACS gainets experience mere aboves accounter at the highest weiting room to less revoled times, ACS gainets experience interval  $\{C_3 = 1.3 \text{ to } 110\}$  and patients-bears  $\{O_3 = 2.5, 2.8\%$  and foldows:  $\{O_3 = 1.3, 9.8\%, CL = 1.0 \text{ to } 9.3\}$ . Adverse extraorine were not significantly more frequent during times within highest number of admitted patients  $\{O_3 = 1.3, 9.8\%, CL = 1.0 \text{ to } 9.3\}$ . Adverse extraorine were not significantly more frequent during times length of stay (LOS) for admitted pointers breasferred to impatient bets within 6 hours (OR = 1.5, 9.8%) and  $\{O_3 = 1.3, 9.8\%, CL = 1.0 \text{ to } 0.3\}$ . The bount of the high-length of stay (LOS) for admitted pointers breasferred to impatient bets within 6 hours (OR = 1.5, 9.8%) and  $\{O_3 = 1.3, 9.8\%, CL = 1.0 \text{ to } 0.3\%, CL = 1.0 \text{ to } 0.3\%$ . The strength of high-length of the strength of the st

Conclusions: Then was an association between some measures of ED crowding and a higher risk of adverse custics secular exchanges in patients with both ACS-valued and non-ACS-valued chest pain regestions.

ACADEMIC EMERGENCY MEDIONE 2009, 16:617-625 0: 2009 by the Society for Academic Emergency

Keywords: crowding, overcrowding, adverse outcomes, cardiovascular, emergency department, health care

Finansal Kayıp

Ambulans rededilmesine neden oluyor.

ACİL SERVİS
ÇALIŞANLARINDA
"BURN-OUT"
TÜKERNMİŞLİK
SENDROMU

Magid DJ et al., The quality gap: searching for the concequences of emergency department crowding. Ann Emerg Med 2004;44:586-8







#### Önerileri

"URGENT MATTER"
PROGRAMI
Ortak Bileşenler
"Urgent Matters Program Toolkit"

http://www.urgentmatters.org/

- Neden çok, çözüm güç.
- 2002 yılında George Washington University
   Medical Center ve Robert Wood Johnson
   Foundation tarafından 16 hastanede "urgent matters" programı
  - Hasta Akım Modelleri,



#### <del>Önerileri</del>

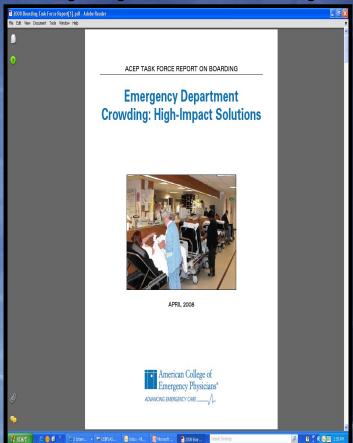
# "URGENT MATTER" PROGRAMI Ortak Bilesenler

- Acil servis kalabalığı sadece acil servisinin değil, tüm hastanenin sorunu.
  - Multidisipliner hastane takımları oluşturulmalı.
  - Kurum yöneticileri acil servisin savunucuları olmalıdır.
- Hastane yönetimi hasta akışının iyileştirilmesinin öncelikli olduğunun kesin mesajını vermeli
  - Kalite iyileştirme tekniklerini bilmeli ve kullanmalı
  - Kendi içinde titiz ölçümler yapmalı
  - Bilgi şeffaflığı kurumsal değer olmalı



## <u>Önerileri</u>

2007 yılında ACEP çalışma kolu oluşturdu.



http://www.acep.org/workarea/downloadasset.aspx?id=37960



# Acil Servis Kalabalığı

Cözüm Önerileri

Yüksek Etkinlikli Çözümler

"Tam Kapasite Protokolü"

Acil hastaların acil servis dışına, koridorlara, toplantı salonu dahil uygun olabilecek bölümlere nakledilmesi

Elektif hasta veya cerrahi hasta liste listesinin koordinasyonu VEYA Yatış Blokaj Sistemi ?

Hastaneden taburcu olacak hastaların öğleden önce koordine edilmesi

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ACEP TASK FORCE REPORT ON BOARDING

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Önerileri

いる HEALTH POLICY AND CLINICAL PRACTICE/ORIGINAL RESEARCH

#### The Association Between Transfer of Emergency Department Boarders to Inpatient Hallways and Mortality: A 4-Year Experience

Asa Viccellio, MD Carolyn Santora, RN Adam J. Singer, MD Henry C. Thode Jr., PhD Mark C. Henry, MD From the Department of Emergency Medicine, Stony Brook University, Stony Brook, NY.

Study objective: We developed and implemented an institutional protocol aimed at reducing crowding by admitting boarded patients to hospital inpatient hailways. We hypothesized that transfer of admitted patients from the emergency department (ED) to inpatient hailways would be feasible and not create patient harm.

Methods: This was a retrospective cohort study in a suburban, academic ED with an annual census of 70,000. We studied consecutive patients admitted from our ED between January 2004 and January 2008. In 2001, a multidisciplinary team developed and implemented an institutional protocol in which admitted adult patients boarded in the ED were transferred to hospital inpatient hallways under select conditions. We extracted data from the electronic medical record system, measuring patient demographics, ED disposition (discharge, admit to floor, admit to hallway), ED length of stay, and inhospital mortality. We report ED length of stay, subsequent transfer to an ICU, and hospital mortality of patients admitted to standard and hallway inpatient beds.

Results: Of 55,062 ED patients admitted, there were 1,798 deaths. Of all admissions, 2,042 (4%) went to a hallway; 53,020 went to a standard bed. Patients admitted to standard and hallway beds were similar in age (median [interquartile range] 55 years [37 to 72 years] and 54 years [41 to 70 years], respectively) and sex (48.2% and 50% female patients, respectively). The median (interquartile range) times from ED triage to actual admission in patients admitted to standard and hallway beds were 426 minutes (306 to 600 minutes) and 624 (439 to 895 minutes) minutes, respectively (P<.001). Median ED census at triage was lower for standard bed admissions than for hallway patients (44 [33 to 53] versus 50 [38 to 61], respectively, P<.001). Inhospital mortality rates were higher among patients admitted to standard beds (2.6%; 95% confidence interval [CI] 2.5% to 2.7%) than among patients admitted to hallway beds (1.1%; 95% CI 0.7% to 1.7%). ICU transfers were also higher in the standard bed admissions (6.7% [95% CI 6.5% to 6.9%) versus 2.5% [95% CI 1.9% to 3.3%)).

Conclusion: Transfer of ED-boarded admitted patients to an inpatient hallway occurs during high ED census and waiting times for admission but does not appears to result in patient harm. [Ann Emerg Med. 2009;54: 487-491.]

2004-2008 arası Toplam 55062 hasta 53020 normal hastane yatağı 2042 koridora- seçilmiş hasta Herhangi bir zarar oluşmamış

# Research

In 2008, the Western Australian government announced that EDs would adopt a 4-hour rule, whereby firstly 85% and eventually 98% of patients would be either discharged home or admitted to a ward within 4 hours of presentation.

# Emergency department overcrowding, mortality and the 4-hour rule in Western Australia

Gary C Geelhoed FRACP, FACEM, MD, Director.<sup>1</sup> and Professor.<sup>2</sup>

# Nicholas H de Klerk BSc, MSc, PhD, Head of Biostatistics and Bioinformatics<sup>3,4</sup>

1 Emergency Department, Princess Margaret Hospital for Children, Perth. WA.

2 School of Paediatrics and Child Health and School of Primary and Aboriginal and Rural Health Care. vercrowding in emergency departments (EDs) occurs when the physical or staffing capacity of the department is exceeded by the number of patients waiting to be seen, undergoing assessment and treatment or waiting for departure. Overcrowding occurs in Australia and elsewhere in the developed world and has been well documented over the past decade. 2-4

It became generally recognised that

#### **Abstract**

**Objective:** To assess whether emergency department (ED) overcrowding was reduced after the introduction of the 4-hour rule in Western Australia and whether any changes in overcrowding were associated with significant changes in patient mortality rates.

Design, setting and patients: Quasi-experimental intervention study using dependent pretest and post-test samples. Hospital and patient data were obtained for three tertiary hospitals and three secondary hospitals in Perth, WA. for 2007–08 to 2010–11.

Main outcome measures: Mortality rates; overcrowding rates.

Results: No change was shown in mortality from 2007–08 to 2010–11 for the secondary hospitals and from 2007–08 to 2009–10 for the tertiary hospitals. ED overcrowding (as measured by 8-hour access block) at the tertiary hospitals



## Önerileri

#### Ek Çözüm Önerileri---Anlamlı Maliyet İlişkisi

- "Yatakbaşı Kayıt Sistemi (Bedside Registration)
- Hızlı Bakı Birimleri (Fast Tract Units)
- Gözlem Üniteleri (Observation Units)
- □Doktor Triajı
- Elektif Cerrahilerin İptali
- Diğer; ek sağlık personeli (hemşire ve yardımcı sağlık personeli, laboratuvar ve radyoloji istemlerinin gerçekleştirilme süre tespiti, elektronik kayıt tutma, hastane kayıt sistemlerinin geliştirilmesi ve kayıtlara ulaşılabilmesi, triaj uygulama)



Önerileri

Etkisiz Çözüm Önerileri

- PAcil serviste kapasite arttırımı (Acil servis alanını genişletme, ek odalar açma)
  - "Katlardan taburcu olan hastalara özel alanlar oluşturmak
- •Kat doktoru---Hasta bakım koordinasyonunda hastane bazlı doktor kullanmak. (Hastane kalış süresini azaltır, AS bekleme zamanına etkisi yoktur.)
  - -Ambulansların reddedimesi
  - Gereksiz başvuruların eliminasyonu



## Bizim için çözüm!

16 Ekim 2009 CUMA

#### Resmî Gazete

Sayı: 27378

#### **TEBLIĞ**

Sağlık Bakanlığından:

#### YATAKLI SAĞLIK TESİSLERİNDE ACİL SERVİS HİZMETLE UYGULAMA USUL VE ESASLARI HAKKINDA TEBLİĞ

#### Renk kodlaması ve triyaj uygulaması

MADDE 8 – (1) Acil servislerde etkin bir hizmet sunumu için renk kodlaması uygulanır. Triyaj işlemi başvuru sırasında yapılır. Triyaj uygulaması için muayene, tetkik, tedavi, tıbbi ve cerrahi girişimler bakımından öncelik sırasına göre kırmızı, sarı ve yeşil renkler kullanılır. Renk kodlamasına ilişkin uygulama esasları Ek-7'de gösterilmiştir.

- (4) Müstakil acil branş nöbetleri, öncelikle iç hastalıkları, genel cerrahi, kadın hastalıkları ve doğum, çocuk sağlığı ve hastalıkları, beyin cerrahi ile ortopedi ve travmatoloji, kardiyoloji, nöroloji, anestezi ve reanimasyon branşlarında düzenlenir.
- (3) Acil servislerde hasta takibinin 24 saati geçmemesi esastır. Bu süre içerisinde kesin tanısı konulamamış veya yatış endikasyonu belirlenememiş hastalar ile yatış endikasyonu bulunan ve birden fazla kliniği ilgilendiren hastalar acil servis sorumlu tabibi veya nöbetçi uzman tabibince değerlendirilir ve tıbbi durumunun gerektirdiği en uygun uzmanlık dalına ait kliniğe yatışı yapılarak ilgili klinik şefi veya sorumlu uzman tabibine bilgi verilir. Yatışına karar verilen klinikte boş yatak bulunmaması hâlinde boş yatak bulunan uygun kliniklerden birisine yatırılarak hastanın takibi, bakım ve tedavisi ilgili olduğu klinik tarafından yapılır. Acil serviste kliniklere yatış bekleyen acil hastalara yatış önceliği verilir.
- (4) Tanısı konulmuş ve tedavi planı belirlenmiş, acil müdahale gerektirmeyen, durumu stabil olan ancak ileri tetkik ve tedavisinin sağlanması amacıyla önceden koordinasyon sağlanarak başka sağlık tesisinden sevkle gönderilen ve nakil sırasında acil müdahaleyi gerektirecek akut tıbbi sorun gelişmemiş hastalar gerekmedikçe acil serviste yeniden değerlendirilmez. Bu tür hastalar, acil serviste bekletilmeksizin, yatış işlemleri derhal tamamlanır ve ilgili uzmanlık dalına ait kliniğe yatırılır.



Acil servis kalabalığının en önemli nedeni yatış bekleyen hastaların birikmesidir.

YATIŞ SORUNU

GÜÇLÜ YÖNETİM ve GÜÇLÜ ACİL SERVİS YÖNETİMİNİN İŞBİRLİĞİ

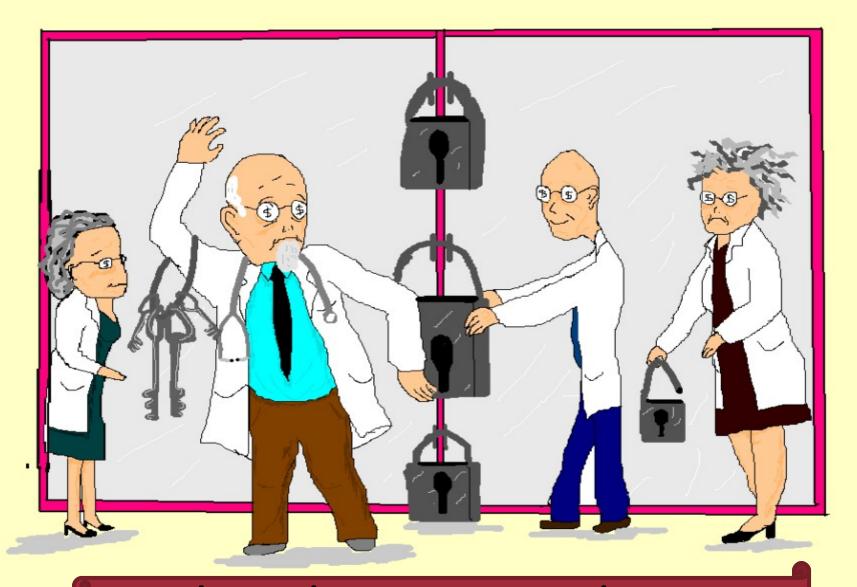
HASTA AKIŞ MODELİ



# Acil Servise Bakış Açısı



ACIL SERVISLER HASTANELERIN VITRINIDIR.



ACIL SERVISLER HASTANELERIN ARKA KAPISIDIR, KAPATILMALIDIR.

