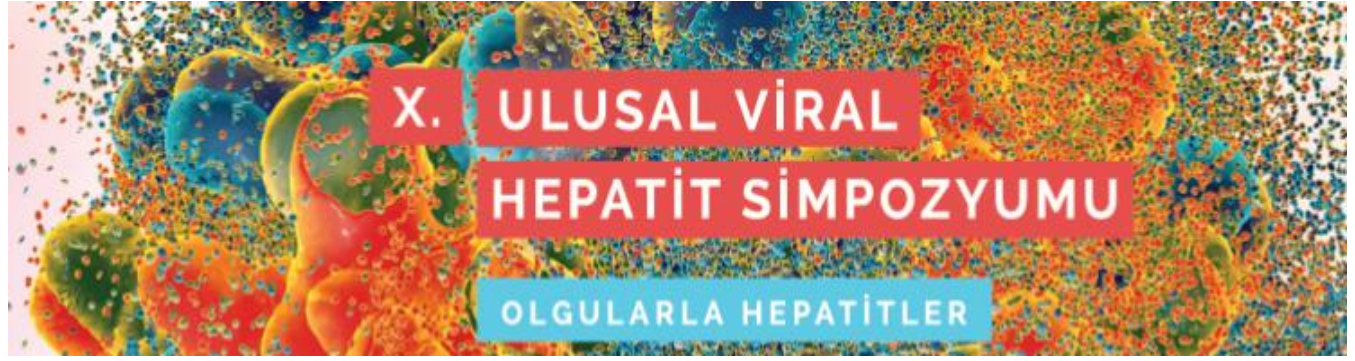




Akılcı İlaç Kullanımı

Dr. Süda TEKİN

KUH İnfeksiyon Hastalıkları ve Klinik Mikrobiyoloji Bölümü

Akılcı İlaç Kullanımı



- ✓ **Akılcı İlaç Kullanımı**, kişilerin klinik bulgularına ve bireysel özelliklerine göre; uygun ilacı, uygun süre ve dozda, en düşük fiyata ve kolayca sağlayabilmeleri olarak tanımlanmaktadır.
- ✓ Bu tanım ilk defa 1985 yılında Nairobi’de Dünya Sağlık Örgütü tarafından yapılmıştır.
- ✓ Akılcı ilaç kullanımı (AİK) ilaç kullanırken doğruları uygulamak ve bilinçli olmaktır.

Akılcı İlaç Kullanımı İlkeleri

- ✓ Belirlenen doğru ilacın,
- ✓ Doğru miktarda,
- ✓ Doğru uygulama yoluyla,
- ✓ Doğru zamanlamayla,
- ✓ Yeterli bilgilendirme yapılarak ve
- ✓ Maliyet uygunluğu da dikkate alınarak kullanılması

Akılcı İlaç Kullanımı İlkeleri

- ✓ Hekim
- ✓ Eczacı
- ✓ Hemşire
- ✓ Diğer sağlık personeli
- ✓ **Hasta/ hasta yakını** →
- ✓ Üretici
- ✓ Düzenleyici Otorite
- ✓ Medya

Kendisinin veya yakınının tedavisi sırasında bilinçli olmalıdır.





U.S.

Anne Miller, 90, First Patient Saved by Penicillin

By WOLFGANG SAXON JUNE 9, 1999

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

In March 1942, Mrs. Miller was near death at New Haven F



- Antibiyotik direnci antibiyotiklerin keşfiyle birlikte fark edilmiştir.

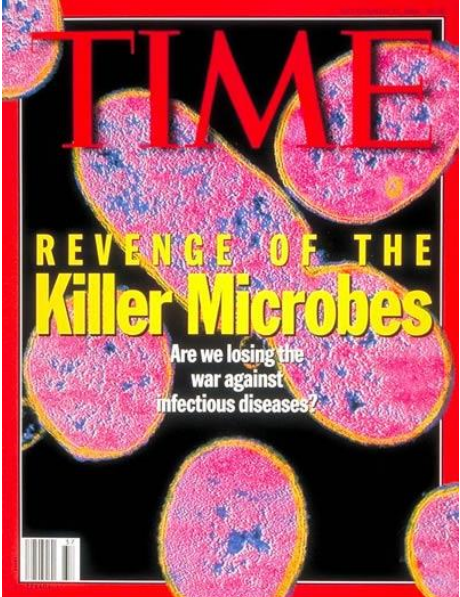


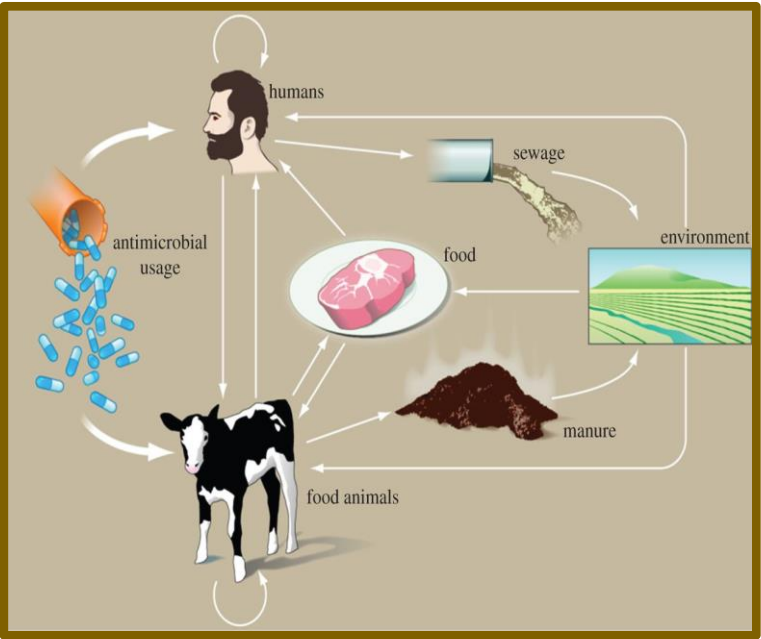
Küresel Antibiyotik Direnci



2050 yılı
10 m ölüm

Maliyet
66 trilyon Euro





Antibiyotik Tüketimi

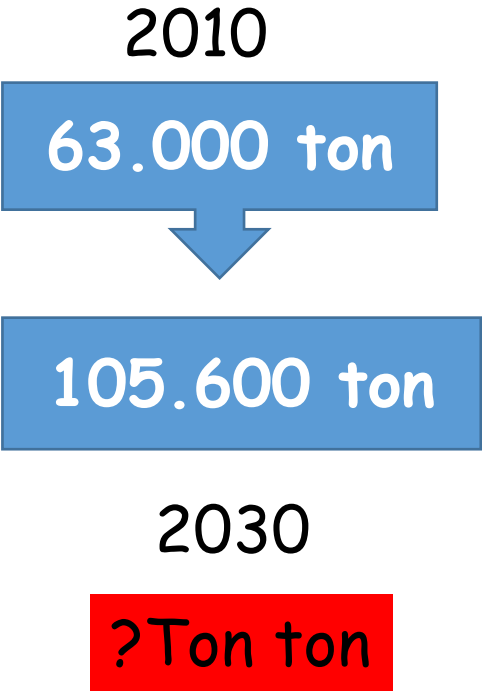
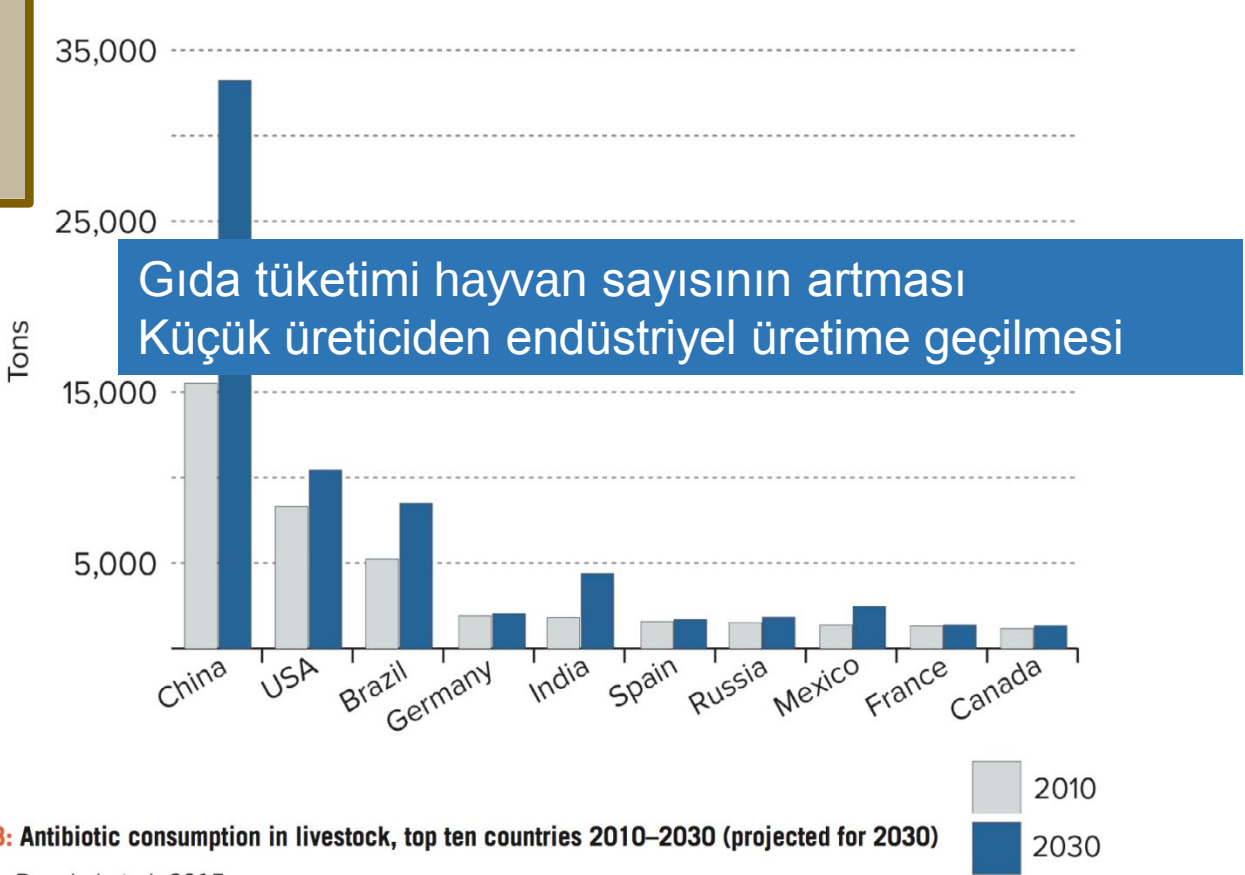
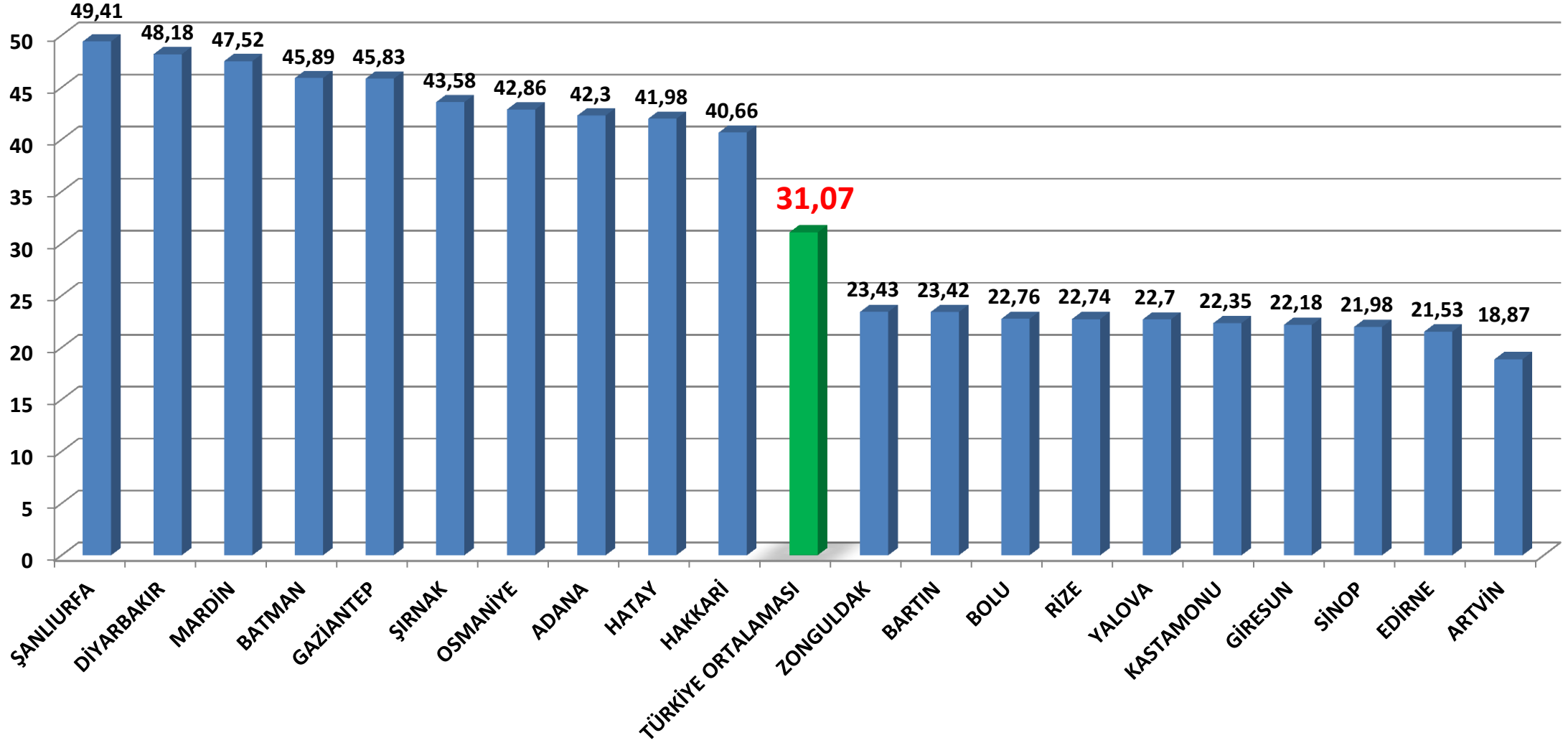


FIGURE ES-3: Antibiotic consumption in livestock, top ten countries 2010–2030 (projected for 2030)

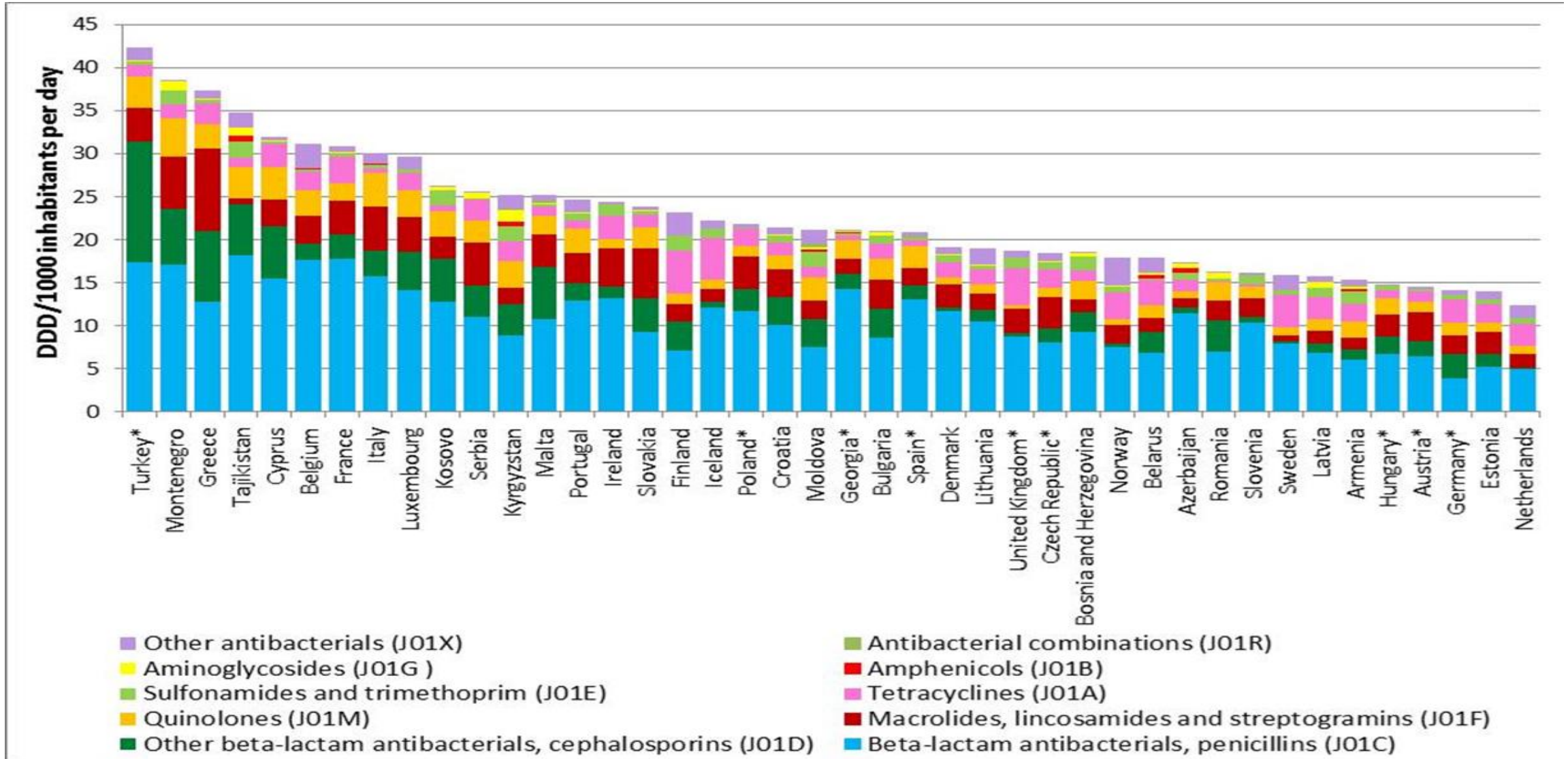
Source: Van Boeckel et al. 2015

2015 Yılı

Aile Hekimleri Antibiyotik Bulunan Reçete Yüzdesi



Ülke Sıralaması- Antibiyotik Tüketimi





Short report

Healthcare-associated Gram-negative bloodstream infections: antibiotic resistance and predictors of mortality

Ö. Ergönül^{a,*}, M. Aydın^b, A. Azap^c, Ş. Başaran^d, Ş. Tekin^a, Ş. Kaya^e, S. Gülsün^e,

Antibiotic resistance rates in healthcare-associated Gram-negative bloodstream infections

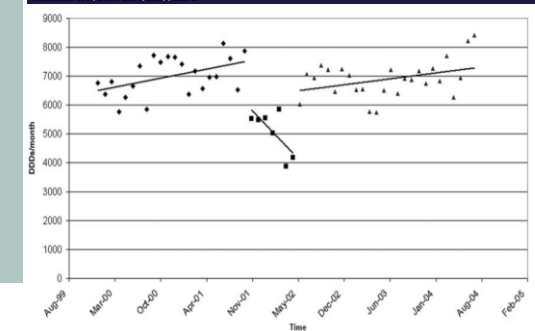
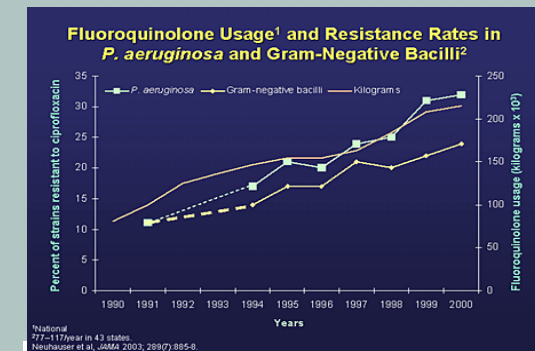
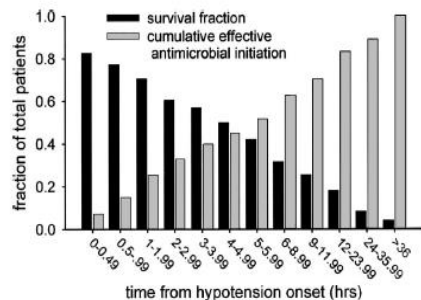
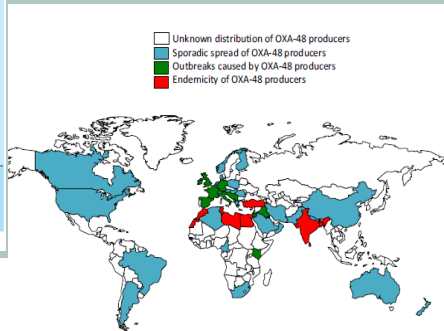
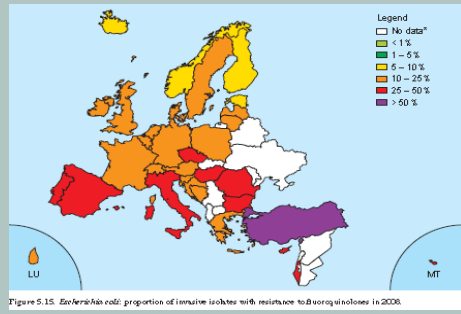
Bacteria	Carbapenem N (%)	Fluoroquinolones N (%)	Third-generation cephalosporins N (%)	Aminoglycosides N (%)	Colistin N (%)
<i>Acinetobacter baumannii</i>	239 (94)	240 (94)	247 (97)	187 (73)	15 (6)
<i>Klebsiella pneumoniae</i>	88 (40)	130 (60)	159 (72)	56 (25)	14 (6)
<i>Escherichia coli</i>	13 (6.4)	128 (63)	143 (71)	47 (23)	0
<i>Pseudomonas aeruginosa</i>	32 (43)	36 (49)	37 (51)	19 (26)	1 (1)
<i>Enterobacter cloacae</i>	5 (16)	6 (19)	16 (53)	5 (16)	0

Hızla tanı konulmalı...

Meropenem-
colistin- vanco

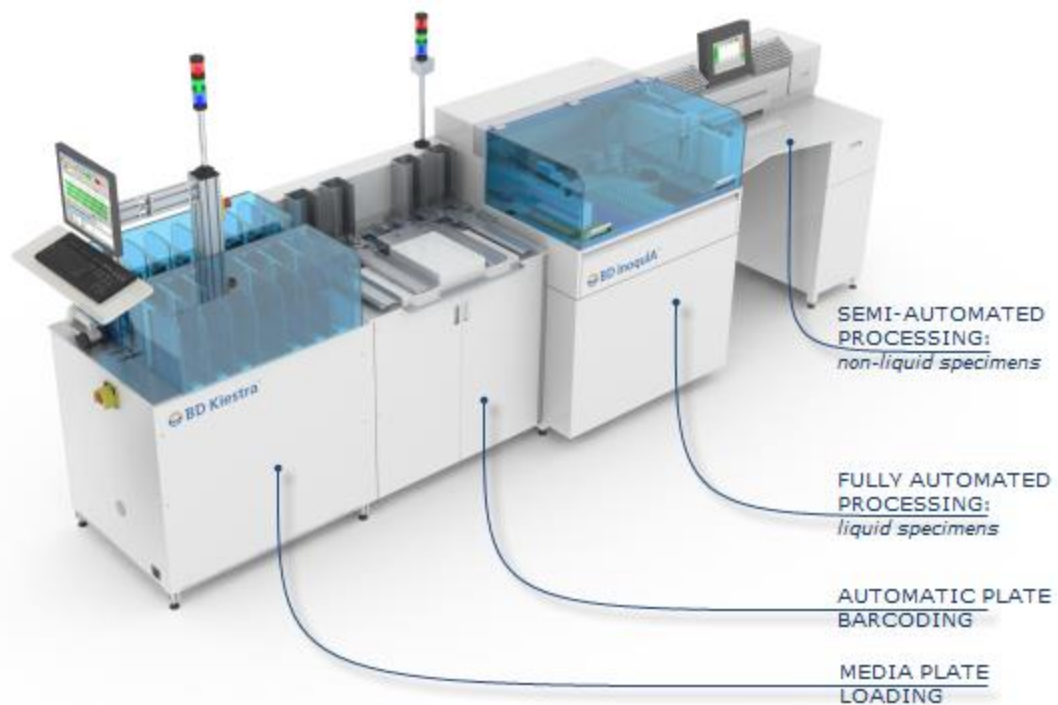


Ampicillin-
sulbactam



- Etkeni göstermek (boyama)
- Üretmek (Kültür)
- Etkene ait antijenler/yapılar
- Etkene karşı gelişen antikor (seroloji)
- Etkene özgü DNA/RNA yapıları





Every time antibiotics are prescribed:



Specific recommendations for common prescribing situations:



1. Order recommended cultures before antibiotics are given and start drugs promptly.



2. Make sure indication, dose, and expected duration are specified in the patient record.



3. Reassess within 48 hours and adjust Rx if necessary or stop Rx if indicated.



Rx for urinary tract infections

- Make sure that culture results represent true infection and not just colonization.
 - Assess patient for signs and symptoms of UTI.
 - Make sure that urinalysis is obtained with every urine culture.
- Treat for recommended length of time and ensure that planned post-discharge treatment takes into account the antibiotics given in the hospital.



Rx for pneumonia

- Make sure that symptoms truly represent pneumonia and not an alternate, non-infectious diagnosis.
- Treat for the recommended length of time and ensure that planned post-discharge treatment takes into account the antibiotics given in the hospital.



Rx for MRSA infections

- Verify that MRSA is growing in clinically relevant cultures. Do not use vancomycin to treat infections caused by methicillin-susceptible staph (and not MRSA).

SOURCE: CDC Vital Signs, 2014

Implementing an Antibiotic Stewardship Program: Guidelines by the Infectious Diseases Society of America and the Society for Healthcare Epidemiology of America

Tamar F. Barlam,^{1,a} Sara E. Cosgrove,^{2,a} Lilian M. Abbo,³ Conan MacDougall,⁴ Audrey N. Schuetz,⁵ Edward J. Septimus,⁶ Arjun Srinivasan,⁷ Timothy H. Dellit,⁸ Yngve T. Falck-Ytter,⁹ Neil O. Fishman,¹⁰ Cindy W. Hamilton,¹¹ Timothy C. Jenkins,¹² Pamela A. Lipsett,¹³ Preeti N. Malani,¹⁴ Larissa S. May,¹⁵ Gregory J. Moran,¹⁶ Melinda M. Neuhauser,¹⁷ Jason G. Newland,¹⁸ Christopher A. Oehl,¹⁹ Matthew H. Samore,²⁰ Susan K. Seo,²¹ and Kavita K. Trivedi²²

Clinical Infectious Diseases™ 2016;62(10):e51–e77

Infection (2016) 44:395–439
DOI 10.1007/s15010-016-0885-z



GUIDELINE



Strategies to enhance rational use of antibiotics in hospital: a guideline by the German Society for Infectious Diseases

K. de With¹ · F. Allerberger² · S. Amann³ · P. Apfalter⁴ · H.-R. Brodt⁵ · T. Eckmanns⁶ ·
M. Fellhauer⁷ · H. K. Geiss⁸ · O. Janata⁹ · R. Krause¹⁰ · S. Lemmen¹¹ · E. Meyer¹² ·
H. Mittermayer⁴ · U. Porsche¹³ · E. Presterl¹⁴ · S. Reuter¹⁵ · B. Sinha¹⁶ · R. Strauß¹⁷ ·
A. Wechsler-Fördös¹⁸ · C. Wenisch¹⁹ · W. V. Kern²⁰

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Implementing an Antibiotic Stewardship Program: Guidelines by the Infectious Diseases Society of America and the Society for Healthcare Epidemiology of America

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- Total # recommendations: **28**
 - # strong recommendations: **5**
 - # weak recommendations: **18**
 - # good practice recommendations: **5**

2. Combating antimicrobial resistance

To overcome the threat of antimicrobial resistance, a three-pillar approach has been advocated:

- 1 Optimise the use of existing antimicrobial agents
- 2 Prevent the transmission of drug-resistant organisms through infection control
- 3 Improve environmental decontamination

Antimicrobial exposure (dose, duration, type of antibiotic) drives selection of resistant bacteria



Antimicrobial Use

INFLUENCERS:

- Human antimicrobial consumption
- Agriculture antimicrobial consumption

Rasyonel antibiyotik-ilaç kullanımı

Rationale for cohorting handwashing, active surveillance

Double Room
Room A
Patient A

Double Room
Room A
Patient B

Double Room
Room A
Patient B



Infection Control

INFLUENCERS:

- Hand hygiene
- Epidemiology
- Outbreak investigations
 - Cohorting
- Active surveillance

commode, doorknob



Environment

INFLUENCERS:

- Germicides
- 10% hypochlorite (sporicidal) for *C. difficile*
- Cleaning Policy & Practice (What surfaces? How often? Is terminal cleaning enough? (NO!))



White patients =
non-infected/non-colonized
with MDRO



Blue patients =
infected or colonized
with MDRO



Susceptible organism



Resistant organism

2. Combating antimicrobial resistance

To overcome the threat of antimicrobial resistance, a three-pillar approach has been advocated:

- 1 Optimise the use of existing antimicrobial agents
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Antimicrobial Use

INFLUENCERS:

- Human antimicrobial consumption
- Agriculture antimicrobial consumption

Rationale for cohorting handwashing, active surveillance

Double Room
Room A
Patient A

Double Room
Room A
Patient B

Room A
Patient B

Etkin infeksiyon kontrolü

Infection Control

INFLUENCERS:

- Hand hygiene
- Epidemiology
- Outbreak investigations
 - Cohorting
- Active surveillance



White patients =
non-infected/non-colonized
with MDRO



Blue patients =
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Environment

INFLUENCERS:

- Germicides
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Susceptible organism
Resistant organism

2. Combating antimicrobial resistance

To overcome the threat of antimicrobial resistance, a three-pillar approach has been advocated:

- 1 Optimise the use of existing antimicrobial agents
- 2 Prevent the transmission of drug-resistant organisms through infection control
- 3 Improve environmental decontamination

Antimicrobial exposure (dose, duration, type of antibiotic) drives selection of resistant bacteria



Antimicrobial Use

INFLUENCERS:

- Human antimicrobial consumption
- Agriculture antimicrobial consumption

Rationale for cohorting, patient placement, handwashing, active surveillance

Double Room
Room A
Patient A



Double Room
Room A
Patient B



Infection Control

INFLUENCERS:

- Hand hygiene
- Epidemiology
- Outbreak investigations
 - Cohorting
- Active surveillance



White patients =
non-infected/non-colonized
with MDRO



Blue patients =
infected or colonized
with MDRO

Germicides, Sub-MIC
residues, ionic surfactants

Room A
Patient B



Environment

INFLUENCERS:

- Germicides
- 10% hypochlorite (sporicidal) for *C. difficile*
- Cleaning Policy & Practice (What surfaces? How often?
Is terminal cleaning enough? (NO!))



Susceptible organism

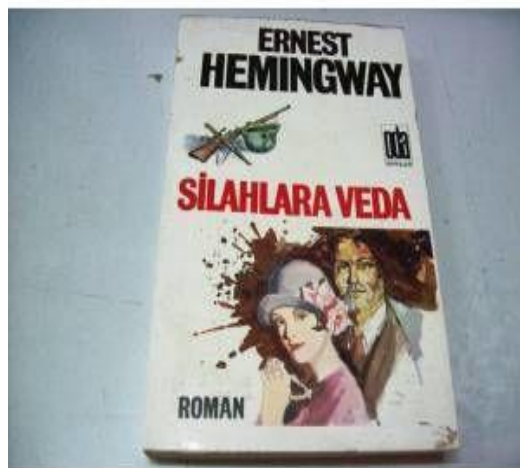


Resistant organism

Etkin çevresel kontaminasyon



Guns Save Lives



‘Ve kadınlar,
Bizim kadınlarımız:
Korkunç ve mübarek elleri,
İnce, küçük çeneleri, kocaman gözleriyle
Anamız, avradımız, yarımız...’

N.Hikmet

