

Antibiyotiklerin Kullanımının Monitörizasyonu



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Enfeksiyon Hastalıkları ve Klinik Mikrobiyoloji Ana Bilim Dalı

U.S.

Anne Miller, 90, First Patient Who Was Saved by Penicillin

By WOLFGANG SAXON JUNE 9, 1999

Anne Sheafe Miller, who made medical history as the first patient ever saved by penicillin, died on May 27 in Salisbury, Conn. She was 90.

In March 1942, Mrs. Miller was near death at New Haven Hospital suffering from a streptococcal infection, a common cause of death then. She had been hospitalized for a month, often delirious with her temperature spiking to nearly 107, while doctors tried everything available, including sulfa drugs, blood transfusions and surgery. All failed.

As she slipped in and out of consciousness, her desperate doctors obtained a tiny amount of what was still an obscure, experimental drug and injected her with it. Her hospital chart, now at the Smithsonian Institution, registered a sharp overnight drop in temperature, and by the next day she was no longer delirious and soon was eating full meals, one of her doctors reported.

Mrs. Miller's life was saved, and so eventually were the lives of all those previously felled by infections of bacteria like streptococci, staphylococci and

Antibiyotikler halen her gün hayat kurtarmaya devam ediyor...

- Neonatal bakım
- Transplantasyon
- Kemoterapi
- Immunsupresyon
- Cerrahi girişimler
- Yoğun bakım'da enfeksiyonların kontrolü kritik önem taşımakta



Antibiyotik direnci

Antibiyotik direnci antibiyotiklerin keşfi ile birlikte fark edilmiştir.

“Laboratuvarda mikropları öldürmeye yetmeyecek konsantrasyonda penisiline maruz bırakarak dirençli hale getirmek hiç de zor değil, ve bu durum sıklıkla vücutta da meydana gelmekte.” Sir Alexander Fleming, 1945





1920

1930

1940

1950

1960

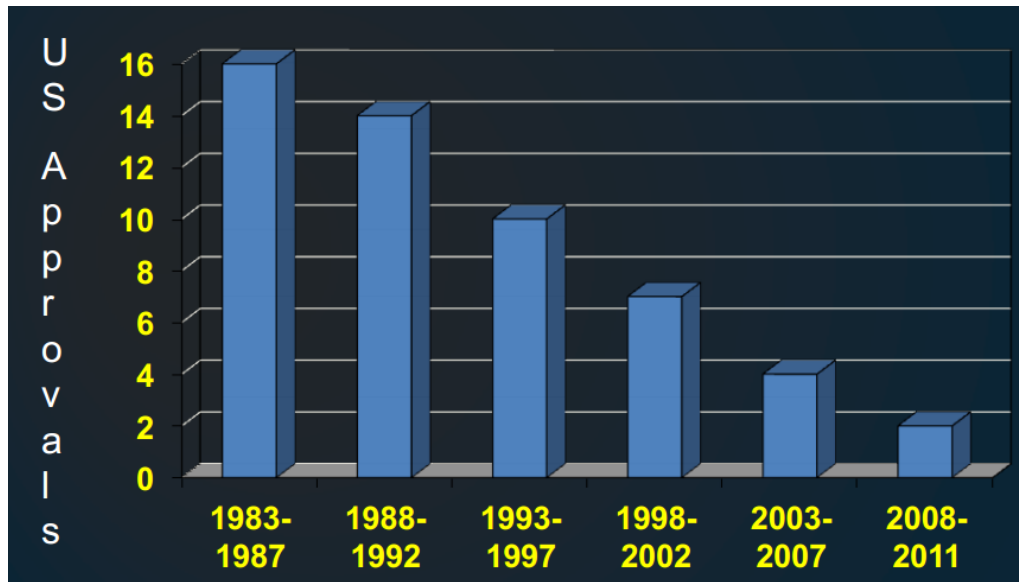
1970

1980

1990

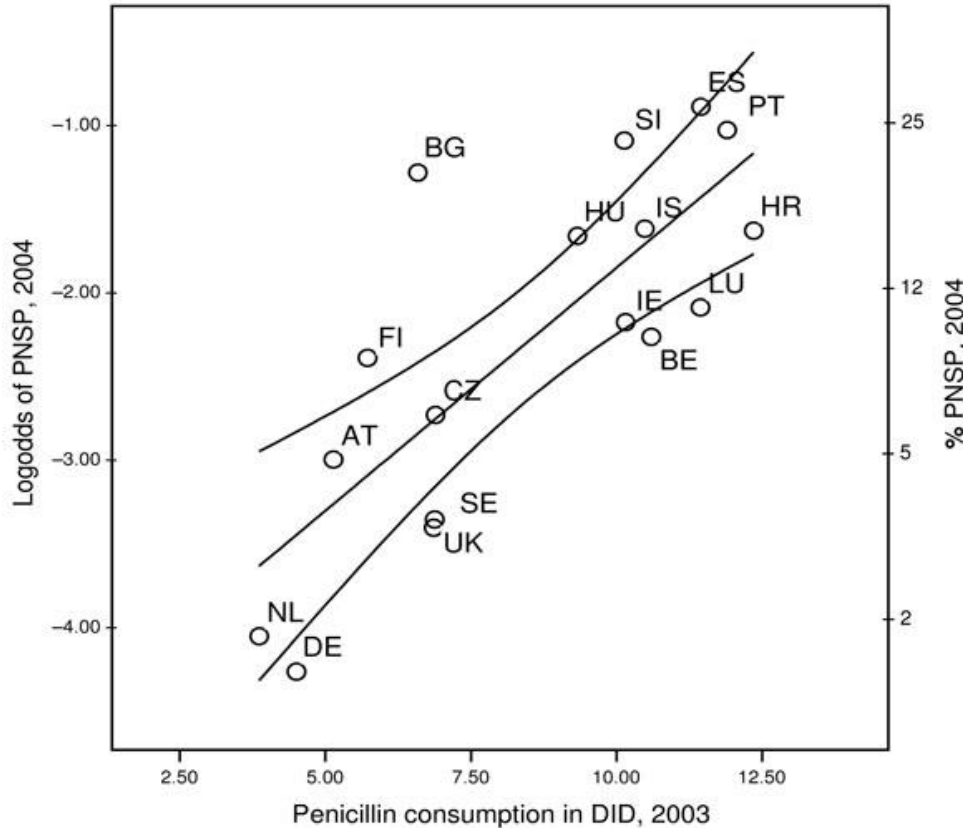
Antibiyotikler sınırlı bir kaynaktır

- Direnç oranları artmakta
- Uygun olmayan abx kullanımı
- Ufukta yeni antibiyotik ?



Antibiyotik kullanımı ve direnç ilişkisi

Penisilin tüketimi fazla olan ülkelerde pnömokoklarda penisilin direnci daha fazla görülmektedir



17 Avrupa ülkesinde polikliniklerde penisilin reçetelenme oranları ve pnömokoklarda penisilin direnci

Antimikrobiyal Yönetim Programları



Antimikrobiyal direnç

Yeni antibiyotik?

Maliyet

Antimikrobiyal Yönetim Programları

Doğru Tanı
Doğru Antibiyotik
Doğru Doz
Doğru Süre



Antimikrobiyal Yönetim Programları



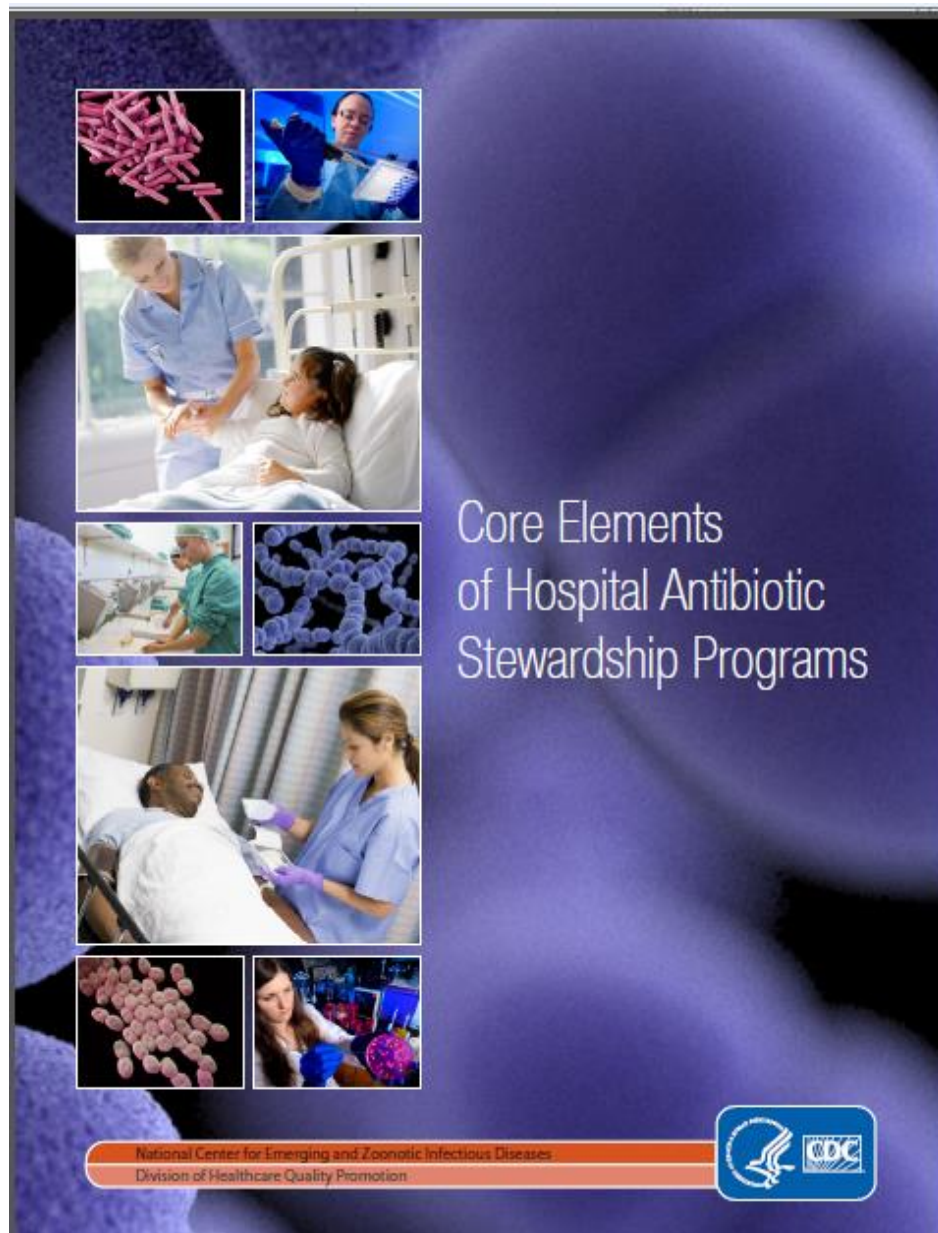
- ☐ Antibiyotik Direnci
- ☐ Maliyet



NATIONAL ACTION PLAN FOR COMBATING ANTIBIOTIC-RESISTANT BACTERIA

MARCH 2015





Core Elements of Hospital Antibiotic Stewardship Programs

National Center for Emerging and Zoonotic Infectious Diseases
Division of Healthcare Quality Promotion



<http://www.cdc.gov/getsmart/healthcare/implementation/core-elements.html>

Quality Collaborative

► Infection Control & Prevention

► Antimicrobial Stewardship Project

Catheter-Associated Urinary Tract Infection (CAUTI) Prevention Collaborative
Central Line-Associated Bloodstream Infections (CLABSI) Collaborative
Clostridium difficile (C. difficile) Collaborative
Infection Prevention Coach Training Program
IPRO Methicillin-resistant Staphylococcus aureus (MRSA) Project

Workforce Development & Training

Building Infrastructure for Clinical Advancement

Transitions in Care

Quality and Outcomes Research Committee

News Clips

Member Letter Bulletins

Member Press Releases

Home >> Quality >> Infection Control & Prevention >> Antimicrobial Stewardship Project >>

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Antimicrobial Stewardship Project Toolkit



Antimicrobial Stewardship Project Toolkit

Toolkit

- [GNYHA Antimicrobial Stewardship Program Toolkit](#)

Toolkit Appendices

- [Appendix A1: \(Hospital\) Assessment of Current Practices Survey](#)
- [Appendix A2: \(Long Term Care\) Assessment of Current Practices Survey](#)
- [Appendix B: Clinician Pre-/Post-Perception Survey](#)
- [Appendix C: Antibiotic Tracking Sheet](#)
- [Appendix D1: \(Hospital\) Sample Models](#)
- [Appendix D2: \(Long Term Care\) Sample Models](#)
- [Appendix E: Marketing Brochure](#)
- [Appendix F: Clinician-Oriented PowerPoint Presentation with Teaching Guide](#)
- [Appendix G: Pre-/Post-Assessment \(Clinician Specific\)](#)
- [Appendix H: Sample Recommendation Chart Stickers – IV:PO](#)
- [Appendix I: Sample Recommendation Chart Stickers – No Infection](#)
- [Appendix J: Sample Antimicrobial Stewardship Program Initial Request](#)
- [Appendix K: Antimicrobial Stewardship Program Follow-Up](#)
- [Appendix L: Process Measurement – Recommendation Tracking Tool](#)
- [Appendix M: Theoretical Monthly Savings of an Antimicrobial Stewardship Program](#)
- [Appendix N: Administrator-Oriented PowerPoint Presentation with Teaching Guide](#)



NSQHS Standards, Standard 3: Antimicrobial Stewardship Criterion

Actions required:

- 3.14.1** An AMS program is in place
- 3.14.2** The clinical workforce prescribing antimicrobials have access to endorsed
antibiotic usage
Therapeutic Guidelines on
- 3.14.3** Monitoring of antimicrobial usage and resistance is undertaken
- 3.14.4** Action is taken to improve the effectiveness of AMS



Antimikrobiyal Yönetim Programları

DEVELOP POLICIES TO IMPROVE ANTIBIOTIC PRESCRIBING/USE:

- ☐ Prescriber documentation requires dose, duration, and indication for all antibiotic prescriptions
- ☐ Facility-specific algorithm for assessing residents
- ☐ Facility-specific algorithms for appropriate diagnostic testing (*e.g., cultures*)
- ☐ Facility-specific treatment protocols for infections

MONITOR ONE OR MORE MEASURES OF ANTIBIOTIC USE:

- ☐ Adherence to clinical assessment documentation policies (*signs/symptoms, vital signs, physical exam*)
- ☐ Adherence to prescribing documentation requirements (*dose, duration, indication*)
- ☐ Adherence to facility-specific treatment protocols
- ☐ Point prevalence surveys of antibiotic use
- ☐ Rates of new antibiotic starts/1,000 resident-days
- ☐ Antibiotic days of therapy/1,000 resident-days

MONITOR ONE OR MORE OUTCOMES OF ANTIBIOTIC USE AND RATES OF:

- ☐ *C. difficile* infection
- ☐ Antibiotic-resistant organisms
- ☐ Adverse drug events due to antibiotics

PROVIDE EDUCATIONAL RESOURCES AND MATERIALS ABOUT ANTIBIOTIC RESISTANCE AND FOR IMPROVING ANTIBIOTIC USE FOR:

- ☐ Clinical providers (*e.g., MDs, NPs, PAs, Pharm.D.s*)
- ☐ Nursing staff (*e.g., RNs, LPNs, CNAs*)
- ☐ Residents and families

Antibiyotiklerin Kullanımının Monitörizasyonu

- Bakteriyel direnci belirleyen faktörleri,
- Bakteriyel direncin gelişimini öngörmeyi,
- Antibiyotiklerin uygun kullanımına yönelik antimikrobiyal yönetim programlarının planlanmasını,
- Antimikrobiyal yönetim programlarının etkisini ölçmeyi sağlar.

Antibiyotiklerin Kullanımının Monitörizasyonu

- Monitörizasyon **Antimikrobiyal Yönetim Programlarının** uygulanmasında kritik öneme sahiptir.
- **Antimikrobiyal Yönetim Programlarının** antibiyotik kullanımında düzelmeyi sağlayıp sağlamadığı ancak monitörizasyon ile gösterilebilir.

Antibiyotiklerin Kullanımının Monitörizasyonu

- **Kullanıma ilişkin ölçütler:**

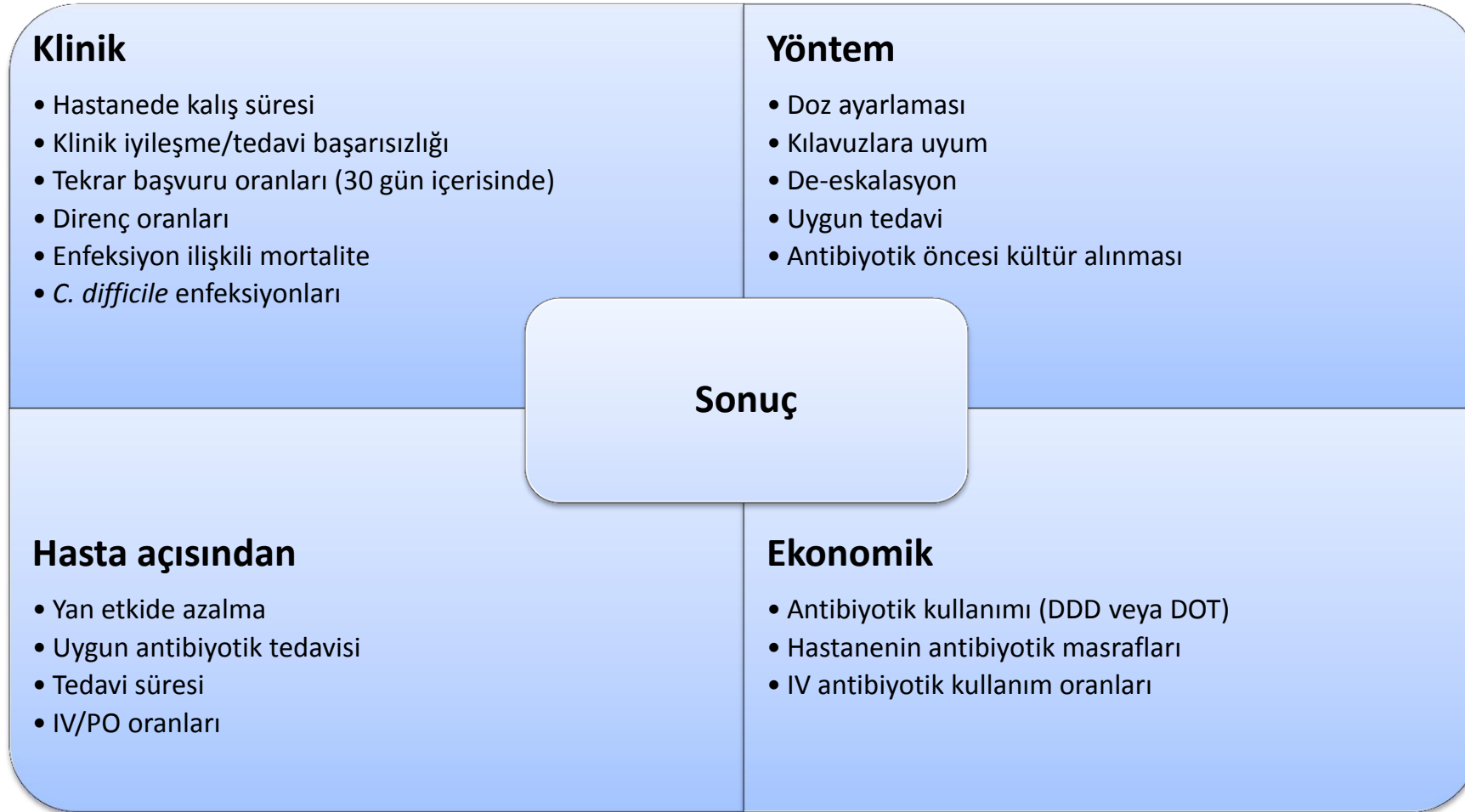
- Antibiyotik reçete edilirken klinik değerlendirmenin dökümanite edilmesi
- Antibiyotik kullanımına yönelik nokta prevelans çalışmaları
- Antibiyotik Tedavi Günü (Antibiotic days of therapy) (DOT)
- Reçeteleme sonrası uygunluğun değerlendirilmesi

- **Sonuca ilişkin ölçütler:**

- *C. difficile* ve dirençli bakterilerin izlemi
- Antibiyotik kullanımına ilişkin yan etkiler
- Antibiyotik direnci
- Antibiyotik kullanım maliyeti



Antibiyotiklerin Kullanımının Monitörizasyonu



DDD=Defined daily dose

DOT=Days of therapy

Antimikrobiyal Yönetim Programları

ANTİBİYOTİK KULLANIMINA İLİŞKİN BİR VEYA DAHA FAZLA ÖLÇÜT İZLENMELİDİR:

☐ Klinik değerlendirmenin dökümantasyonuna ilişkin politikalara uyum

☐ Recetleme gerekliliklerine uyum (Doz, süre)

ANTİBİYOTİK KULLANIMININ SONUÇLARINA İLİŞKİN BİR VEYA DAHA FAZLA ORAN İZLENMELİDİR:

☐ Antibiyotik dirençli bakteriler

☐ C.difficile enfeksiyonu

☐ Antibiyotik ilişkili yan etkiler

ası

- ☐ Clinical providers (e.g., MDs, NPs, PAs, Pharm.D.s)
- ☐ Nursing staff (e.g., RNs, LPNs, CNAs)
- ☐ Residents and families

Gram + Enfeksiyonlarda antibiyotik uygunluğunun değerlendirilmesi formu

Assessment of Appropriateness of Antibiotic Use for Resistant Gram-Positive Infections

A. Date: _____
Gender: Male Female
Age: _____
Service: _____

B. PLEASE INDICATE IF DAPTOMYCIN, LINEZOLID OR VANCOMYCIN WAS USED FOR ANY OF THE FOLLOWING INDICATIONS:

1. Single blood culture positive for coagulase-negative staphylococci, *Bacillus* species, *Corynebacterium* species and/or diphtheroids in the absence of prosthetic joints, prosthetic cardiac valves, or cardiac implantable electronic devices (including AICD, LVAD and pacemaker). Yes No

2. Documented infection with Streptococci, Enterococci, or Staphylococci susceptible to a β -lactam antibiotic, in a patient without documented allergy to β -lactam antibiotics. Yes No
(If allergy to β -lactam, please answer questions in section C)

3. Continued empiric use after 72h despite no cultures collected or negative cultures. Yes No
(Exceptions should be made for neutropenic patients with an ANC < 500 cells/ μ L and patients transferred from outside facilities)

A. If **Yes**, was an indication documented? (Please specify indication below) Yes No

B. If **Yes**, were cultures collected? Yes No

C. If cultures were collected, were antibiotics administered before collection? Yes No

4. Treatment of methicillin-resistant *Staphylococcus aureus* (MRSA) isolated from cultures of the nares or stool (represent colonization). Yes No

C. IF ALLERGY REPORTED TO β -LACTAM ANTIBIOTIC, PLEASE ANSWER THE FOLLOWING:

1. Drug name _____

2. Was allergy/adverse drug reaction documented? Yes No

3. Documented allergy or adverse drug reaction _____

Üriner Enfeksiyonlarda antibiyotik uygunluğunun değerlendirilmesi formu

Assessment of Appropriateness of Antibiotics for Urinary Tract Infections (UTIs)

7. If a urinalysis and/or urine culture were collected, please designate how urine was collected:

- ☐ Clean catch
- ☐ Indwelling catheter
- ☐ Straight catheterization
- ☐ Collection method not specified

8. Was the patient receiving antibiotics prior to collection of the urine culture? Yes No

9. Were empiric antibiotics (started prior to culture results) consistent with institutional/national guidelines? (Document antibiotic below) Yes No

10. Was the urinary catheter removed after a diagnosis of CA-UTI or catheter-associated asymptomatic bacteriuria (CA-ASB)? Yes No

A. If **Not**, was a reason for continuation documented? (Please specify below) Yes No

11. Were empiric antibiotics stopped if no organism was isolated by culture? Yes No

A. If **No**, was an indication for continued antibiotics documented? Yes No
Please specify indication for continuation: _____

12. If an organism was isolated by culture, was it susceptible to the prescribed antibiotic? Yes No
(PRINT ANTIBIOTIC SUSCEPTIBILITY REPORT)

13. Were antibiotics changed after culture results were available? Yes No

A. If **YES**, please document antibiotic change:

14. Total duration of antibiotic therapy for UTI while an inpatient?

_____ Days

15. Was an ID consult team involved in the patient's care? Yes No

ANTIBIOTIC TRACKING SHEET

Instructions: Please use this form to track all antibiotics that have been prescribed to a resident. Please note that this sheet represents all antibiotics that have been prescribed to ONE specific resident.

RESIDENT ID:	PRESCRIBING MD:	ADMISSION DATE: / /			
ANTIBIOTIC #1:					
DATE (MM/DD/YY)		INDICATIONS FOR USE (please check all that apply)		DIAGNOSTIC TESTS (please check all tests that were performed)	
START	STOP	YES	NO	YES	NO
		(Y) (N)	FEVER	(Y) (N)	BLOOD CULTURE
		(Y) (N)	URINARY TRACT SYMPTOMS	(Y) (N)	URINE CULTURE
		(Y) (N)	RESPIRATORY SYMPTOMS	(Y) (N)	URINALYSIS
(Y) (N) URINARY CATHETER		(Y) (N)	DIARRHEA	(Y) (N)	RESPIRATORY SPECIMEN CULTURE/TEST
(Y) (N) CENTRAL LINE		(Y) (N)	SKIN/WOUND INFECTION	(Y) (N)	STOOL CULTURE/TEST
(Y) (N) VENTILATOR		(Y) (N)	OTHER (Please specify): []	(Y) (N)	CHEST X-RAY
LTC FACILITY ONLY: DID PATIENT REQUIRE TRANSFER TO HOSPITAL?		(Y) (N)	IS PATIENT COLONIZED WITH RESISTANT ORGANISM? []	(Y) (N)	CBC
YES	NO			(Y) (N)	WOUND CULTURE
(Y) (N)	(Y) (N)			(Y) (N)	OTHER (Please specify): []
ANTIBIOTIC #2:					
DATE (MM/DD/YY)		INDICATIONS FOR USE (please check all that apply)		DIAGNOSTIC TESTS (please check all tests that were performed)	
START	STOP	YES	NO	YES	NO
		(Y) (N)	FEVER	(Y) (N)	BLOOD CULTURE
		(Y) (N)	URINARY TRACT SYMPTOMS	(Y) (N)	URINE CULTURE
		(Y) (N)	RESPIRATORY SYMPTOMS	(Y) (N)	URINALYSIS
		(Y) (N)	DIARRHEA	(Y) (N)	RESPIRATORY SPECIMEN CULTURE/TEST
		(Y) (N)	SKIN/WOUND INFECTION	(Y) (N)	STOOL CULTURE/TEST
		(Y) (N)	OTHER (please specify): []	(Y) (N)	CHEST X-RAY
				(Y) (N)	CBC
				(Y) (N)	WOUND CULTURE
				(Y) (N)	OTHER (Please specify): []

Measurement of Adult Antibacterial Drug Use in 130 US Hospitals: Comparison of Defined Daily Dose and Days of Therapy

Ronald E. Polk,¹ Christina Fox,¹ Anne Mahoney,² Jim Letcavage,² and Conan MacDougall^{1,a}

¹School of Pharmacy, Department of Pharmacy, Virginia Commonwealth University, Medical College of Virginia Campus, Richmond, Virginia; and ²Solucient, Evanston, Illinois

(See the editorial commentary by Monnet on pages 671–3)

Background. Hospitals are advised to measure antibiotic use and monitor its relationship to resistance. The World Health Organization's recommended metric is the defined daily dose (DDD). An alternative measure is the number of days of therapy (DOT). The purpose of this study was to contrast these measures.

Methods. We measured the use of 50 antibacterial drugs that were administered to adults who were discharged from 130 US hospitals during 1 August 2002–31 July 2003.

Results. Of 1,795,504 patients, 1,074,174 received at least 1 dose of an antibacterial drug (59.8%). The mean ($\pm$ standard deviation) of total antibacterial drug use measured by the number of DDDs per 1000 patient-days and the number of DOTs per 1000 patient-days were not significantly different (792 ± 147 and 776 ± 120 , respectively; $P = .137$), although the correlation was poor ($r = 0.603$). For some individual drugs, such as levofloxacin and linezolid, there was no significant difference between DDDs per 1000 patient-days and DOTs per 1000 patient-days, because the administered daily dosage was nearly equivalent to the DDD. When the administered dosage exceeded the DDD, such as for ampicillin-sulbactam and cefepime, estimates of use based on DDDs per 1000 patient-days significantly exceeded those based on DOTs per 1000 patient-days ($P < .001$). When the administered dosage was less than the DDD, such as for piperacillin-tazobactam and ceftriaxone, estimates of use based on DDDs per 1000 patient-days were significantly lower than those based on DOTs per 1000 patient-days ($P < .001$).

Conclusion. The measurement of aggregate hospital antibiotic use by DDDs per 1000 patient-days and DOTs per 1000 patient-days is discordant for many frequently used antibacterial drugs, because the administered dose is dissimilar from the DDD recommended by the World Health Organization. DDD methods are useful for benchmarking purposes but cannot be used to make inferences about the number of DOTs or relative use for many antibacterial drugs.

Table 2. Comparison of the advantages and disadvantages of measuring aggregate antibiotic use by defined daily dose (DDDs) per 1000 patient-days) versus days of therapy (DOTs) per 1000 patient-days.

Measurement method	Advantages	Disadvantages
Defined Daily Dose	(1) Allows standardized comparisons of aggregate antibiotic use between hospitals in different locations and countries; (2) allows for an estimate of use in countries with limited access to computerized pharmacy data; (3) will change the estimate of drug use if the recommended daily dose is altered and the approved DDD does not change	(1) Will not accurately estimate DOT when the administered daily dose is not equal to the DDD and, therefore, cannot be used to compare relative use between different antibiotic classes; (2) cannot be used in children; (3) will underestimate use for drugs that require reduced dosage when excretory function is impaired, such as with renal impairment; (4) approved DDDs may change as new dosages are approved for existing drugs, which can create confusion when comparing use over time
Days of Therapy	(1) Can be used to measure antimicrobial use in children; (2) not influenced by changes in the recommended DDD; (3) not influenced by discrepancies between the DDD and the preferred daily dose	(1) Will overestimate use for drugs that are given in multiple doses per day; (2) more difficult to measure without computerized pharmacy records

Implementing a Strategy for Monitoring Inpatient Antimicrobial Use Among Hospitals in the United States

Scott K. Fridkin and Arjun Srinivasan

Division of Healthcare Quality Promotion, Centers for Disease Control and Prevention, Atlanta, Georgia

Measuring antimicrobial use is an important way to provide metrics that support more vigorous, facility-specific stewardship efforts, which in turn will be a major step toward reducing unnecessary use of broad-spectrum antimicrobials. Yet no single system is available in the United States that can meet stewardship needs at the level of individual hospitals and provide benchmarks, monitor trends, and measure the magnitude of antimicrobial use at the regional, state, and national levels. Therefore, the Centers for Disease Control and Prevention is pursuing 3 distinct and complimentary efforts that remain focused on providing “data for action,” including facility-level use metrics for benchmarking across comparable patient care settings, national estimates of usage patterns using sentinel surveillance sites, and limited assessments using proprietary data.

Antibiyotiklerin Kullanımının Monitörizasyonu

- Antibiyotik kullanımı ve direnç takibi için bilgisayar programları ile sürekli izlem
 - Yerel, Ulusal, Bölgesel ağlar
- Nokta prevelans çalışmaları
- Eczane çıkış verileri

Antibiyotiklerin Kullanımının Monitörizasyonu

- Hastaneler eczane çıkış verilerini izleyerek antibiyotik tüketim verilerini saptayabilir. Diğer hastaneler ile karşılaştırabilir.

TÜRKİYE'DE DURUM

- Kısıtlı antibiyotik kullanımı-2003
- Halen;

En çok satılan ilaçlar (Dünya genelinde)

- Kalp-damar hastalıkları % 19.3
- Santral sinir sistemi hastalıkları % 15.8
- Metabolik hastalıklar % 15.3
- Antibiyotikler % 9.9

En çok satılan ilaçlar (Türkiye'de)

- Antibiyotikler % 19.0
- Ağrı kesiciler % 12.0
- Antiromatizmal ilaçlar % 11.0
- Soğuk algınlığı ilaçları % 8.6



T.C. Sağlık Bakanlığı
Türkiye İlaç ve Tıbbi Cihaz Kurumu

Akılcı İlaç Kullanımı ve İlaç Tedarik Yönetimi Dairesi

2010 yılında "Akılcı İlaç Kullanımı Şube Müdürlüğü" kurulmuş

- **Reçete Bilgi Sistemi (RBS);** 26 Ekim 2010 tarihinde Hıfzıssıhha Mektebi Müdürlüğü'nde akılcı ilaç kullanımının yaygınlaştırılması amaçlanarak Reçete Değerlendirme Projesi (RDP) adıyla başlatılmıştır.
- Bu sistem aracılığıyla hekim, tanı, ilaç, ülke, bölge, il, ilçe, hastane ve aile sağlığı merkezi bazında dağılımlar hesaplanmaktadır. Bu hesaplamalar belirli zaman aralıklarına göre yapılabilmektedir. RBS'de reçeteler, bazı reçeteleme indikatörlerine göre analiz edilmekte ve kıyaslanmaktadır.

- Türkiye’de **Reçete Bilgi Sistemi** verileri:
- 81 ilde aile hekimlerinin düzenlediği reçetelerde Antibiyotik bulunan reçete yüzdesi :
 - 2011 %34,94,
 - 2012 %33,99
 - 2013 %33,95

Duyurular

 :

Deėerli Kullanıcılar,

Araç kullanım g n  sonucuna ulaőtığımız payda verilerinin toplanmasında santral ven z kateter g n ne ulařmak i in "santral ven z kateterli hasta sayısı" esas alınmaktadır. Bu nedenle hastanın birden fazla kateterinin olması ya da ka  kateterinin olduėunun bizim i in bir anlamı bulunmamaktadır.  nemli olan hastanın kateterinin olması ya da olmamasıdır.  rneėin 3 santral kateteri olan bir hasta invaziv formda ilgili alana "1 hasta" olarak yazılmalıdır.

 :

Deėerli Kullanıcılar,

2015 yılı verilerinin deėerlendirilmesi sırasında tespit edilen aksaklıklar neticesinde payda girişleri ekranına kontrol paneli eklenmiştir. Bu kontrol panelinde;

- a. Yeni yatan hasta sayısı dolu yatak sayısından b y k olamaz
- b. Ventil t r g n  hasta g n nden b y k olamaz
- c.  riner kateter g n  hasta g n nden b y k olamaz
- d. Umbilikal kateter g n  hasta g n nden b y k olamaz

Bu kontrol parametreleri ile ilgili son 1 haftadır sıkıntılar yaşanmış olup; bu sorunlara istinaden ařaėıdaki bilgilendirme metninin yazılmasına ihtiya  duyulmuřtur. Bu kapsamda İnvaziv ara  formu doldurulurken;

- a. Yoėun Bakım  nitelerinde (YB ) y r t len invaziv ara  iliřkili enfeksiyonların s rveyansı enfeksiyon kontrol hemřirelerinin sorumluluėunda ve takibinde y r t lmelidir.

Kullanıcı Rapor Türü Antibiyotik Direnç Raporları

- Kullanıcı
- Veri Girişi
- Enfeksiyon
- El Hijyeni
- Payda Girişleri
- Ameliyat
- Mikroorganizma İşlem
- Mikroorg. Antibiyotik

Kimlik Bilgileri

Yatış Tanıları

Altta Yatan Hastalıklar

Risk Faktörleri

Enfeksiyonlar

Antibiyotik

Servis

Doz

Empirik/Tedavi

Başlama Tarihi

Bitiş Tarihi

Ekle

	#	ANTİBİYOTİK ADI	BASLAMATARIHI	BITİSTARIHI	CARPAN	MIKTAR	EMPIRİK	BİRİMDÖZ
Düzenle	Sil	Meropenem	26.05.2016 00:00:00	08.06.2016 00:00:00	3	1,00	Empirik	1
Düzenle	Sil	Linezolid	26.05.2016 00:00:00	08.06.2016 00:00:00	2	600,00	Empirik	0
Düzenle	Sil	Meropenem	17.06.2016 00:00:00		3	1,00	Tedavi	1
Düzenle	Sil	Teikoplanin	20.06.2016 00:00:00		1	400,00	Tedavi	0
Düzenle	Sil	Flukonazol	21.06.2016 00:00:00		2	400,00	Tedavi	0

Raporlar

Listeler

Kaydet

* Veri girişlerini
tamamladıktan
sonra kaydet
tuşuna basınız.

GÜNCELLEME



Türkiye Halk Sağlığı Kurumu
Hastane Enfeksiyonları Sürveyans Sistemi

YOZGAT BOZOK ÜNİVERSİTESİ ARAŞTIRMA VE UYGULAMA HASTANESİ
GÜLESER ÜNSAL - Aktif Kullanıcı: 138

Kullanıcı Rapor Türü Antibiyotik Direnç Raporları

Posta - gül aksoy - Outlo ..Enfeksiyon Sürveyans Sı ..Enfeksiyon Sürveyans Sı ameliyat_payda_2010

infinite.tig.gov.tr/liste/ismikroorganizmant.aspx

- Listeler
- Ameliyat
- Yatış
- Enfeksiyon
- El Hijyeni
- Payda Verileri
- Mikroorganizma
- Mikroorg. Antibiyotikler**

Sorgula Excel

Enter text to search...														
Drag a column header here to group by that column														
Kayıt No	Kurum Adı	Servis	Kimlik No	Adı Soyadı	Cinsiyet	Enfeksiyon Adı	Enfeksiyon Tarihi	Sek. Kan Dolaşımı	Örnek Türü	Mikroorganizma Adı	Esbl	MRSA	VRE	Karbapenem Dir
9740	YOZGAT BOZOK ÜNİVERSİTESİ ARAŞTIRMA VE UYGULAMA HASTANESİ	GENEL YOĞUN BAKIM (KARMA)			K	Kateter İlişkili Üriner Sistem Enfeksiyonu	28.02.2014		İdrar	Klebsiella spp				

Antibiyotik Adı	Duyarlılık
Amikasin	Duyarlı
Amoksisilin-klavulanat	Dirençli
Ampisilin	Dirençli
Ampisilin-sulbaktam	
Aztreonam	
Fosfomisin	Duyarlı
Gentamisin	Duyarlı
İmipenem	Duyarlı
Netilmisin	
Nitrofurantoin	Dirençli

Kullanıcı **Yeni Hasta** ☐ TC ☐ Yabancı ☐ Yeni Doğan

Veri Girişi **TC Kimlik / Hasta No**

Enfeksiyon **Adı Soyadı**

El Hijyeni **Cinsiyet** ☐ Erkek ☒ Kadın

Payda Girişleri **Doğum Tarihi**

Ameliyat **Servis**

Mikroorganizma İşlem **Ameliyat**

Mikroorg. Antibiyotik **Ameliyat Tarihi**

Raporlar **Taraf** ☒ Tarafsız ☐ Sağ ☐ Sol

Ameliyat Süresi

Yara Sınıfı

Asa Skoru

Laparoskopik/Endoskopi

Acil / Elektif

Anestezi Türü

Oda No

Risk İndeksi

Listeler ☒ Servis Doktorları ☐ Bütün Doktorlar

☐ YAPRAK ÜSTÜN ☐ NAGİHAN SARI ☒ MUSTAFA KARA

☐ LEVENT SEÇKİN ☐ EMEL KIYAK ÇAĞLAYAN

Antibiyotik

Veriliş Zamanı

Kullanım Süresi

Durumu

+ Antibiyotik Ekle

#	Antibiyotik	Veriliş Zamanı	Kullanım Süresi	Durumu
No data to display				

Kaydet

Enter text to search...					
Drag a column header here to group by that column					
MIKROORGANİZMAADI	ANTİBİYOTİKADI	Duyarlı	Duyarlı_Yuzdesi	Dirençli	Dirençli_Yuzdesi
Acinetobacter baumannii	Amikasin	2	33,33	4	66,67
Acinetobacter baumannii	Ampisilin	0	0	2	100
Acinetobacter baumannii	Ampisilin-sulbaktam	0	0	4	100
Acinetobacter baumannii	Gentamisin	2	33,33	4	66,67
Acinetobacter baumannii	İmipenem	0	0	6	100
Acinetobacter baumannii	Kolistin	5	100	0	0
Acinetobacter baumannii	Levofloksasin	0	0	3	100
Acinetobacter baumannii	Meropenem	0	0	6	100
Acinetobacter baumannii	Netilmisin	1	50	1	50
Acinetobacter baumannii	Piperasilin	0	0	3	100
Acinetobacter baumannii	Piperasilin-tazobaktam	0	0	1	100
Acinetobacter baumannii	Sefazolin	0	0	1	100
Acinetobacter baumannii	Sefepim	0	0	6	100
Acinetobacter baumannii	Sefoperazon-sulbaktam	1	25	3	75
Acinetobacter baumannii	Seftazidim	0	0	5	100
Acinetobacter baumannii	Seftriakson	0	0	2	100
Acinetobacter baumannii	Siprofloksasin	0	0	6	100
Acinetobacter baumannii	Tigesiklin	3	100	0	0
Acinetobacter baumannii	Trimetoprim-sulfametoksazol	2	33,33	4	66,67
Escherichia coli	Amikasin	1	100	0	0
Escherichia coli	Amoksisilin-klavulanat	1	100	0	0

Evaluation of antibiotic use in a hospital with an antibiotic restriction policy

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Abstract

The study was designed to evaluate rational antibiotic use in relation to diagnosis and bacteriological findings. All hospitalized patients who received antibiotics were evaluated by a cross-sectional study. Of the 713 patients hospitalized, 281 (39.4%) patients received 377 antibiotics. Among 30 different antibiotics the most frequently requested were first generation cephalosporins (19.9%), ampicillin–sulbactam (19.1%) and aminoglycosides (11.7%). Antibiotic use was appropriate in 64.2% of antibiotic requests. In analysis of appropriate use, a request after an infectious diseases consultation was a frequent reason (OR = 14, $P < 0.001$, CI = 0.02–0.24). Antibiotics requested in conjunction with susceptibility results were found to be more appropriate than those ordered empirically (OR = 4.5, $P = 0.017$, CI = 0.06–0.76). Inappropriate antibiotic use was significantly higher among unrestricted antibiotics than restricted ones ($P < 0.001$). Irrational antibiotic use was high for unrestricted antibiotics. Additional interventions such as postgraduate training programmes and elaboration of local guidelines could be beneficial.

Çalışma

- Temmuz 2001
- Nokta prevelans
- Hastanede 713 hasta +,
- Antibiyotik kullanan hasta sayısı 281 (%39)
- Kullanılan ab sayısı 440
- En sık kullanılan antibiyotikler:
 - 1.Kuşak Sefalosporinler %20
 - Ampisilin-sulbaktam %19
 - Aminoglikozitler %12
 - Kinolonlar %11
 - Karbapenemler %7

Değerlendirme

- 1)Antibiyotik doğru, doz yanlış
- 2)Aynı spektrumda birden fazla antibiyotik kullanımı mevcut
- 3)Antibiyotik spektrumu dar
- 4)Antibiyotik spektrumu çok geniş
- 5)Daha ucuz antibiyotik mevcut
- 6)Antibiyotik ihtiyacı yok

Sonuç

Categories of inappropriate antibiotic use

Categories of inappropriate antibiotic use	<i>n</i>	%
Unnecessary use (no evidence of an infection or indication of prophylaxis)	86	63.7
Overly broad	15	11.1
Not broad enough	12	8.9
Agree with choice of antibiotic, but dosage was inappropriate	12	8.9
Overlap of spectrum (> 1 agents used at the same time)	8	5.9
More expensive than the equivalent	2	1.5
Total	135	100

Sonuç

Appropriateness of antibiotic use in different wards

Ward	Appropriate use		Inappropriate use		Total	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
ICUs	22	68.8	10	31.2	32	100
Medical	77	80.2	19	19.8	96	100
Surgical	143	57.4	106	42.6	249	100
Total	242	64.2	135	35.8	377	100

ID specialists recommended 25% of all antibiotics.



Evaluation of antibiotic use in intensive care units of a tertiary care hospital in Turkey

A. Erbay*, H. Bodur, E. Akıncı, A. Çolpan

Summary The object of this study was to evaluate the appropriateness of antibiotic use in relation to diagnosis and bacteriological findings in the intensive care units (ICUs) of a 1100-bed referral and tertiary care hospital with an antibiotic restriction policy in Turkey. Between June and December 2002, patients who received antibiotics in the medical and surgical ICUs were evaluated prospectively. Two infectious diseases (ID) specialists assessed the antibiotics ordered daily. Of the 368 patients admitted to the ICUs, 223 (60.6%) received 440 antibiotics. The most frequently prescribed antibiotics were first-generation cephalosporins (16.1%), third-generation cephalosporins (15.2%), aminoglycosides (12.1%), carbapenems (10.7%) and ampicillin-sulbactam (8.7%). Antibiotic use was inappropriate in 47.3% of antibiotics. ID specialists recommended the use of 47% of all antibiotics. An antibiotic order without an ID consultation was more likely to be inappropriate [odds ratio (OR)=13.2, $P<0.001$, confidence intervals (CI)=4.4-39.5]. Antibiotics ordered empirically were found to be less appropriate than those ordered with evidence of culture and susceptibility results (OR=3.8, $P=0.038$, CI=1.1-13.1). Inappropriate antibiotic use was significantly higher in patients who had surgical interventions (OR=3.6, $P=0.025$, CI=1.2-10.8). Irrational antibiotic use was high for unrestricted antibiotics. In particular, antibiotic use was inappropriate in surgical ICUs. Additional interventions such as postgraduate training programmes and elaboration of local guidelines could be beneficial.

- Haziran-Aralık 2002
- YBÜ'de 368 hasta izlendi
- 223 hastaya (%60.6) 440 antibiyotik verildi
- 806 antibiyotik günü/ 1000 hasta günü

Yüksek antibiyotik kullanım oranı

Yüksek kullanım nedir?

Ortalama: 20.4 - 192.9 AB günü/1000 hasta günü

Yüksek kullanım: >62 AB günü/1000 hasta günü

- (1) agree with choice of antibiotic, but dosage was inappropriate according to the literature;
- (2) agree with choice of antibiotic, but loading dose was not administered;
- (3) agree with choice of antibiotic, but dosage was not altered for the patient's current renal or hepatic functions;
- (4) agree with choice of antibiotic, but disagree with the duration (extended surgical prophylaxis);
- (5) disagree with choice of antibiotic because it was ineffective against the isolated pathogen based on culture and sensitivity tests;
- (6) disagree with choice of antibiotic because of toxicity or allergy;
- (7) disagree with choice of antibiotic because of the deteriorating clinical status of the patient;
- (8) disagree with choice of antibiotic because the spectrum of the antibiotics were overlapped;
- (9) disagree with choice of antibiotic because the spectrum was not broad enough;
- (10) disagree with choice of antibiotic because the spectrum was too broad;
- (11) disagree with choice of antibiotic because an equally suitable drug was available at a lower cost; and
- (12) disagree with the need for an antibiotic.

Antibiyotik uygun/doz uygun değil

Antibiyotik uygun/yükleme dozu yapılmamış

Antibiyotik uygun/doz karaciğer-böbrek
fonksiyonlarına göre ayarlanmamış

Antibiyotik uygun/kullanım süresi uygun değil
(uzamış cerrahi profilaksi)

Antibiyotik uygun değil: izole edilen patojene etkisiz

Antibiyotik uygun değil: toksisite/alerji mevcut

Antibiyotik uygun değil: aynı etkinlikte daha ucuzu var

Antibiyotik uygun değil: klinik durumda
bozulma var

Antibiyotik uygun değil: spektrum dar

Antibiyotik uygun değil: spektrum fazla geniş

Antibiyotik uygun değil: aynı spektrumda
>1 ajan kullanımı

Antibiyotik kombinasyonu uygun değil

Antibiyotik kullanımı gereksiz

- En sık kullanılan antibiyotikler:
 - 1.Kuşak Sefalosporinler %16
 - 3.Kuşak Sefalosporinler %15
 - Aminoglikozitler %12
 - Karbapenemler %11
 - Ampisilin-sulbaktam %9
- Antibiyotiklerin %47'si EHU tarafından başlanılmıştı ve bunların %87'si kısıtlı antibiyotiklerdi.
- Profilaktik antibiyotik kullanımının %80'i uygun değildi.

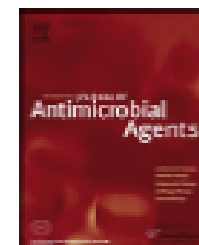
Table IV Categories of inappropriate antibiotic use

Categories of inappropriate antibiotic use	<i>N</i>	%
Disagree with need for an antibiotic	81	38.9
Agree with choice of antibiotic, but disagree with the duration (extended surgical prophylaxis)	71	34.1
Disagree with choice of antibiotic because it was ineffective against the isolated pathogen based on culture and sensitivity tests	14	6.7
Disagree with choice of antibiotic because the spectrum of the antibiotics overlapped	11	5.3
Disagree with choice of antibiotic because the spectrum was not broad enough	9	4.3
Agree with choice of antibiotic, but dosage was inappropriate according to the literature	8	3.9
Agree with choice of antibiotic, but dosage was not altered for the patient's current renal or hepatic functions	7	3.4
Disagree with choice of antibiotic because of the deteriorating clinical status of the patient	4	1.9
Disagree with choice of antibiotic because the spectrum was too broad	2	1.0
Disagree with choice of antibiotic because an equally suitable drug was available at a lower cost	1	0.5
Total	208	100



Contents lists available at ScienceDirect

International Journal of Antimicrobial Agents

journal homepage: <http://www.elsevier.com/locate/ijantimicag>Impact of early appropriate antimicrobial therapy on survival in *Acinetobacter baumannii* bloodstream infectionsAyşe Erbay^{a,*}, Aysun Idil^b, M. Gökhan Gözel^a, İpek Mumcuoğlu^c, Neriman Balaban^c^a Department of Infectious Diseases and Clinical Microbiology, Ankara Numune Education and Research Hospital, Ankara, Turkey^b Department of Public Health, Ankara University School of Medicine, Ankara, Turkey^c Department of Microbiology, Ankara Numune Education and Research Hospital, Ankara, Turkey

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ABSTRACT

The impact of appropriate empirical antimicrobial therapy for *Acinetobacter baumannii* bacteraemia on patient outcomes has not been clearly established. We assessed predictors of 30-day mortality and the effect of inappropriate empirical antimicrobial treatment on mortality among patients with *A. baumannii* bacteraemia between July 2005 and June 2008. Initial empirical antimicrobial therapy was considered to be appropriate if the initial antibiotics that were administered within 48 h after the acquisition of a blood culture sample included at least one antibiotic that was active in vitro and when the dosage and route of administration were in accordance with current medical standards. Overall, 103 patients with nosocomial *A. baumannii* bacteraemia were included in the study. Appropriate empirical therapy was administered to 41.7% of patients within 48 h. The overall mortality rate was 54.4%, with rates of 39.5% and 65% for patients who received appropriate and inappropriate antimicrobial therapy within 48 h, respectively. Thus, a 25.5% reduction in the overall crude mortality rate was associated with adequate early empirical antimicrobial therapy. Multivariate analysis using a Cox regression model showed that significant independent risk factors for mortality were delayed appropriate treatment [hazard ratio (HR) = 2.4, 95% confidence interval (CI) 1.3–4.2; $P=0.004$], development of septic shock (HR = 2.6, 95% CI 1.4–4.8; $P=0.004$), age > 65 years (HR = 2.1, 95% CI 1.2–3.7; $P=0.007$) and mechanical ventilation (HR = 3.3, 95% CI 1.5–7.4; $P=0.003$). It is concluded that a delay in receiving appropriate antimicrobial therapy had an adverse influence on clinical outcome in patients with *A. baumannii* bacteraemia.

Son Sözü Hep Mikroplar Söyler



"The microbe always has the last word."

LOUIS PASTEUR (1822-1895)