



TOPLUM KÖKENLİ ÜRİNER SİSTEM İNFEKSİYONLARI

Direnç durumu ve tedavi önerileri

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İnfeksiyon Hastalıkları ve Klinik Mikrobiyoloji Anabilim Dalı

ADÇG-MİÇG Simpozyum 2024

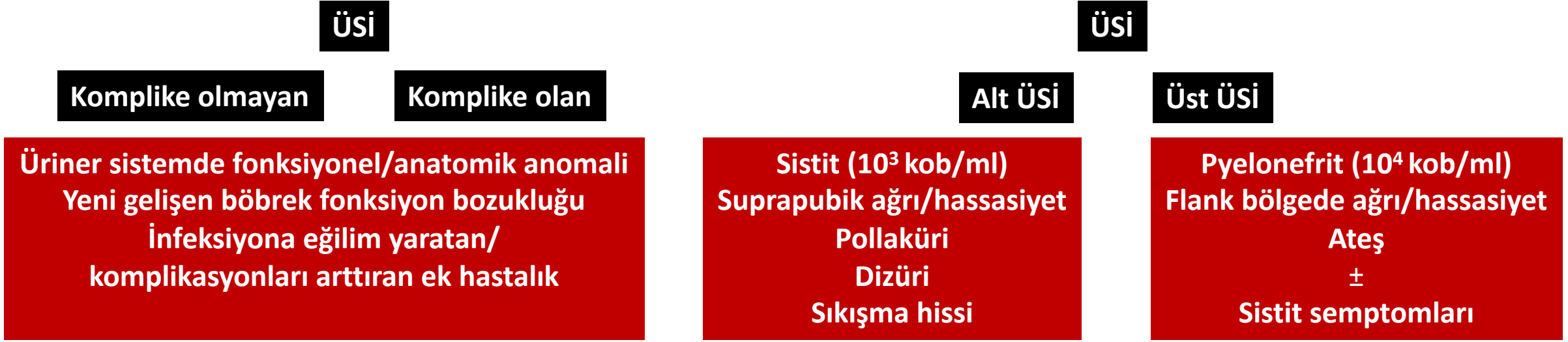
28 Eylül 2024, Diyarbakır



Sunum planı



Üriner sistem infeksiyonlarında tanımlar ve sınıflama



- Asemptomatik bakteriüri
 - Semptomlar olmaksızın ve piyüriden bağımsız biçimde, kadınlarda iki ardışık (kataterizasyonla alınan örnekte tek) ve erkeklerde tek idrar örneğinde bir veya daha fazla bakteri türünün $\geq 10^5$ kob/ml üreme göstermesi
- Rekürren ÜSi
 - Son altı ayda en az iki ya da son 12 ayda en az üç semptomatik ÜSi atağı

Toplum kökenli üriner sistem infeksiyonlarının epidemiyolojisi

- Üriner sistem infeksiyonları (ÜSi) toplumda en sık rastlanan infeksiyon hastalığı olup poliklinik hastalarına **antibiyotik reçete edilmesinin en sık nedenlerinden** biridir
- Üriner sistem infeksiyonlarının ABD'de yıllık 2.6 trilyon dolar tedavi maliyeti oluşturmaktadır
- Moon ve ark., retrospektif kohort çalışmalarında, uygun olmayan antibiyotik reçetelerinin acil servis ziyaretleri ve hastaneye yatışlarla ilişkili daha yüksek maliyetlere yol açtığını bildirmiştir
- ***Escherichia coli*** tüm gruplarda ÜSi'ye en sık (%70-90) neden olan bakteridir
 - Kültürlerde izole edilen diğer bakteriler: *Klebsiella spp*, *Pseudomonas aeruginosa* ve *Enterococcus spp*
- Erişkin yaş grubunda ÜSi en sık premenapozal kadınlarda görülmektedir
 - 65 yaş üzeri kadın ve erkeklerde ÜSi riski eşitlenmektedir
 - Geriatrik yaş grubunda ÜSi sıklığı; yaşla birlikte immün yanıtta azalma, komorbiditeler nedeniyle hastaneye yatış sıklığında artma, invazif girişimler/protez/üriner kateter ihtiyacında artma, inkontinans, mental fonksiyonlarda gerileme, vaginal flora değişikliği, prostat hipertrofisi vb nedenlerle artış göstermektedir

Foxman B. Nat Rev Urol 2010;7:653-60.

Rowe TA, Juthani-Mehta M. Infect Dis Clin North Am. 2014 Mar;28(1):75-89.

Moon RC, et al. PLoS One. 2022 Nov 21;17(11):e0277713.

Toplum kökenli üriner sistem infeksiyonlarının epidemiyolojisi

- Gebe kadınlar; immün sistemde baskılanma, mesane hacminde azalma, idrar konsantrasyonunda artma vb nedenlerle ÜSİ'ye duyarlı hale gelirler
 - Tüm gebeliklerin %50-60'ında ÜSE atağı görülmektedir
 - ÜSİ riski gestasyonel yaşla birlikte artar
- Gebelerde ÜSİ, en sık asemptomatik bakteriüri (ASB) şeklinde görülür
 - *E. coli* ASB'nin en sık etkenidir
 - *Klebsiella spp*, *Pseudomonas aeruginosa*, *Enterococcus spp*, *Staphylococcus aureus* ve B grubu streptokoklar da ASB'ye neden olabilir
 - Uygun tedavi edilmediğinde sistit, pyelonefrit, preeklampsi, preterm eylem, düşük doğum ağırlığı ve ölü doğuma neden olabilir

Michael E, Wadhvani R. Indian Journal of Obstetrics and Gynecology Research. 2017;4(2):108-111.

McClure EM, Goldenberg RL. The Lancet Global Health. 2019;7(1): e18-e19.

Azami M, Jaafari Z, Masoumi M, et al. BMC urology. 2019;19(1):43.

Le J, Briggs GG, McKeown A, et al. Annals of Pharmacotherapy. 2004;38(10):1692-1701.

Baraka, M.A.; AlLehaibi, L.H.; AlSuwaidan, et al. *ij. Pharm. Policy Pract.* 2021, 14, 9.

Marques L.P., Flores J.T., Barros Junior Ode O., et. al. Braz J Infect Dis 2012; 16: pp. 436-441.

Toplum kökenli üriner sistem infeksiyonlarının epidemiyolojisi

- ASB prevalansı yaşla birlikte artar
 - Genç erkeklerde nadir görülmekte olup genç kadınlarda sıklık %1-2 arasındadır
 - 65-90 yaş arasındaki kadın ve erkeklerde prevalans sırasıyla %6-16 ve %5-21'e yükselmektedir
 - Hastaneye yatırılan ve ileri yaş hastalarda bu sıklık %50'ye kadar çıkabilmekte olup 3-6 ay içerisinde idrar kültürlerinin spontan biçimde negatifleştiği gözlenmiştir
 - Üriner kateterle izlenen ileri yaş grubu bireylerde kolonizasyon hızı günlük %3-7 bulunmuştur
 - Kateterin çekilmesini takiben olguların en az 1/3 ünde bakteriüri ortadan kalkmaktadır

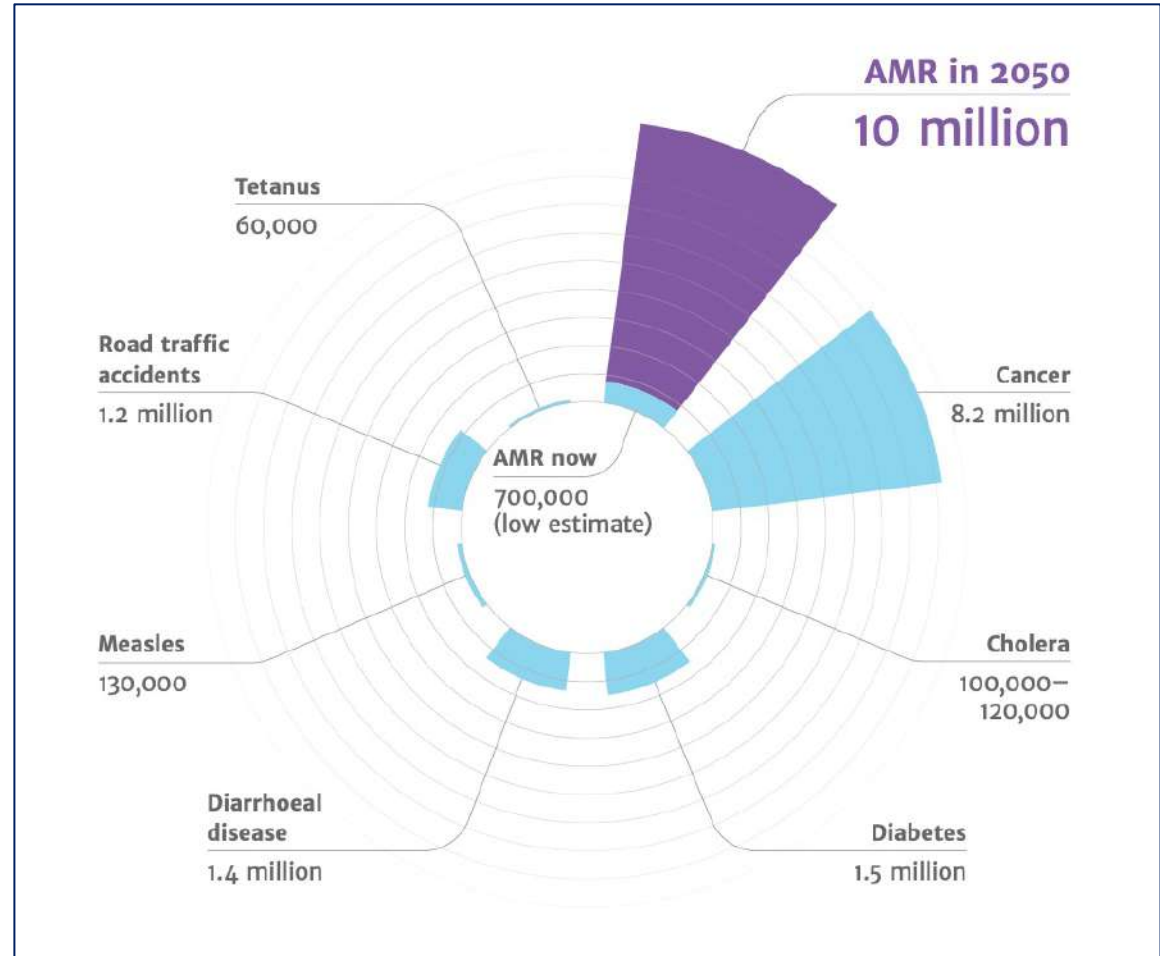
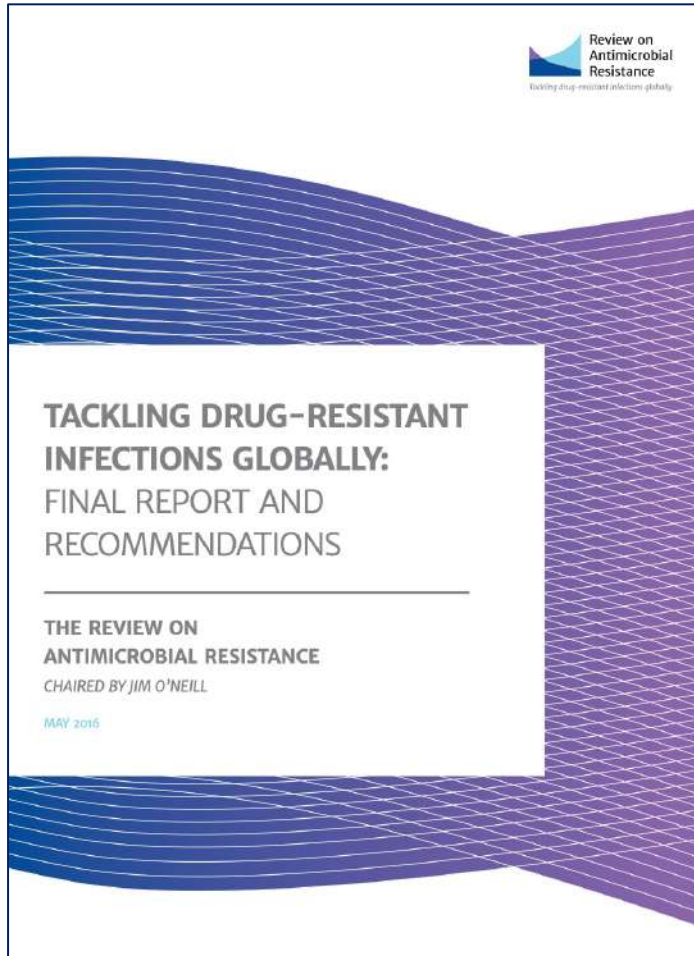
Nicolle L.E.: Asymptomatic bacteriuria in the elderly. *Infect Dis Clin North Am* 1997; 11: pp. 647-662.
Detweiler K, Mayers D, Fletcher SG. *Urol Clin North Am*. 2015 Nov;42(4):561-8.

Toplum kökenli üriner sistem infeksiyonlarının epidemiyolojisi

- Rekürren ÜSİ
 - Kadınlarda daha sık görülmektedir
 - Tüm yaş gruplarındaki kadınları ırk, etnik köken, sosyoekonomik durum, eğitim düzeyi ve cinsel aktiviteden bağımsız biçimde etkilemektedir
 - Kadınlarda yaşam kalitesi ve günlük aktiviteleri belirgin biçimde kısıtlamaktadır
 - Bir ÜSİ atağı geçiren kadınların %20-30'unun ikinci atağı geçirdiği ve bunların %25'inin rekürren ÜSİ öyküsü olduğu gösterilmiştir

Geerlings SE. Microbiol Spectr 2016; 4: doi: 10.1128/microbiolspec.UTI-0002-2012.
Wagenlehner F, Wullt B, Ballarini S et al: Expert Rev Pharmacoecon Outcomes Res 2018; 18: 107.

Toplum kökenli üriner sistem enfeksiyonlarının tedavisi -Antimikrobiyal direnç durumu-



Toplum kökenli üriner sistem enfeksiyonlarının tedavisi -Antimikrobiyal direnç durumu-

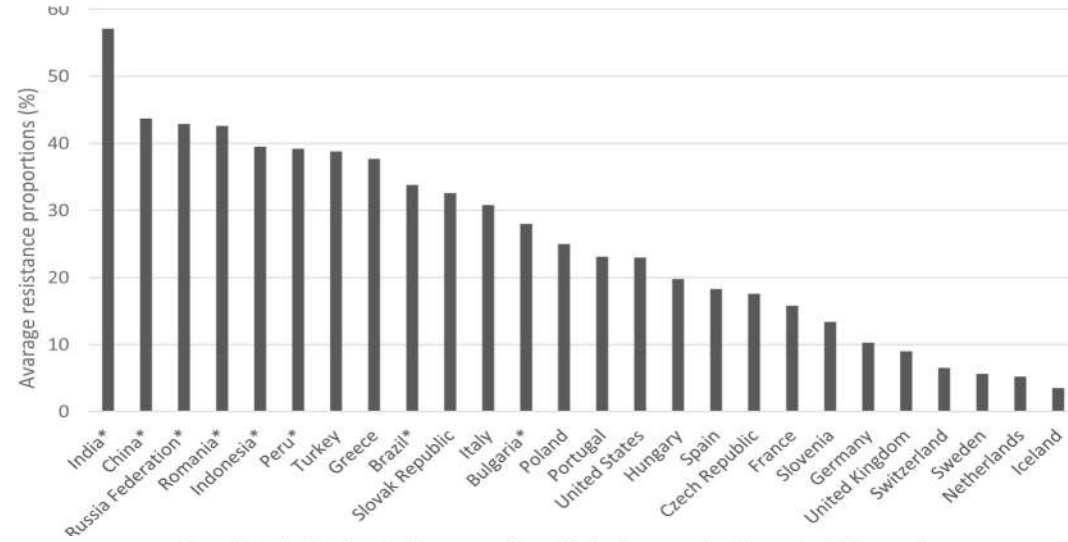
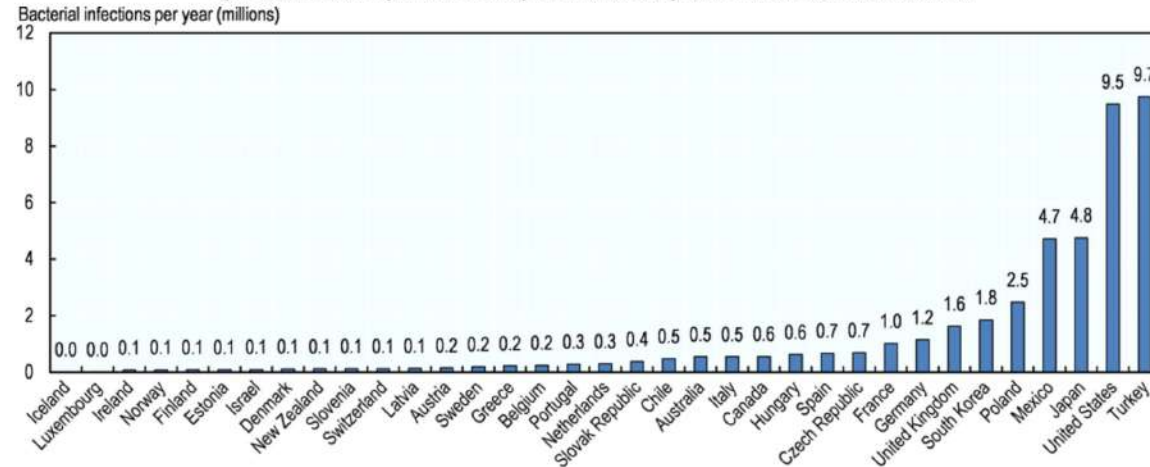


Figure 2.2. Infections by microbes susceptible to the development of resistance in OECD countries



Few JA, More D.
Stemming the superbug tide.
2018.



ULUSAL SAĞLIK HİZMETİ İLİŞKİLİ ENFEKSİYONLAR SÜRVEYANS AĞI (USHİESA) ETKEN DAĞILIMI VE ANTİBİYOTİK DİRENÇ RAPORU 2018



ANTİBİYOTİKTE DEĞİL SAĞLIĞINIZDA ISRARCİ OLUN



- Antibiyotiklerin Kararı İhtiyaçta Kullanılmalıdır.
- Her Antibiyotik Her Hastalıkta Kullanılmaz.
- Antibiyotik Ağrı, Öksürük, Baş ağrısı, İltihaplı ve Çiğnemeli Hastalıklarda Kullanılmaz.

Antibiyotikleri yalnızca hekiminizin gerekli gördüğü durumlarda reçeteli olarak eczacınızın danışmanlığında kullanın



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BİLİNCİZ ANTİBİYOTİK KULLANMA GELECEĞİNİ KARARTMA



TC Sağlık Bakanlığı

Medicine Antibiotic Resistance System

Üyelik Formu | Şifrenizi mi unutmuşsunuz?

GİRİŞ



Dünya Antibiyotik Direnç Haftası Basın Toplantısı 2018

2019 - 2023

ULUSAL ANTİMİKROBİYAL DİRENÇ ÖNLEME Stratejik Eylem Planı

This case study describes key findings that relate to costing Turkey's AMR NAP. It provides an overview of current AMR NAP implementation, describes overall processes and systems for costing and budgeting in Turkey, summarizes specific approaches this country has undertaken to cost AMR NAP activities and outlines key lessons learned.

Background:

Turkey participated in the scoping exercise to inform the development of the WHO costing and budgeting tool for AMR NAPs. Activities included engagement with key Turkish stakeholders through the project, a WHO mission to Turkey in March 2020, workshops, key informant interviews, and post-mission data collection and consultations.

Turkey AMR NAP: overview and implementation

The draft Turkey AMR NAP was completed in 2016 in accordance with the AMR GAP developed by the FAO, OIE and WHO.

Development of the AMR NAP was coordinated by the Ministry of Health with the participation of the Ministry of Agriculture and Forestry and all related stakeholders to develop national strategies and provide intersectoral coordination.

While the Turkey AMR NAP has not yet been formally approved, several activities under the plan have already been implemented. To ensure sustainability and accountability for the implementation, however, it is critical that Turkey's AMR NAP be formally approved by the country's government.

Among key activities already implemented in Turkey are:

- Establishment of surveillance networks for antibiotic consumption and electronic prescription systems.
- Delivery of training for pharmacists to prevent the sale of antibiotics without prescription.
- Publication of an NAP on the rational use of medicines.
- Establishment of an antimicrobial stewardship team in most hospitals.
- Implementation of a national veterinary AMR monitoring programme.
- Preparation of awareness materials for use in training for kindergarten, elementary school, secondary school and high school students.

AMR NAP activities selected for costing by Turkish stakeholders

STRATEGY 1: Ensure coordination and cooperation among stakeholders in national studies on development of AMR

OBJECTIVE 1: Ensure multi-stakeholder coordination at the national level with the purpose of hindering and limiting AMR	A1. Establish the National AMR Coordination Committee with the participation of fundamental stakeholders that will coordinate the activities related to policies of antibiotic usage and monitoring of resistance development
OBJECTIVE 1: Ensure multi-stakeholder coordination at the national level with the purpose of hindering and limiting AMR	A4. Ensure integration of the existing AMR and Antimicrobial Consumption surveillance systems and those to be created in human, food, agriculture, animal breeding and environment sectors

STRATEGY 2: Strengthen national AMR surveillance

OBJECTIVE 1: Strengthen national AMR surveillance for humans	A1. Strengthen the surveillance system for blood and CSF (cerebrospinal fluid) isolates
OBJECTIVE 1: Strengthen AMR surveillance for humans	A2. Strengthen the surveillance system for enteric bacterial pathogens
OBJECTIVE 1: Strengthen AMR surveillance for humans	A3. Strengthen the surveillance system for resistance to anti-TB medicines
OBJECTIVE 1: Strengthen AMR surveillance for humans	A5. Create a surveillance system for antibiotic resistance to <i>E. coli</i> and <i>K. pneumoniae</i> isolates, the community-acquired agents of UTI, and gather data
OBJECTIVE 1: Strengthen AMR surveillance for humans	A6. Perform the pilot study on the surveillance system for antibiotic resistance to gonococcus isolates and then create this system
OBJECTIVE 1: Strengthen AMR surveillance for humans	A7. Create a molecular epidemiology surveillance system for infections related to health services

STRATEGY 4: Strengthen processes for IPC

OBJECTIVE 1: Strengthen activities for preventing and controlling infections related to health services	A1. Strengthen the surveillance system for infections related to health services and its technical infrastructure
OBJECTIVE 1: Strengthen activities for preventing and controlling infections related to health services	A2. Ensure data exchange between the surveillance programme for infections related to health services and the hospital information management system
OBJECTIVE 2: Strengthen immunization studies and improve compliance	A3. Implement vaccine completion and acceleration programmes for immigrant children below the age of 5

https://cdn.who.int/media/docs/default-source/antimicrobial-resistance/amr-spc-npm/costing-tool/turkey-case-study_who-costing-and-budgeting-tool-nap-amr-user-guide5bb40b5a79384c99b79f45d4a7d49cf5.pdf?sfvrsn=f7bf44cb_6&download=true

Choose your question and filters:

Survey year
2023

Question
2.1 Multi-sector and One Health c

WHO | **FAO** | WOAH | Income

WHO Region
All

Country
All

Map View | Visualization View | Table View | Response Overview | Country Reports | Download Responses | Print

- A - No formal multi-sectoral governance or coordination mechanism o
- B - Multi-sectoral working group(s) or coordination mechanism commi
- C - Formalized Multisector coordination mechanism with technical wo
- D - Joint working on issues including agreement on common objective
- E - Integrated approaches used to implement the national AMR action of the action plan.

Global Database for Tracking Antimicrobial Resistance (AMR)
Country Self- Assessment Survey (TrACSS)

Choose your question and filters:

Survey year
2023

Question
2.3 Country progress with develop

WHO | **FAO** | WOAH | Income

WHO Region
All

Country
All

Map View | Visualization View | Table View | Response Overview | Country Reports | Download Responses | Print

- A - No national AMR action plan or plan under development.
- B - National AMR action under development.plan developed.
- C - National AMR action plan approved by government and is being implemented.
- D - National AMR action plan has costed and budgeted operational plan and has monitoring mechanism in place.
- E - Financial provision for the National AMR action plan implementation is included in the national plans and budgets.

Toplum kökenli üriner sistem infeksiyonlarının tedavisi

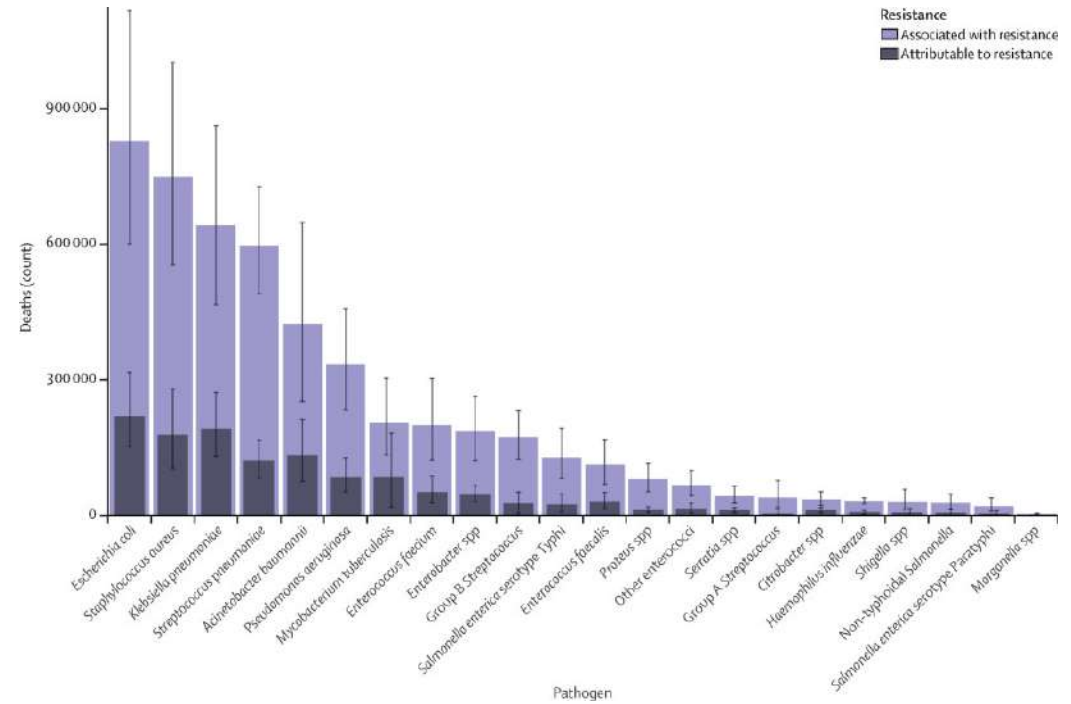
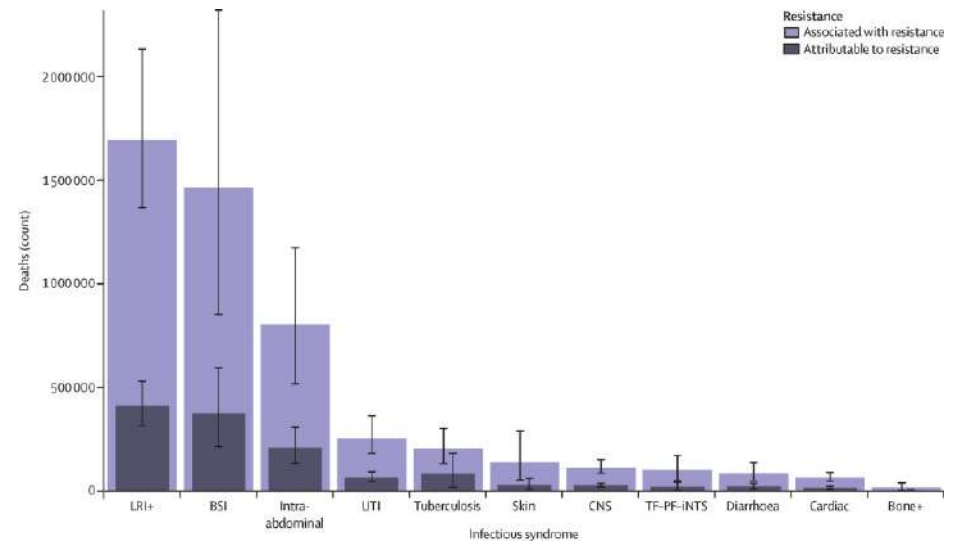
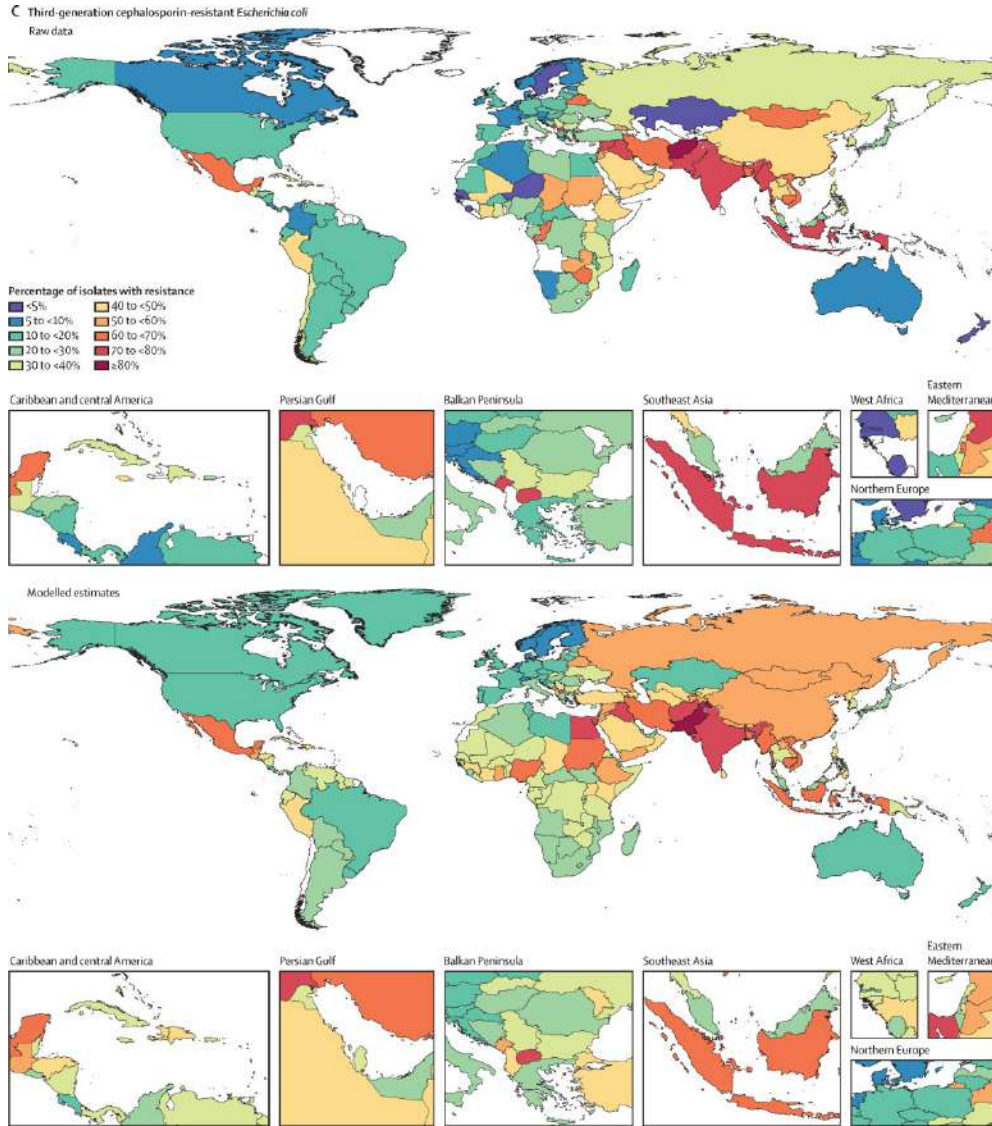
-Antimikrobiyal direnç durumu-

- 2009-2010 yıllarında dünyanın çeşitli bölgelerinden 30 kadar ülkenin dahil olduğu, yatan hastalarla yapılan SMART çalışmasında üriner sistem infeksiyonlarından izole edilen *E. coli*'lerde GSBL oluşturma oranı %17.9 olarak saptanmış, en yüksek oranın %27.7 ile Asya-Pasifik bölgesine ait olduğu bildirilmiştir
- EARS-Net verilerine göre Avrupa bölgesinde kuzeyden güneye ve doğuya doğru gidildikçe GSBL pozitifliğinin arttığı ve Bulgaristan'da *E. coli*'de %40.4'e, *Klebsiella* spp.'de %74.8'e kadar yükseldiği görülmektedir
- İspanya'da yapılan bir çalışmada, GSBL üreten *E. coli*'ye bağlı infeksiyon sıklığının yıllar içinde artış gösterdiği ve bu suşların GSBL üretmeyen suşlara göre antibiyotiklere daha dirençli oldukları bildirilmiştir

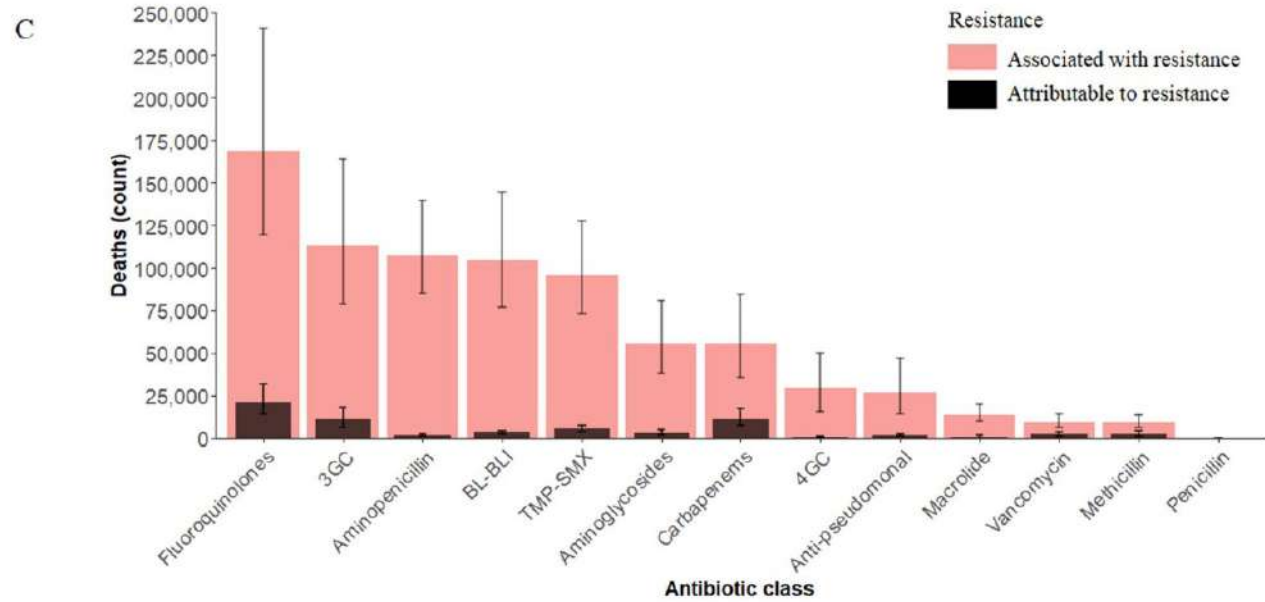
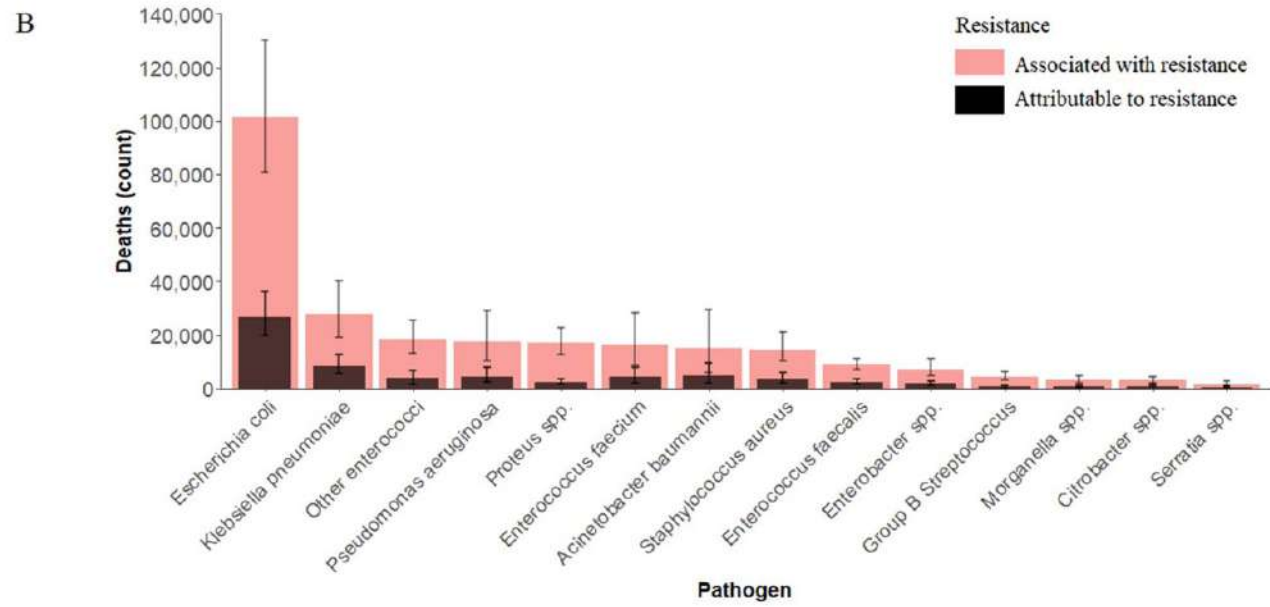
Hoban D, et al. Antimicrobial susceptibility of global in patient urinary tract isolates of *Escherichia coli*: results from the Study for Monitoring Antimicrobial Resistance Trends (SMART) program: 2009-2010. *Diagn Microbiol Infect Dis*. 2011; 70(4): 507-11.

Mazzariol A, et al. Multi-drug-resistant Gram-negative bacteria causing urinary tract infections: a review. *J Chemother*. 2017; 29(1): 2-9.

Calbo E, et al. Risk factors for community-onset urinary tract infections due to *Escherichia coli* harboring extended-spectrum betalactamases. *J Antimicrob Chemother*. 2006; 57(4): 780-3.



Antimicrobial Resistance Collaborators. Global burden of bacterial antimicrobial resistance in 2019: a systematic analysis. *Lancet*. 2022;399(10325):629-655.

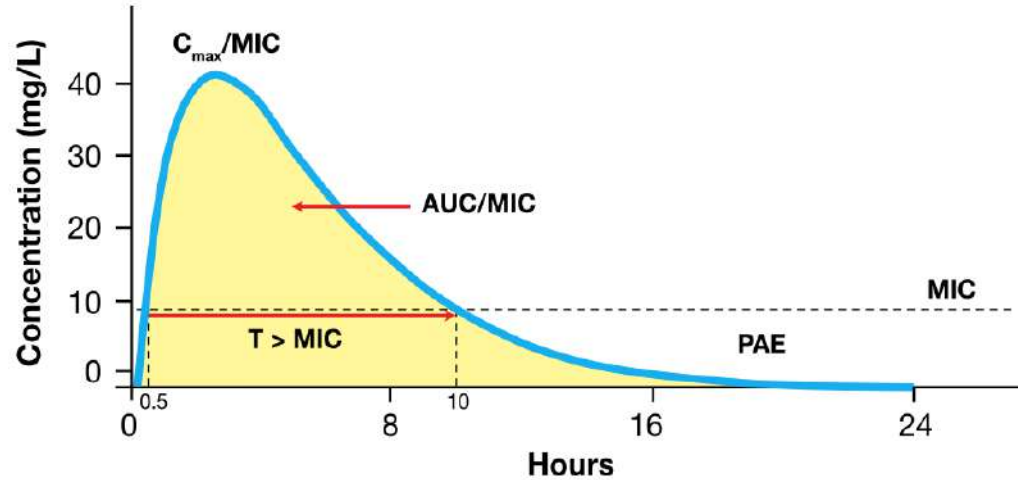


Li X, et al. Global and Regional Burden of Bacterial Antimicrobial Resistance in Urinary Tract Infections in 2019. *J Clin Med.* 2022;11(10):2817.

Toplum kökenli üriner sistem infeksiyonlarının tedavisi

ÜSİ tedavisinde seçilecek antimikrobiyal ajan;

- Olası patojenlere karşı in vitro aktif olmalı
- Direnç olasılığı düşük olmalı
- Optimum farmakokinetik/farmakodinamik profile sahip olmalı
- İyi tolere edilebilmeli
- Klinik etkinliği gösterilmiş olmalı



T>MIC zamana bağımlı etki gösteren (betalaktamlar, nitrofurantoin) AUC/MIC konsantrasyon bağımlı etki gösteren antimikrobiyallerin (aminoglikozidler, kinolonlar, fosfomisin) etkinliğini değerlendirmede kullanılan farmakodinamik parametrelerdir

Novelli A, Rosi E. J Chemother. 2017 Dec;29(sup1):10-18.

Ülkemizde toplum kökenli üriner sistem infeksiyonlarında antibiyotik direnci sorunu

- Ülkemizde Arslan ve ark. yaptığı çalışmada fosfomisin direnci %0.3, Köken ve ark. ise %0.6 bulmuşlardır

Arslan H, ve ark. Urinary Tract Infection Study Group: Risk factors for ciprofloxacin resistance among *Escherichia coli* strains isolated from community-acquired urinary tract infections in Turkey. *J Antimicrob Chemoter* 2005; 56(5): 914-8.

Köken G, ve ark. Toplum kökenli üriner sistem infeksiyonu etkeni *Escherichia coli* suşlarında fosfomisin trometamol etkinliği. *ANKEM Derg* 2008;22(1):23-7.

- Ülkemizde 55 farklı ili kapsayan çalışmada fosfomisin direnci %3.6 saptanmıştır


Arman D, ve ark. Birinci basamak sağlık merkezlerinde toplum kökenli alt üriner sistem enfeksiyonları: etkenler ve antimikrobiyal duyarlılıkları. *Mediterr J Infect Microb Antimicrob* 2012; 1:10.

- GSBL pozitif suşlardaki fosfomisin direncinin GSBL negatif suşlardakine göre anlamlı düzeyde daha yüksek olduğunu saptayan çalışmalar mevcuttur

Tekin A, ve ark. Üropatojen *Escherichia coli* izolatlarına fos- fomisin ve bazı antibiyotiklerin invitro etkinliği. *ANKEM Derg* 2012; 26:61-8. <http://dx.doi.org/10.5222/ankem.2012.061>

oteo J, orden B, Bautista v, et al. CTX-M-15- producing urinary *Escherichia coli* O25b-ST131- phylogroup B2 has acquired resistance to fosfomycin. *J Antimicrob Chemother* 2009; 64:712-7. <http://dx.doi.org/10.1093/jac/dkp288>

Ülkemizde toplum kökenli üriner sistem infeksiyonlarında antibiyotik direnci sorunu

Yazar	İl	Zaman aralığı	n	GSBL oranı	E. coli direnç durumu (%)							
					AMP	AMC	CIP	CRO	T-SXT	N	F	AK
Timurkaynak ve ark.	Ankara	2001	90	-	55	-	-	3	38	-	-	1
Savaş ve ark.	Adana	2000-2002	997	-	70	-	25	13	59	-	-	10
Temiz ve ark.	Diyarbakır	2006	516	-	76	65,7	-	41,5	-	13,2	-	0
Salduz ve ark. 	İstanbul	2006-2007	197	-	71,3	23,4	12	6	57,7	-	-	0
Gözüküçük ve ark.	İstanbul	2008	348	<i>E.coli</i> : %14,6	63,7	36,6	19,8	19,2	40	12,4	-	1,1
Uyanık ve ark.	Erzurum	2008-2009	139	<i>E.coli</i> : %26	-	-	28,7	-	48,9	-	-	0
Kandemir ve ark.	Mersin	2008-2009	311	<i>E.coli</i> : %10 <i>Klebsiella spp.</i> : %3,7	99,2	98	17,9	12	43,4	4,4	-	0,4
Gülcan ve ark.	Kütahya	2008-2010	748	Tüm Gram negatiflerde: %20,1	60,9	22,2	-	19,5	45,9	3,6	2,4	0,6
Duman ve ark.	Malatya	2009-2010	747	<i>E.coli</i> : %13,9	77,3	-	-	-	-	-	-	-
Deveci ve ark.	Mardin	2010	57	-	-	-	33,3	-	-	-	0	-

Ülkemizde toplum kökenli üriner sistem infeksiyonlarında antibiyotik direnci sorunu

Yazar	İl	Zaman aralığı	n	GSBL oranı	E. coli direnç durumu (%)							
					AMP	AMC	CIP	CRO	T-SXT	N	F	AK
Aral ve ark.	K.maraş	2008-2011	527	-	73,5	-	-	39	52	-	-	29
Ağca	Kütahya	2010-2011	239	-	70	28	19	-	44	-	-	7
Doğan ve ark. Ç	Konya	2008-2012	337	-	31,3	2,8	-	0,9	23	1,4	-	0
Zengin ve ark.	Van	2009-2012	390	-	-	42	33	18	45	-	-	5
Gündem ve ark.	Erzincan	2012	235	E.coli: %21,3 Klebsiella spp.: %46	-	79,3	19,3	16,1	40,7	-	4,2	1,1
Şanal	Ankara	2012	443	<i>E.coli</i> : %8,9	-	-	16,7	-	34,1	3,2	4,2	-
Uluğ ve ark.	Eskişehir	2010-2012	401	Tüm gram negatiflerde: %9,1	-	19,5	34,7	16	18,7	9,5	-	-
Durmaz ve ark.	Osmaniye	2012-2013	122	<i>E.coli</i> : %32,8	-	-	21,3	-	40,1	-	-	-
Yılmaz ve ark.	İzmir	2008-2014	1328 1	Tüm gram negatiflerde: %24	67	37	50	28	20	0,9	4,3	0,3

Ülkemizde toplum kökenli üriner sistem infeksiyonlarında antibiyotik direnci sorunu

Yazar	İl	Zaman aralığı	n	GSBL oranı	E. coli direnç durumu (%)							
					AMP	AMC	CIP	CRO	T-SXT	N	F	AK
Aytaç ve ark.	Ankara	2010-2014	17857	Tüm Gram-negatiflerde: %8,6	61,8	22,5	24,6	-	43,6	-	-	-
Gül ve ark.	Kırıkkale	2013-2014	45	<i>E. coli</i> : %3 <i>Klebsiella spp</i> : %14,3	-	18,2	18,2	3	21,2	-	-	-
Denk ve ark.	Elazığ	2014	222	-	60,9	22,6	24,8	27,1	34,7	3,6	3,2	5,4
Karamanlıoğlu ve ark.	Ankara	2016-2017	4001	<i>E.coli</i> : %17 <i>Klebsiella spp.:</i> %24,5	-	42,1	20,7	21,7	30,4	1,1	0,5	7,3
Eroğlu ve ark.	Ankara, İstanbul	2010-2018	2913	Tüm Gram-negatiflerde: %19,3	-	-	-	-	-	-	-	-
Temoçin ve ark.	Yozgat	2017-2018	524	<i>E.coli</i> : %29,9 <i>Klebsiella spp</i> : %28,8	57,4	-	25	-	37,4	4,9	2	2
Şencan. ve ark.	Çok merkez	2019-2020	1588	-	49,8	24,3	-	-	27,4	3,4	24	-
Korkmazer ve ark. *	Ankara	2019-2020	246	Tüm Gram-negatiflerde: %40	74,2	72	44,8	49	37,5	12	14	5
Coşkun ve ark.	Ankara	2021	179	<i>E.coli</i>: %48,3 <i>Klebsiella spp</i>: %60	-	54,3	45,7	50	37	6	3,4	9,5

Ülkemizde toplum kökenli üriner sistem infeksiyonlarında antibiyotik direnci sorunu-Kısıtlılıklar

- Birinci basamakta idrar kültürü alma oranları çok düşük
- Toplum kökenli infeksiyonların ulusal sürveyansı yok
- Çalışmaların çoğu laboratuvar kökenli, hasta bilgileri mevcut değil
- Çalışmalarda kullanılan yöntemler ve tanımlamalar farklı
 - Piyüri tanımı değişken
 - Kültürlerin inkübasyon derece ve süreleri değişken
 - Manuel veya otomatize sistemler kullanılmış
 - Olguların yaş ve cinsiyet dağılımları değişken
 - Antibiyotik duyarlılıklarının belirlenme yöntemi değişken

Ülkemizde toplum kökenli üriner sistem infeksiyonlarında antibiyotik direnç verilerinin in vitro standardize şartlarda belirlendiği ve klinik kullanımda etkinliğini gösteren, yaş ve cinsiyet dağılımı ve risk faktörlerinin tanımlandığı geniş çaplı araştırmalara ihtiyaç vardır

Toplum kökenli üriner sistem infeksiyonlarının tedavisi

IDSA GUIDELINES

International Clinical Practice Guidelines for the Treatment of Acute Uncomplicated Cystitis and Pyelonephritis in Women: A 2010 Update by the Infectious Diseases Society of America and the European Society for Microbiology and Infectious Diseases

Kalpana Gupta,¹ Thomas M. Hooton,² Kurt G. Naber,³ Björn Wultz,⁴ Richard Colgan,⁵ Loren G. Miller,⁶ Gregory J. Moran,⁷ Lindsay E. Nicolle,⁸ Raul Raz,⁹ Anthony J. Schaeffer,¹⁰ and David E. Soper¹¹

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A Panel of International Experts was convened by the Infectious Diseases Society of America (IDSA) in collaboration with the European Society for Microbiology and Infectious Diseases (ESCMID) to update the 1999 Uncomplicated Urinary Tract Infection Guidelines by the IDSA. Co-sponsoring organizations include the American Congress of Obstetricians and Gynecologists, American Urological Association, Association of Medical Microbiology and Infectious Diseases-Canada, and the Society for Academic Emergency Medicine. The focus of this work is treatment of women with acute uncomplicated cystitis and pyelonephritis, diagnoses limited in these guidelines to premenopausal, non-pregnant women with no known urological abnormalities or co-morbidities. The issues of in vitro resistance prevalence and the ecological adverse effects of antimicrobial therapy (collateral damage) were considered as important factors in making optimal treatment choices and thus are reflected in the rankings of recommendations.

EXECUTIVE SUMMARY

BACKGROUND

Acute uncomplicated cystitis remains one of the most common indications for prescribing of antimicrobials to otherwise healthy community-dwelling women. Despite published guidelines for the optimal selection of an antimicrobial agent and duration of therapy, studies demonstrate a wide variation in prescribing practices [1-6]. The Infectious Diseases Society of America (IDSA) published a clinical practice guideline on the treatment of women with acute uncomplicated cystitis and pyelonephritis in 1999 [1]. Since then, antimicrobial resistance among uropathogens causing uncomplicated cystitis has increased, appreciation of the importance of

Received 10 December 2010; accepted 17 December 2010.
The process for evaluating the evidence was based on the IDSA Handbook on Clinical Practice Guideline Development and involved a systematic weighting of the quality of the evidence and the grade of recommendation (Table 1) [3].
It is important to realize that guidelines cannot always account for individual variation among patients. They are not intended to supplant physician judgment with respect to particular patients or special clinical situations. The IDSA considers adherence to these guidelines to be voluntary, with the ultimate determination regarding their application to be made by the physician in the light of each patient's individual circumstances.
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Clinical Infectious Diseases 2011;52(9):e103-e120
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1058-4838/2011/52-09/e103/\$12.00
DOI: 10.1093/cid/cir287

Clinical Infectious Diseases
IDSA FEATURES



Clinical Practice Guideline for the Management of Asymptomatic Bacteriuria: 2019 Update by the Infectious Diseases Society of America^a

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Asymptomatic bacteriuria (ASB) is a common finding in many populations, including healthy women and persons with underlying urologic abnormalities. The 2005 guideline from the Infectious Diseases Society of America recommended that ASB should be screened for and treated only in pregnant women or in an individual prior to undergoing invasive urologic procedures. Treatment was not recommended for healthy women; older women or men; or persons with diabetes, indwelling catheters, or spinal cord injury. The guideline did not address children and some adult populations, including patients with neutropenia, solid organ transplants, and neurologic surgery. In the years since the publication of the guideline, further information relevant to ASB has become available. In addition, antimicrobial treatment of ASB has been recognized as an important contributor to inappropriate antimicrobial use, which promotes emergence of antimicrobial resistance. The current guideline updates the recommendations of the 2005 guideline, includes new recommendations for populations not previously addressed, and, where relevant, addresses the interpretation of nonlocalizing clinical symptoms in populations with a high prevalence of ASB.

Keywords. asymptomatic bacteriuria; bacteriuria; urinary tract infection; pyelonephritis; cystitis; diabetes; pregnancy; renal transplant; endourologic surgery; urologic devices; urinary catheter; older adults; nursing home; long-term care; spinal cord injury; neurogenic bladder.

EXECUTIVE SUMMARY

Asymptomatic bacteriuria (ASB) is the presence of 1 or more species of bacteria growing in the urine at specified quantitative counts ($\geq 10^5$ colony-forming units [CFU]/mL or $\geq 10^6$ CFU/L), irrespective of the presence of pyuria, in the absence of signs or symptoms attributable to urinary tract infection (UTI). ASB is a common finding in some healthy female populations and in many women or men with abnormalities of the genitourinary tract that impair voiding. In 2005, the Infectious Diseases Society of America (IDSA) published a guideline with recommendations for the management of ASB in adults. The current guideline reviews and updates the 2005 guideline, incorporating new evidence that has become available. The recommendations also consider populations not addressed in the 2005 guidelines, such as children and patients with solid organ transplants or neutropenia. Since the previous guideline was published, antimicrobial stewardship programs have identified nontreatment of ASB as an important opportunity for decreasing inappropriate antimicrobial use. Nonlocalizing signs and symptoms are common in

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Clinical Infectious Diseases 2010;50(9):e49-75
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DOI: 10.1093/cid/cir121

Türk Klinik Mikrobiyoloji ve Infeksiyon Hastalıkları Derneği Antibiyotik Direnci Çalışma Grubu

Toplum kökenli üriner sistem infeksiyonları uzlaşısı raporu

Toplum kökenli üriner sistem infeksiyonlarının tedavisi

Akut komplike olmayan sistit

Trimetoprim
sulfametoksazol

Florokinolonlar

Pivmenisilam

Pivmenisilam dışı
oral beta laktamlar

Ampisilin
Amoksisilin

2x160/80 mg,
3 gün

Kollateral hasar

2x400 mg,
3-7 gün

Etki zayıf

Önerilmez, direnç
oranı yüksek

Bölgesel direnç
>%20 ise verme

Ülkemizde yok

Diğer ajanlar
kullanılmıyorsa

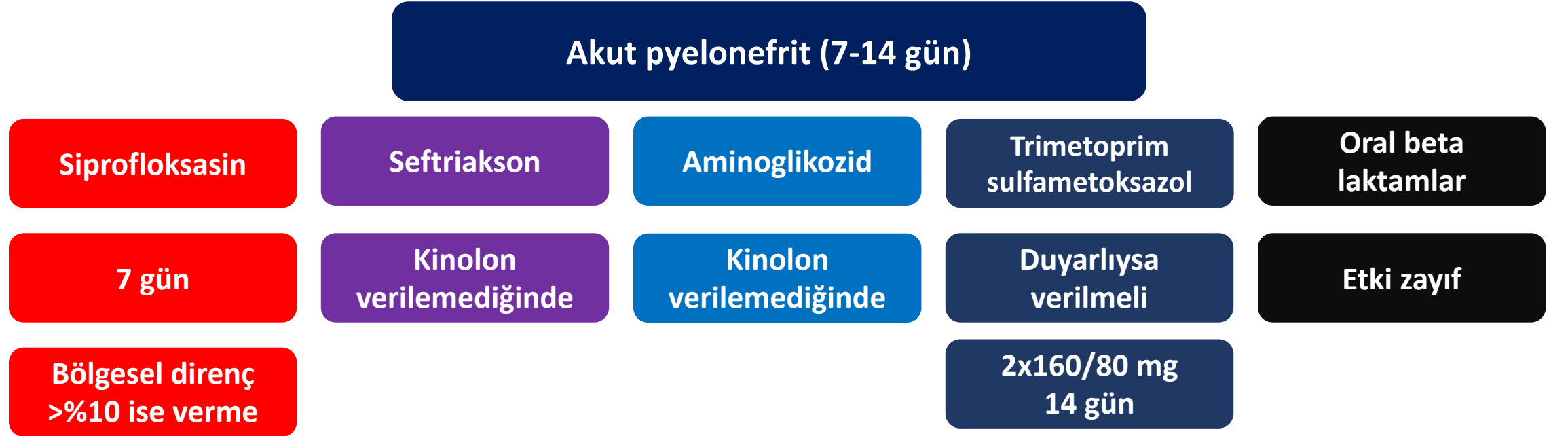
Nitrofurantoin

Fosfomisin

2x100 mg, 5 gün

3 gram tek doz

Toplum kökenli üriner sistem infeksiyonlarının tedavisi



- Amerikan Gıda ve İlaç Dairesi (U.S. Food and Drug Administration) fosfomisin trometamolün sadece komplike olmayan sistitlerin tedavisinde kullanılmasının uygun olduğunu bildirmektedir

Aminoglikozidler çözüm olabilir mi? -Birlikte tartışalım-

Clinical Infectious Diseases

IDS A GUIDELINES

IDS A
Infectious Diseases Society of America

hivma
hiv medicine association

OXFORD

Infectious Diseases Society of America 2024 Guidance on the Treatment of Antimicrobial-Resistant Gram-Negative Infections

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The Infectious Diseases Society of America (IDSA) is committed to providing up-to-date guidance on the treatment of antimicrobial-resistant (AMR) infections. This guidance document focuses on infections caused by extended-spectrum β -lactamase-producing Enterobacterales (ESBL-E), AmpC β -lactamase-producing Enterobacterales (AmpC-E), carbapenem-resistant Enterobacterales (CRE), *Pseudomonas aeruginosa* with difficult-to-treat resistance (DTR *P. aeruginosa*), carbapenem-resistant *Acinetobacter baumannii* (CRAB), and *Stenotrophomonas maltophilia*. This updated document replaces previous versions of the guidance document. A panel of 6 infectious diseases specialists with expertise in managing antimicrobial-resistant infections formulated questions about the treatment of infections caused by ESBL-E, AmpC-E, CRE, DTR *P. aeruginosa*, CRAB, and *S. maltophilia*. Because of differences in the epidemiology of AMR and availability of specific anti-infectives internationally, this document focuses on the treatment of AMR infections in the United States. Preferred and alternative suggested treatment approaches are provided with accompanying rationales, assuming the causative organism has been identified and antibiotic susceptibility results are known. Approaches to empiric treatment, transitioning to oral therapy, duration of therapy, and other management considerations are discussed briefly. Suggested approaches apply for both adult and pediatric populations, although suggested antibiotic dosages are provided only for adults. The field of AMR is highly dynamic. Consultation with an infectious diseases specialist is recommended for the treatment of AMR infections. This document is current as of December 31, 2023 and will be updated periodically. The most current version of this document, including date of publication, is available at www.idsociety.org/practice-guideline/amr-guidance/.

Keywords. ESBL; *Pseudomonas aeruginosa*; CRAB; *Stenotrophomonas maltophilia*.

GSBL üreten *Enterobacterales* ile gelişen komplike olmayan sistit (tek doz) ve pyelonefrit/komplike üriner sistem infeksiyonları tedavisinde aminoglikozidler önerilen alternatif rejimler arasında yer almaktadır



İlginiz ve katılımınız için teşekkür ederim...