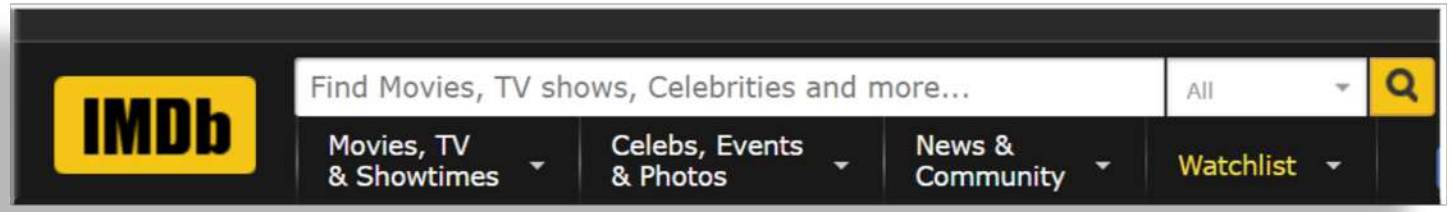
2019 Yılında Ses Getiren Makaleler

-Hastane Enfeksiyonları-

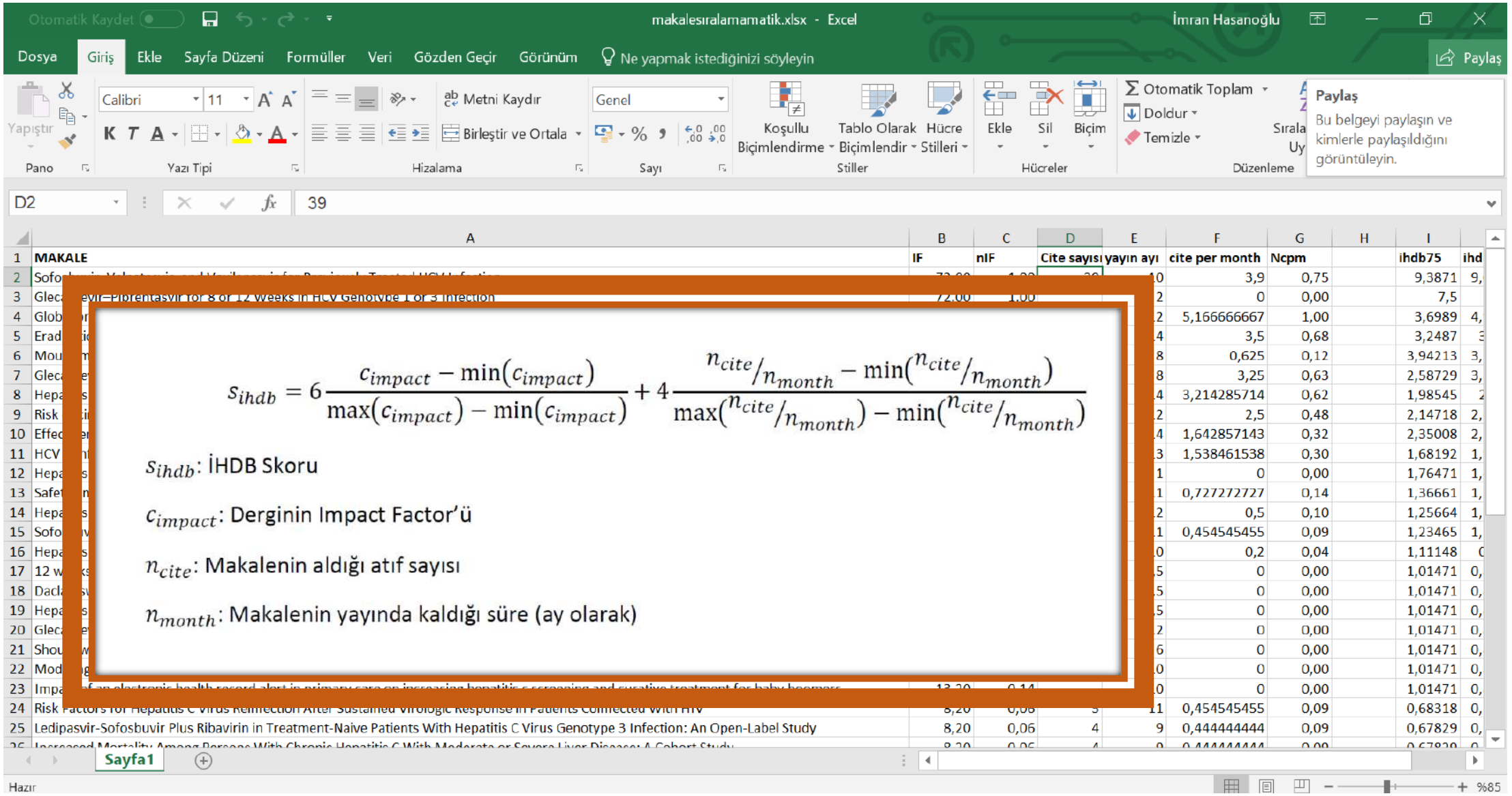
Dr. İmran Hasanoğlu
Ankara Yıldırım Beyazıt Üniversitesi Tıp Fakültesi
Ankara Şehir Hastanesi
Enfeksiyon Hastalıkları ve Klinik Mikrobiyoloji ABD

Klimik Ankara Günleri
25 Aralık 2019

En iyi literatürler
Kime göre???



Derginin impact faktörü x Atıf sayısı
yayında kaldığı ay



$$s_{ihdb} = 6\frac{c_{impact} - \min(c_{impact})}{\max(c_{impact}) - \min(c_{impact})} + 4\frac{{}^{n_{cite}}/_{n_{month}} - \min({}^{n_{cite}}/_{n_{month}})}{\max({}^{n_{cite}}/_{n_{month}}) - \min({}^{n_{cite}}/_{n_{month}})}$$

s_{ihdb}: İHDB Skoru

c_{impact}: Derginin Impact Factor'ü

n_{cite}: Makalenin aldığı atıf sayısı

n_{month}: Makalenin yayında kaldığı süre (ay olarak)

Attributable deaths and disability-adjusted life-years caused by infections with antibiotic-resistant bacteria in the EU and the European Economic Area in 2015: a population-level modelling analysis

Alessandro Cassini, Liselotte Diaz Högberg, Diamantis Plachouras, Annalisa Quattrocchi, Ana Hoxha, Gunnar Skov Simonsen, Mélanie Colomb-Cotinat, Mirjam E Kretzschmar, Brecht Devleesschauwer, Michele Cecchini, Driss Ait Ouakrim, Tiago Cravo Oliveira, Marc J Struelens, Carl Suetens, Dominique L Monnet, and the Burden of AMR Collaborative Group*

Lancet Infect Dis 2019; 19: 56–66
Published Online November 5, 2018
http://dx.doi.org/10.1016/

Summary

Background Infections due to antibiotic-resistant bacteria are threatening modern health care. However, estimating their incidence, complications, and attributable mortality is challenging. We aimed to estimate the burden of infections caused by antibiotic-resistant bacteria of public health concern in countries of the EU and European Economic Area (EEA) in 2015, measured in number of cases, attributable deaths, and disability-adjusted life-years (DALYs).

IF:59
Atıf:110

- ECDC yayını
- 2015 yılında Avrupa Birliği ve Avrupa Ekonomik Bölgesinde antibiyotik dirençli bakterilerle gelişen enfeksiyonlara atfedilen mortalite ve engelli yaşam süreleri (disability adjusted life years- DALY)'ni değerlendiren ilk çalışma
- Popülasyon düzeyinde modelleme çalışması

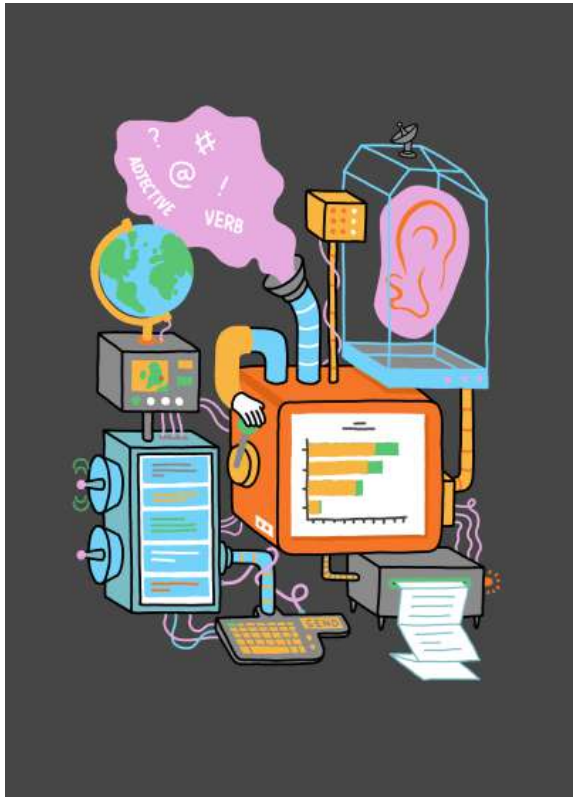
Attributable deaths and disability-adjusted life-years caused by infections with antibiotic-resistant bacteria in the EU and the European Economic Area in 2015: a population-level modelling analysis

Alessandro Cassini, Liselotte Diaz Högberg, Diamantis Plachouras, Annalisa Quattrocchi, Ana Hoxha, Gunnar Skov Simonsen, Mélanie Colomb-Cotinat, Mirjam E Kretzschmar, Brecht Devleesschauwer, Michele Cecchini, Driss Ait Ouakrim, Tiago Cravo Oliveira, Marc J Struelens, Carl Suetens, Dominique L Monnet, and the Burden of AMR Collaborative Group*

Bakteriye, antibiyotik direncinin tipine, enfeksiyon tipine ve insidansına s[illegible] tahmin etmeyi amaçlayan [illegible] Yükü

16 farklı bakteri suşu için
5 farklı tip enfeksiyonun
30 ülkede insidansı

Global Hastalık Yük[illegible]tandart yaşam beklentisi tablosu kullanılmış.



ECDC verileri

EARS- Net verileri

Kan ve BOS'tan izole edilen 8 bakteri suşu

Nozokomiyal enfeksiyonlar ve antibiyotik kullanımı nokta prevelans çalışmaları

2018'e kadar yayınlanan makaleler

2400 farklı hastalık modeli ile Monte Carlo simülasyonu

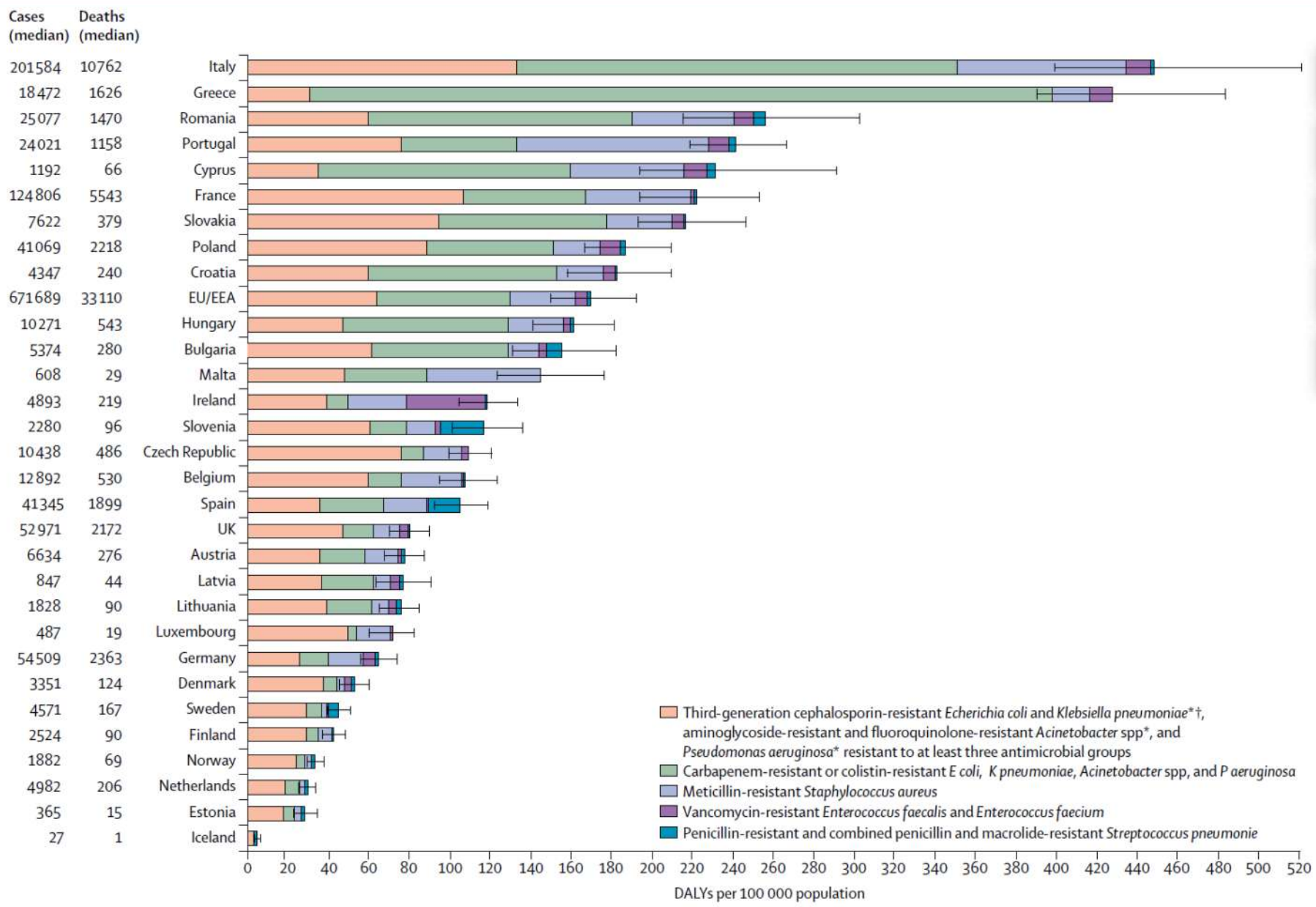
DALY, mortalite

- 100.000 popülasyon başına görülen engelli yaşam süresinin %67.9'si
  1. 3.KS dirençli *E. coli*
  2. MRSA
  3. CR *P. aeroginosa*
  4. 3.KS dirençli *K. pneumonia*

	Median number of infections	Median number of attributable deaths	Median number of DALYs per 100 000 population	Median percentage of total DALYs	Median percentage of DALYs in women	Median percentage of DALYs per 100 000 population due to BSI
Third-generation cephalosporin-resistant *Escherichia coli**†	297 416 (255 377–341 064)	9066 (7787–10 607)	37·2 (32·8–41·8)	21·9% (37·2/170)	46·0% (87 937/191 127)	80·5% (29·9/37·2)
Meticillin-resistant *Staphylococcus aureus*	148 727 (131 757–166 361)	7049 (6308–7863)	32·6 (29·8–35·6)	19·2% (32·6/170)	38·0% (63 715/167 767)	63·9% (20·9/32·6)
Carbapenem-resistant *Pseudomonas aeruginosa*‡	61 892 (53 210–70 984)	4155 (3398–5087)	27·2 (23·0–32·0)	16·0% (27·2/170)	37·2% (52 007/139 832)	44·1% (12·0/27·2)
Third-generation cephalosporin-resistant *Klebsiella pneumoniae**†	68 588 (61 459–76 068)	3687 (3370–4031)	22·5 (20·8–24·3)	13·2% (22·5/170)	35·3% (40 820/115 546)	78·0% (17·5/22·5)
Carbapenem-resistant *Acinetobacter* spp‡	27 343 (24 064–30 794)	2363 (1947–2810)	14·0 (12·0–16·2)	8·24% (14·0/170)	35·6% (25 687/72 062)	77·9% (10·9/14·0)
Carbapenem-resistant *K pneumoniae*‡	15 947 (13 473–18 478)	2118 (1795–2473)	11·5 (9·87–13·2)	6·75% (11·5/170)	34·8% (20 518/58 992)	92·9% (10·7/11·5)
Colistin-resistant *K pneumoniae*	7450 (6223–8715)	1635 (1362–1922)	8·57 (7·19–10·0)	5·04% (8·57/170)	31·7% (13 947/44 035)	95·5% (8·19/8·57)
Vancomycin-resistant *Enterococcus faecalis* and *Enterococcus faecium*	16 146 (13 206–19 334)	1081 (891–1292)	5·49 (4·68–6·47)	3·23% (5·49/170)	37·3% (10 538/28 223)	91·1% (5·00/5·49)
Multidrug-resistant *P aeruginosa**§	9028 (7736–10 425)	572 (456–703)	3·14 (2·60–3·76)	1·85% (3·14/170)	41·4% (6681/16 142)	43·1% (1·35/3·14)
Colistin-resistant *E coli*	7156 (6107–8241)	621 (518–751)	2·57 (2·22–2·95)	1·51% (2·57/170)	54·4% (7182/13 209)	92·2% (2·37/2·57)
Penicillin-resistant *Streptococcus pneumoniae*¶	2836 (2581–3119)	172 (160–185)	1·54 (1·42–1·68)	0·91% (1·54/170)	30·1% (2387/7919)	49·1% (0·76/1·54)
Penicillin-resistant and macrolide-resistant *S pneumoniae*‖	2013 (1776–2252)	172 (141–206)	0·91 (0·76–1·06)	0·53% (0·91/170)	41·2% (1922/4664)	77·4% (0·70/0·91)
Multidrug-resistant *Acinetobacter* spp**	2181·5 (1942·8–2449)	100 (89·5–113)	0·90 (0·79–1·05)	0·53% (0·90/170)	56·4% (2595/4601)	30·6% (0·27/0·90)
Carbapenem-resistant *E coli*‡	2619·0 (2269·0–2961)	141 (119–165)	0·80 (0·68–0·92)	0·47% (0·80/170)	33·9% (1390/4101)	89·0% (0·71/0·80)
Colistin-resistant *Acinetobacter* spp	1084·7 (926·0–1246)	94·5 (73·9–114)	0·64 (0·53–0·77)	0·38% (0·64/170)	27·7% (918/3314)	78·1% (0·50/0·64)
Colistin-resistant *P aeruginosa*	1261·9 (1043·4–1476)	84·5 (65·5–108)	0·59 (0·46–0·72)	0·34% (0·59/170)	42·0% (1264/3007)	44·0% (0·26/0·59)
Overall	671 689 (583 148–763 966)	33 110 (28 480–38 430)	170 (150–192)	100%	38·8% (339 510/874 541)	71·7% (122/170)

Data are median number (95% uncertainty interval) or % (n/N). Data are not age-standardised. DALYs=disability-adjusted life-years. BSI=bloodstream infection. *Excluding isolates also resistant to colistin or carbapenem. †In 2015, most of the third-generation cephalosporin-resistant *E coli* (88·6%) and *K pneumoniae* (85·3%) isolates reported to EARS-Net produced an extended-spectrum β-lactamase. ‡Excluding isolates also resistant to colistin. §Resistance to three or more antibiotic groups as marker of multidrug resistance. ¶Excluding isolates also resistant to macrolides. ‖Excluding isolates only resistant to penicillins. **Aminoglycoside-resistant and fluoroquinolone-resistant as marker of multidrug resistance.

Table 1: Estimated annual burden of infection with antibiotic-resistant bacteria of public health importance, by decreasing number of DALYs per 100 0000 population, EU and European Economic Area, 2015



İtalya

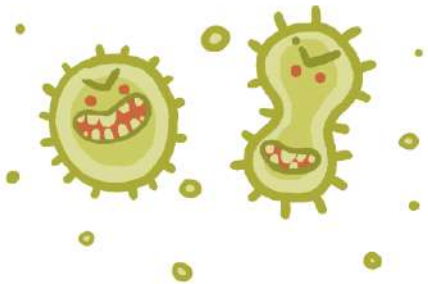
Yunanistan

Romanya

Portekiz

Kıbrıs

671.689
enfeksiyon



170/100.000
DALY

HIV + TBC + İnfluenza = 183

33.110
ölüm

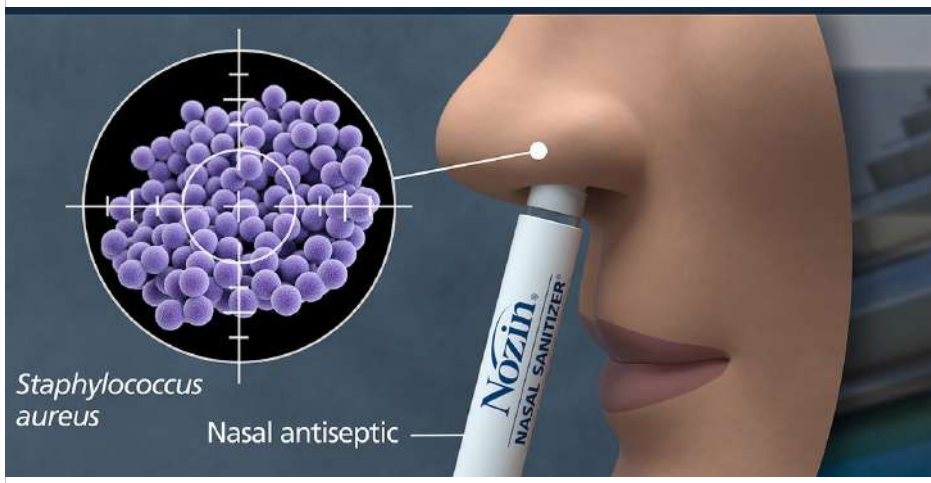
%75'i sağlık hizmeti ilişkili!

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Decolonization to Reduce Postdischarge Infection Risk among MRSA Carriers

S.S. Huang, R. Singh, J.A. McKinnell, S. Park, A. Gombosev, S.J. Eells, D.L. Gillen, D. Kim, S. Rashid, R. Macias-Gil, M.A. Bolaris, T. Tjoa, C. Cao, S.S. Hong, J. Lequieu, E. Cui, J. Chang, J. He, K. Evans, E. Peterson, G. Simpson, P. Robinson, C. Choi, C.C. Bailey, Jr., J.D. Leo, A. Amin, D. Goldmann, J.A. Jernigan, R. Platt, E. Septimus, R.A. Weinstein, M.K. Hayden, and L.G. Miller, for the Project CLEAR Trial



- CLEAR (Changing Lives by Eradicating Antibiotic Resistance) çalışması
- Çok merkezli randomize kontrollü
- MRSA taşıyıcılarında taburculuk sonrası hijyen eğitimi vs eğitim + dekolonizasyonun enfeksiyon gelişimi riskine etkisi

DEKOLONİZASYON GRUBU

project CLEAR

CHANGING LIVES BY ERADICATING ANTIBIOTIC RESISTANCE

Day of Enrollment/Prior to Discharge

- Receive a copy of the signed consent form
- Complete a contact information sheet
- Complete a survey with Project CLEAR study staff
- Have swabs of the nose, throat, armpit/groin, and any wounds taken by Project CLEAR study staff
- Receive a binder containing MRSA educational materials and instructions for soap and medicine to remove MRSA
- Select a follow up clinic location
- Schedule a one month follow up visit at that study clinic
- Prior to discharge, receive decolonization products to remove MRSA
  - Special soap: Hibiclens® (chlorhexidine)
  - Special mouthwash: PerioGard® (chlorhexidine)
  - Special nose medicine: Bactroban Nasal® (mupirocin)

After You Leave the Hospital

- You will be followed in the trial for one year after discharge
- Perform the "Decolonization Protocol" (treatment) which will be done:
  - Twice a month for 6 months
  - Each decolonization treatment lasts for 5 days at a time and includes:
    - Hibiclens® bathing/showering once daily, for 5 days
    - PerioGard® mouthwash twice daily, for 5 days
    - Bactroban Nasal® ointment in both nostrils twice daily for 5 days

6 ay süre ile

- Günlük %4'lük klorheksidin ile banyo/duş
- %0.12'lik klorheksidin ile ağız gargara
- Ayda 1 kez 5 gün süre ile nazal mupirosin

1 yıl izlem

What I Need for Showering with Hibiclens®

1. Hibiclens® bottle and pump
2. Large mesh sponge
3. Two minute timer
4. Clean towel

How To Use Hibiclens®

Use Hibiclens® soap INSTEAD of your regular soap and shampoo. Please **DO NOT USE** other soaps, shampoos, or lotions since many of these products will inactivate Hibiclens® and prevent it from removing MRSA. Only hair conditioner may be used with Hibiclens®. **Lotions compatible with Hibiclens® will be provided upon request.**

- Wet face and hair with water
- With head and hair out of water stream, wash face and hair by pumping Hibiclens® onto hands and firmly massaging onto face and into hair and scalp
    - Ensure Hibiclens® reaches skin around nose. Avoid eyes and ear canal.
- Rinse face and hair with water
- If you use hair conditioner, apply it next, rinse
- Wet the mesh sponge
- Dispense 3 pumps of Hibiclens® onto the wet sponge and rub vigorously into lather
    - Hibiclens® will not lather until you massage Hibiclens® thoroughly into sponge
- Wash body by **turning off shower water** and **FIRMLY MASSAGING** the soapy Hibiclens® sponge onto your skin.
- ****IMPORTANT** for Hibiclens® to work, you should turn the WATER OFF**
    - Soap all areas of neck with special attention to getting soap between all skin folds
    - Wash arms and legs one at a time by massaging skin **THOROUGHLY** with the soapy Hibiclens® sponge
    - Then apply soap to chest and back using firm massage
    - Then apply soap to abdomen using firm massage
    - Then apply soap to hip and groin, followed by genitals and buttocks using firm massage
    - Turn on the **2 minute shower timer**. **For the best effect, Hibiclens® needs to remain on all areas of your skin for at least 2 minutes.**
    - Reapply soap a **SECOND TIME** to all skin areas from the neck down with firm massage exactly as above.
    - Please place special attention to the neck, armpit, groin, areas between the fingers and toes, and all skin folds, including under the breasts for women. Firmly massage Hibiclens® into all skin areas.
    - Turn on water after 2 minute timer goes off
    - Rinse and pat dry with clean towel

PerioGard® (Chlorhexidine) Mouthwash Instructions for Use

PerioGard® is a mouthwash containing chlorhexidine that will reduce the amoun of MRSA that lives in the throat and may lower your risk for MRSA infection. I also kills the germs on your gums and teeth. Before using, please review a instructions below and contact Project CLEAR study staff with any questions a [redacted] or EndMRSA@uci.edu.

- Use PerioGard® during your assigned weeks of every month (either **1st** an **3rd weeks OR 2nd** and **4th weeks)**
- During these weeks, use ***twice* per day for 5 days (Monday through Friday)**

Bactroban Nasal® (Mupirocin) Ointment Instructions for Use

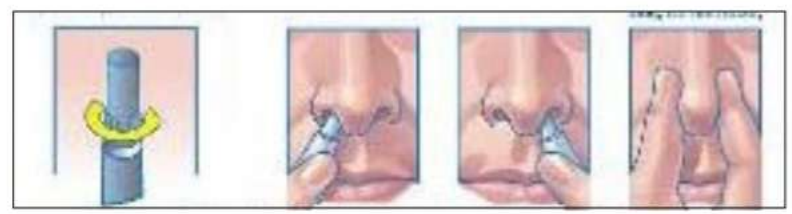
Bactroban Nasal® (mupirocin) is an antibiotic ointment that is FDA approved for use in your nose to get rid of MRSA. Before applying, please review all instructions below and contact Project CLEAR study staff with any questions at [redacted]

- Use Bactroban Nasal® during your assigned weeks of every month (either **1st** and **3rd weeks OR 2nd** and **4th weeks**)
- During these weeks, use ***twice* per day for 5 days (Monday through Friday)**

Special Considerations

- Do not use Bactroban Nasal® if you have an allergy to the product
- Avoid contact with eyes

1) Tilt your head back
2) Turn cap counter-clockwise to puncture the seal
3) Apply half the tube content directly into each nostril
4) You may use a q-tip to help distribute the ointment
5) Press nostrils together and massage for 1 minute
6) Place used tube into disposal box and bring with you to your next clinic visit
7) Wash your hands with soap and water as soon as you are finished



KONTROL GRUBU

Calls and Follow Up

Day of Enrollment/Prior to Discharge

- Receive a copy of the signed consent form
- Complete a contact information sheet
- Complete a survey with Project CLEAR study staff
- Have swabs of the nose, throat, armpit/groin, and any wounds taken by Project CLEAR study staff
- Receive a binder containing MRSA educational materials
- Select a follow up clinic location
- Schedule a one month follow up visit at that study clinic

After You Leave the Hospital

- You will be followed in the study for one year after discharge
- Attend follow up study clinic visits 1, 3, 6, & 9 months after enrollment
  - You will be compensated for each visit
  - During each visit:
    - A survey will be completed with clinic study staff
    - Repeat swabs of nose, throat, armpit/groin, and any wounds will be taken by study staff
    - Additional educational material will be given to you
- Receive phone calls twice a month for one year following discharge
  - Two follow up calls a month for an update on outcomes

project CLEAR

CHANGING LIVES BY ERADICATING ANTIBIOTIC RESISTANCE

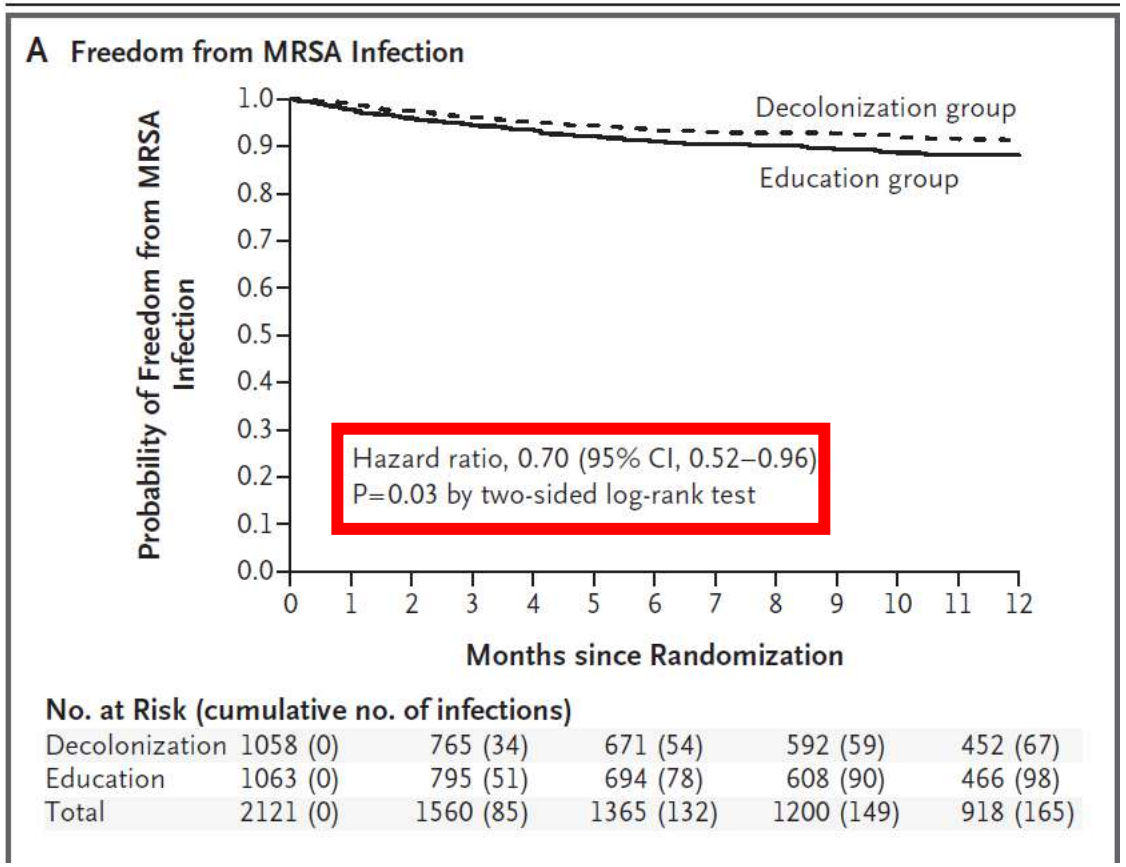
The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Decolonization to Reduce Postdischarge Infection Risk among MRSA Carriers

	Kontrol	Dekolonizasyon
MRSA enfeksiyonu	%9.2	%6.3
Herhangi bir enfeksiyon	%23.7	%19.6

MRSA enfeksiyonu riski dekolonizasyon grubunda anlamlı şekilde daha düşük, hospitalizasyon riski anlamlı şekilde daha düşük Dekolonizasyona bağlı yan etki hafif ve %4.2. (Bu hastaların %50'si ürünlere devam etmiş)



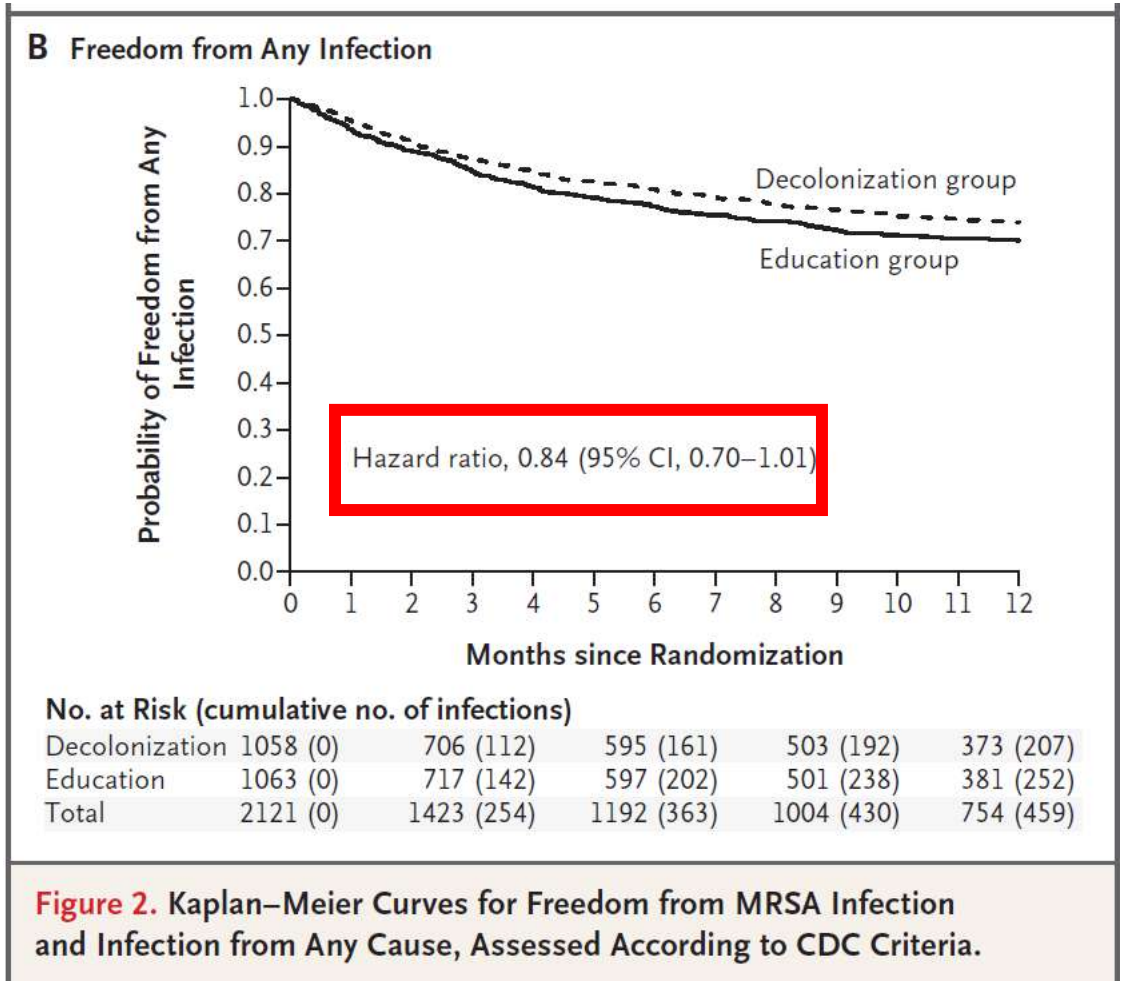


Figure 2. Kaplan–Meier Curves for Freedom from MRSA Infection and Infection from Any Cause, Assessed According to CDC Criteria.

1 MRSA enfeksiyonunu önlemek için 30 hastaya dekolonizasyon (95% CI, 18-230)

Postdischarge Infection Risk among MRSA Carriers

TO THE EDITOR: The article by Huang et al. (Feb. 14 issue)[1] reports a lower incidence of *Staphylococcus aureus* infections among trial participants who were colonized wit (MRSA) if, instead hygiene education cated decolonizati that included bath dine once daily fo the use of chlorhe for 5 days, and the twice daily for 5 d forward swap for bathing soap, and the use of mupirocin and chlorhexidine mouthwash took only a few minutes. Most participants had no any would not t because they ed any incon- nmon and se- from the Cen- ntion reminds eam infections in the United

decolonization group. Further review of the tables in the Supplementary Appendix (available with the full text of their article at NEJM.org) indicates that the absolute difference in the risk of gram-positive infection was lower by approximately 1.5 infections per 10,000 participant-days or approximately 1 less gram-positive infection every 7.7 years among participants who totally adhered to the decolonization regimen. The effort and cost required for this limited response appear to be disproportionate to the benefit.

THE AUTHORS REPL

colonization depen
patient preference i
of the patients who
enroll. This level of
ized 1-year trial in
that the interventic
gests that the preve
ingful to persons w
with MRSA. Second,

Third, MRSA infections are common and serious. A recent report on *S. aureus* from the Centers for Disease Control and Prevention reminds us that there are 119,000 bloodstream infections and 20,000 related deaths annually in the United States.[1] In our trial, serious MRSA infection developed in 1 in 10 participants in the control (education) group in the year after discharge; 29% of the cases involved bacteremia, and 85% led to hospitalization. Overall, the number needed to treat is approximately 30 patients to prevent an infection or hospitalization. If physicians can identify patients who will adhere to the regimen, then the number needed to treat is 12. The relatively low cost of the intervention products, which are generic and widely available, the relative simplicity and acceptability of the regimen, and the personal and health care costs of MRSA disease and associated hospitalization suggest that treatment is worth considering.

and the use of
outhwash took
ipants had no
any would not
it because they
ed any incon-

Cochrane Library

Cochrane Database of Systematic Reviews

AUTHORS' CONCLUSIONS

Implications for practice

It is not clear whether bathing with chlorhexidine reduces hospital-acquired infections, mortality or length of stay in the intensive care unit, or whether chlorhexidine use results in more skin reactions, because the certainty of the evidence is very low. One study is awaiting classification and two studies are ongoing; we do not know if inclusion of these studies in future updates of this Cochrane Review will increase our certainty in the results of the review.

Clinical Microbiology and Infection 25 (2019) 807–817

Contents lists available at ScienceDirect

Clinical Microbiology and Infection

journal homepage: www.clinicalmicrobiologyandinfection.com

Guidelines

ESCMID-EUCIC clinical guidelines on decolonization of multidrug-resistant Gram-negative bacteria carriers

E. Tacconelli [1, 2, *], F. Mazzaferri [2], A.M. de Smet [3], D. Bragantini [2], P. Eggimann [4], B.D. Huttner [5, 6], E.J. Kuijper [7], J.-C. Lucet [8, 9], N.T. Mutters [10, 11], M. Sanguinetti [12], M.J. Schwaber [13, 14], M. Souli [15, 16], J. Torre-Cisneros [17], J.R. Price [18], J. Rodríguez-Baño [19]

- MDR-GNB ile kolonize hastalarda hangi dekolonizasyon rejimleri uygulanmış?
- Bu hastalara dekolonizasyon önerelim mi?
- Dekolonizasyon için kullanılacak ajan ne olmalı?

... and Infection 25 (2019) 807–817

Panel 3.KS dirençli *Enterobacteriaceae* için rutin dekolonizasyon önermiyor

Özellikle nötropenik kolonize hastalarda çalışma planlanmalı.

Günde 4 kez 50 mg oral colistin sülfat ve 250 mg neomisin sülfat

Gayta kültürleri ile gelişebilecek colistin ve neomisin direnci için yakın izlem

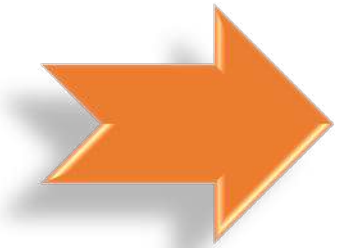
Carbapenem-resistant Enterobacteriaceae

Panel CR *Enterobacteriaceae* için rutin dekolonizasyon önermiyor

studies had a
hospital inpatients [51–53,55,59,60],

Özellikle kolonize nötropenik hastalar ve SOT alıcılarında CRE enfeksiyonu riskini değerlendiren çalışmalar planlanmalı.
Günde 4 kez 80 mg gentamisin sülfat + 50 mg oral colistin sülfat veya tek başına 50 mg oral colistin sülfat ile dekolonizasyon
Gayta kültürleri ile gelişebilecek colistin ve gentamisin direnci için yakın izlem

Karbapenem dirençli *A. baumannii*
Kinolon dirençli *Enterobacteriaceae*
*A*minoglikozit dirençli *Enterobacteriaceae*
Fekal mikrobiota transplantasyonu



VERİ YETERSİZ

MDR-GNB’ de rutin dekolonizasyon önermiyor.
YBÜ, nötropenik hastalar ve SOT alıcıları gibi riskli gruplarda 3.KS dirençli *Enterobacteriaceae* ve CRE’de dekolonizasyonun etkinliği ve yan etkilerini değerlendirmek için iyi dizayn edilmiş RCT gerekmekte.

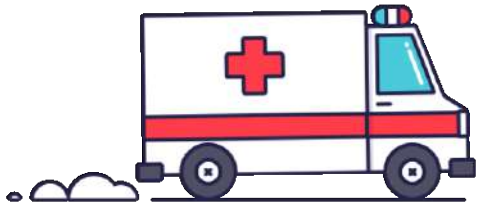
- Prebiyotikler, probiyotikler
- Çay ağacı yağı
- Fotodinamik tedaviler
- Omiganan pentahydrochloride
- Bakteriofaj tedavileri

Research

JAMA Internal Medicine | Original Investigation

Time-Series Analysis of Health Care–Associated Infections in a New Hospital With All Private Rooms

Emily G. McDonald, MD, MSc; Nandini Dendukuri, PhD; Charles Frenette, MD; Todd C. Lee, MD, MPH

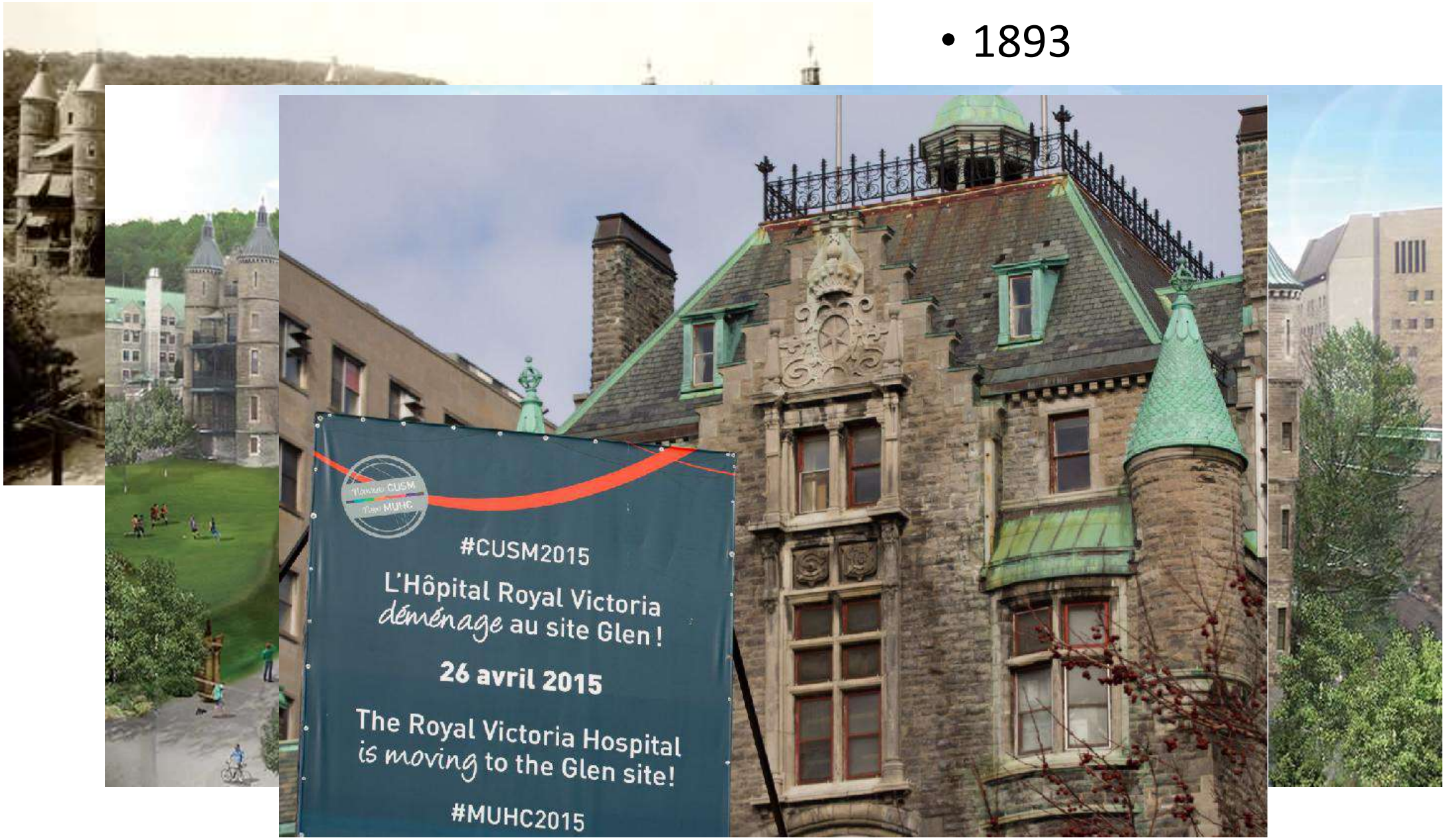


Eski, çok yataklı hasta odalar

MRSA ve VRE kolonizasyonu
MRSA ve VRE enfeksiyonu
C. difficile enfeksiyonu üzerine etkisi

Tek kişilik odalar

- 1893


#CUSM2015
L'Hôpital Royal Victoria
déménage au site Glen !
26 avril 2015
The Royal Victoria Hospital
is moving to the Glen site!
#MUHC2015

- Hepsi tek kişilik toplam 350 yatak

Research

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- 1 Ocak 2013- 31 Mart 2015 vs 1 Nisan 2015 – 31 Mart 2018
- Tüm dahili, cerrahi servisler ve YBÜ'lerdeki hastalar yatışta ve sonrasında haftalık olarak MRSA ve VRE açısından taranmış.
- Hastaneye yatıştan 72 saat sonra veya taburculuktan 4 hafta sonrasına kadar olan C. difficile enfeksiyonları ve MRSA ve VRE'ye bağlı enfeksiyonlar değerlendirilmiş.

Figure 1. Nosocomial Vancomycin-Resistant *Enterococcus* (VRE) Colonization Rate Before and After Move to a New Hospital With All Private Rooms

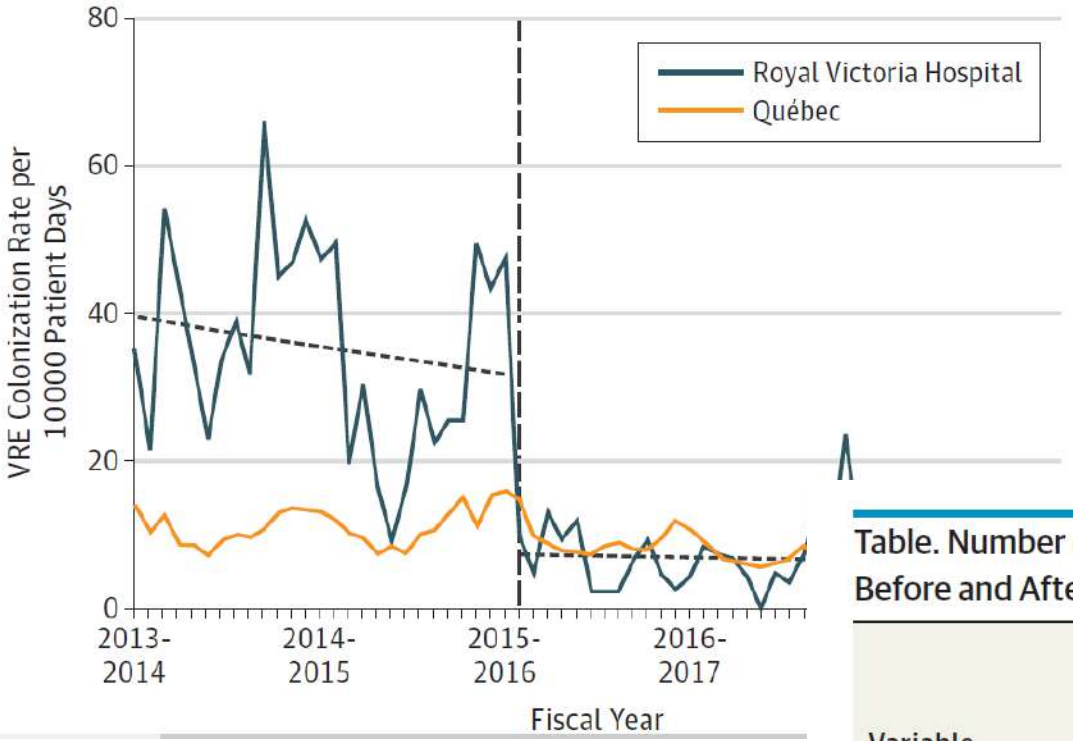


Figure 2. Nosocomial Methicillin-Resistant *Staphylococcus aureus* (MRSA) Colonization Rate After Move to a New Hospital With All Private Rooms

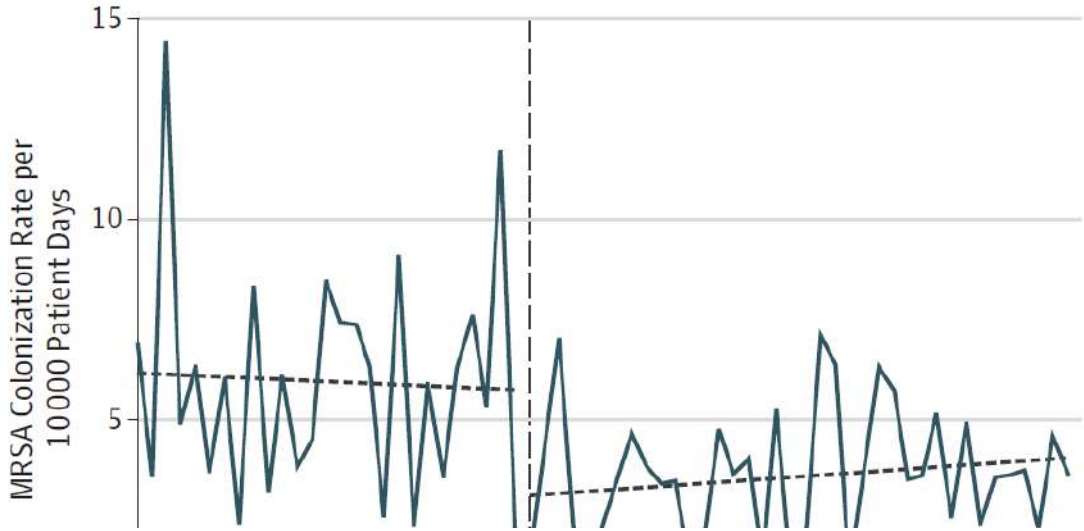


Table. Number of Colonizations, Infections, Patient Days, and Mean Unadjusted Rates Before and After the Move

Variable	Before the Move[a]		After the Move[b]	
	No.	Unadjusted Rate per 10 000 Patient-Days, Mean (95% CI)	No.	Unadjusted Rate per 10 000 Patient-Days, Mean (95% CI)
VRE				
Colonizations	766	35.0 (32.6-37.6)	209	6.6 (5.7-7.5)
Infections	55	2.5 (1.9-3.3)	14	0.4 (0.2-0.7)
MRSA				
Colonizations	129	5.9 (4.9-7.0)	112	3.5 (2.9-4.2)
Infections	27	1.2 (0.8-1.8)	37	1.2 (0.8-1.6)
CDI infections	236	10.8 (9.5-12.2)	223	7.0 (6.1-8.0)

Invited Commentary

The Evidence-Based Hospital—A Case for Single-Patient Rooms

D. Kirk Hamilton, PhD, FAIA, FCCM

Since the 1980s there has been growing recognition that the design of the physical enviro on clinical outcomes.[1] Consis evidence-based medicine, hea to develop an evidence-base

A growing body of researc individual patient rooms and with reduced infections, few anxiety, stronger family su

ventilation methods occurred in blocks of diagnostic and pro- footprint of a bout these new ewer beds, as in ere set aside for on funded hos- ough the 1950s been concen-

ward and see every patient, but as infection control is further prioritized, hospitals will invest the additional dollars for private rooms. Private rooms alone, however, as shown in the study by McDonald and colleagues,[3] will not be sufficient to combat the growing risk of MRSA and *C difficile*.

Contact precautions in single-bed or multiple-bed rooms for patients with extended-spectrum β-lactamase-producing Enterobacteriaceae in Dutch hospitals: a cluster-randomised, crossover, non-inferiority study

*Marjolein F Q Kluytmans-van den Bergh, Patricia C J Bruijning-Verhagen, Christina M J E Vandenbroucke-Grauls, Els I G B de Brauwer, Anton G M Buiting, Bram M Diederen, Erika P M van Elzakker, Alex W Friedrich, Joost Hopman, Nashwan al Naiemi, John W A Rossen, Gijs J H M Ruijs, Paul H M Savelkoul, Carlo Verhulst, Margreet C Vos, Andreas Voss, Marc J M Bonten, Jan A J W Kluytmans, on behalf of the SoM Study Group**

- ESBL + *Enterobacteriaceae* yayılmasını önlemede çok kişilik odalarda temas izolasyonu uygulama vs tek kişilik odalarda temas izolasyonu uygulaması
- Hollanda'da yapılmış cluster randomised non inferiority çalışması
- İlk!

Contact precautions in single-bed or multiple-bed rooms for patients with extended-spectrum β-lactamase-producing Enterobacteriaceae in Dutch hospitals: a cluster-randomised, crossover, non-inferiority study

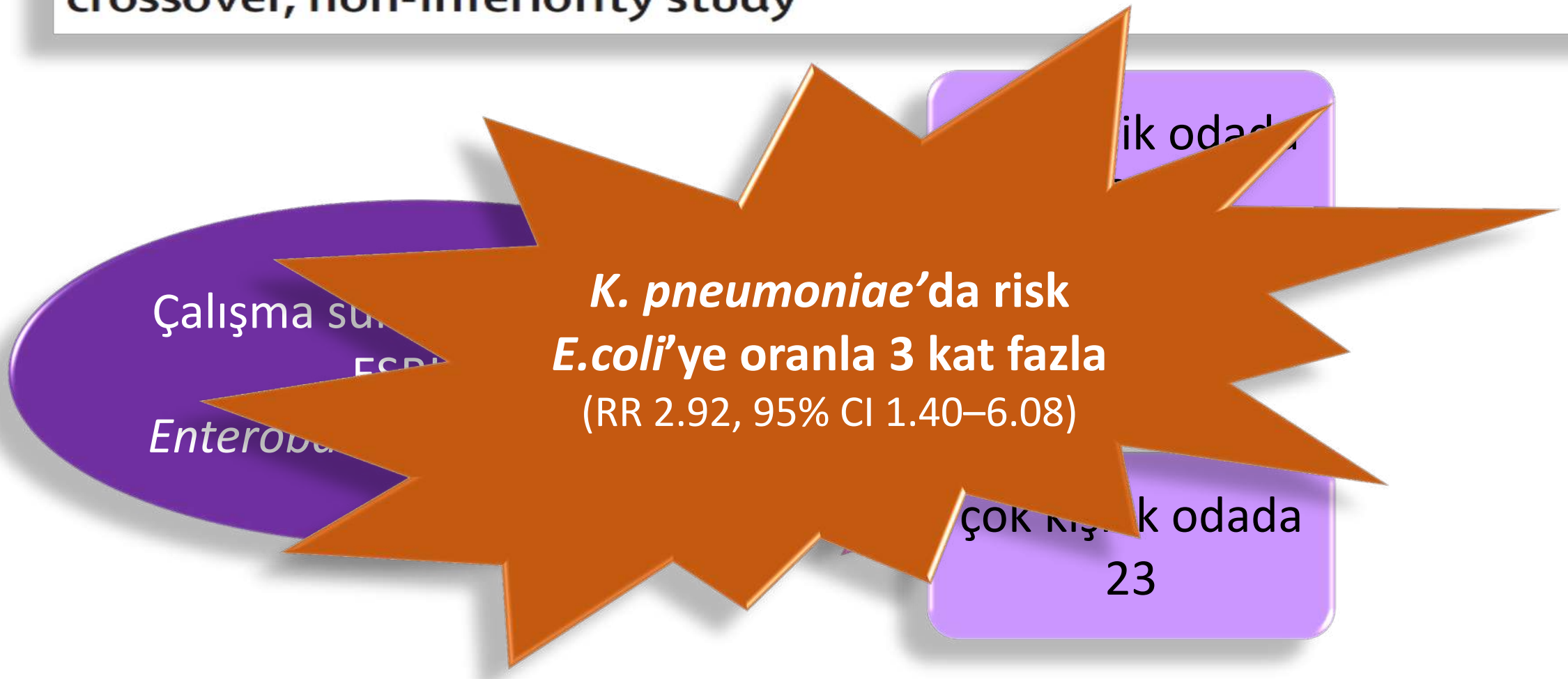
- 2012 yılında Hollanda'da 6 üniversite hastanesi, 9 eğitim araştırma hastanesi ve 1 genel hastanesinin dahili ve cerrahi kliniklerinde
- 18 ay süre
- ESBL + *Enterobacteriaceae* nedeniyle temas izolasyonu uygulanmaya başladıktan 5-9 gün sonra klinikte yatan diğer hastalar taranmış.
- Klonal ilişki değerlendirilmiş.

Contact precautions in single-bed or multiple-bed rooms for patients with extended-spectrum β-lactamase-producing Enterobacteriaceae in Dutch hospitals: a cluster-randomised, crossover, non-inferiority study

616 index hasta, 9527 aynı klinikte yatan hasta verisi incelenmiş.

	Tek kişilik oda	Çok kişilik oda
ESBL + *Enterobacteriaceae* bulaşı	%5	%6
Median hastanede kalış süresi	11	11
30 günlük mortalite	%4	%4

Contact precautions in single-bed or multiple-bed rooms for patients with extended-spectrum β-lactamase-producing Enterobacteriaceae in Dutch hospitals: a cluster-randomised, crossover, non-inferiority study



Contact precautions in single-bed or multiple-bed rooms for patients with extended-spectrum β-lactamase-producing Enterobacteriaceae in Dutch hospitals: a cluster-randomised, crossover, non-inferiority study

ESBL + *Enterobacteriaceae'*da temas izolasyonu stratejisini değerlendiren ilk randomize çalışma

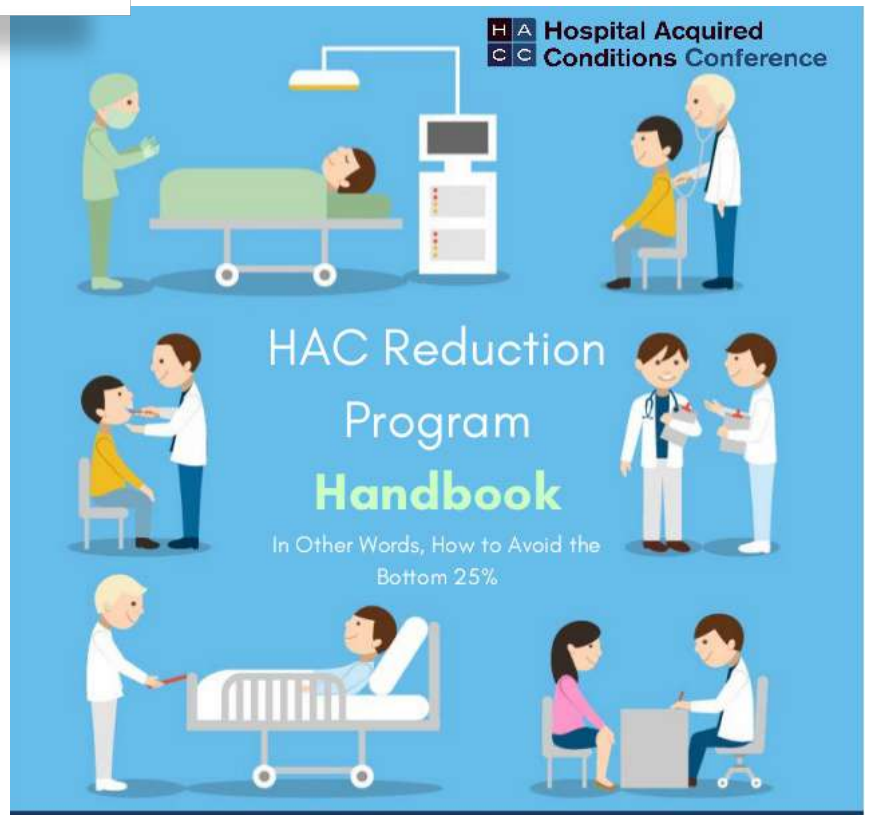
YBÜ ve hematoloji klinikleri dışında ESBL + *Enterobacteriaceae'*da temas izolasyonu stratejisinin çok kişilik odada uygulanması, tek kişilik odada uygulanması kadar etkindir.

RESEARCH

Changes in hospital safety following penalties in the US Hospital Acquired Condition Reduction Program: retrospective cohort study

Roshun Sankaran,[1,2] Devraj Sukul,[2] Ushapoorna Nuliyalu,[3,4] Baris Gulseren,[1] Tedi A Engler,[1,3] Emily Arntson,[1,2] Hanna Zlotnick,[5] Justin B Dimick,[2,3,4] Andrew M Ryan[1,3,4]

- Hastaneden edinilmiş durum azaltma programı (HACRP)
- Medicare and Medicaid kayıtlı tüm hastaneleri HAC'ye göre sıralayıp en kötü %25'lik dilimdeki hastanelere ödeme yaparken %1 ceza kesmekte.



RESEARCH

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- 2015 yılında 724 hastaneye toplam 373 milyon dolar para cezası kesilmiş. Bunlar arasından 708 hastaneyi dahil etmişler.

Pulmoner emboli
DVT
İatrojenik pnömotorax
Postop sepsis
Bası yarası

Ceza almak hastaneden edinilen durumlarda azalmaya sebep oluyor mu?

RESEARCH

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Ceza uygulanan ve uygulanmayan hastaneler arasında 30 günlük mortalite ve tekrar başvuru açısından **FARK YOK**

Uygulanan para cezası HAC'de azalmaya sebep **OLMUYOR**

Changes in hospital safety following penalties in the US Hospital Acquired Condition Reduction Program: retrospective cohort study

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HACRP'de kötü performans gösteren hastanelere uygulanan mali cezaların hasta güvenliğini anlamlı derecede iyileştirmiyor.

HACRP kapsamındaki cezalandırmanın sistematik olarak hastane özellikleriyle ilişkili olduğu ancak performans artışı ile ilişkili olmadığı gösterilmiş.

Contents lists available at ScienceDirect

Colloids and Surfaces B: Biointerfaces

journal homepage: www.elsevier.com/locate/colsurfb

Review

Self-disinfecting surfaces and infection control

Micaela Machado Querido[a,b], Lívia Aguiar[a], Paula Neves[a], Cristiana Costa Pereira[a,b,*], João Paulo Teixeira[a,b]

[a] National Institute of Health, Environmental Health Department, Porto, Portugal

- Terminal dezenfeksiyon sonrası hastane yüzeylerinin %50'den azı temiz
- Banyo kapı kolları, ışık düğmeleri gibi yerlerde oran %30

P.C. Carling et al. Improving cleaning of the environment surrounding patients in 36 acute care hospitals, Infect. Control Hosp. Epidemiol. 29 (2008) 1035–1041

P.C. Carling et al. Improving environmental hygiene in 27 intensive care units to decrease multidrug-resistant bacterial transmission, Crit. Care Med. 38 (2010) 1054–1059

D.J. Weber et al. Role of hospital surfaces in the transmission of emerging health care-associated pathogens: Norovirus, Clostridium difficile, and Acinetobacter species, Am. J. Infect. Control 38 (2010) S25–S33

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Anti-adeziv yüzeyler

Kimyasal ve fiziksel modifikasyon

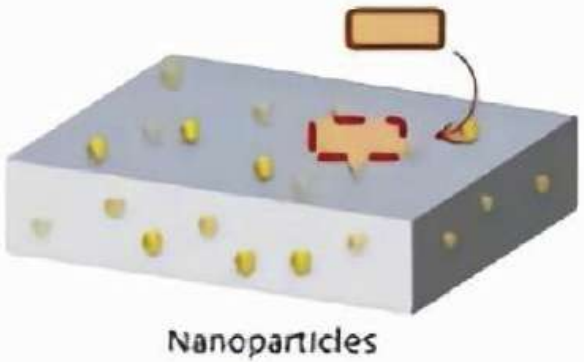
Antimicrobial Surfaces

a) Photoactivated

b) Intrinsically Antimicrobial

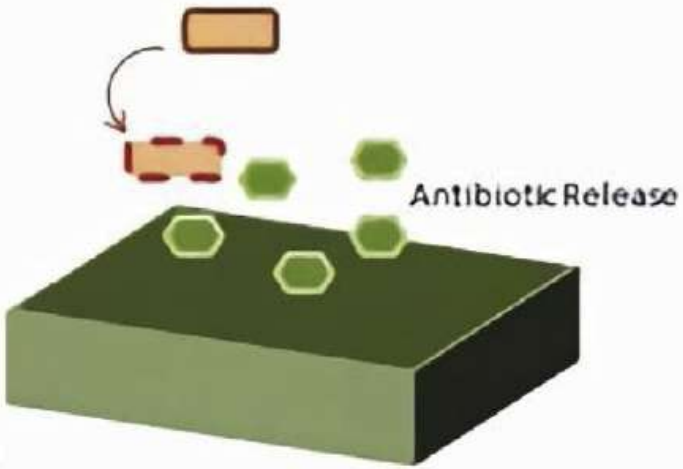
Antimicrobial Loading

c) **Incorporation**

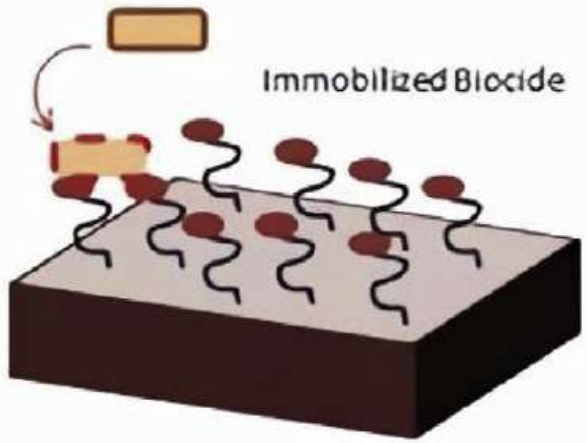


d) **Coating**

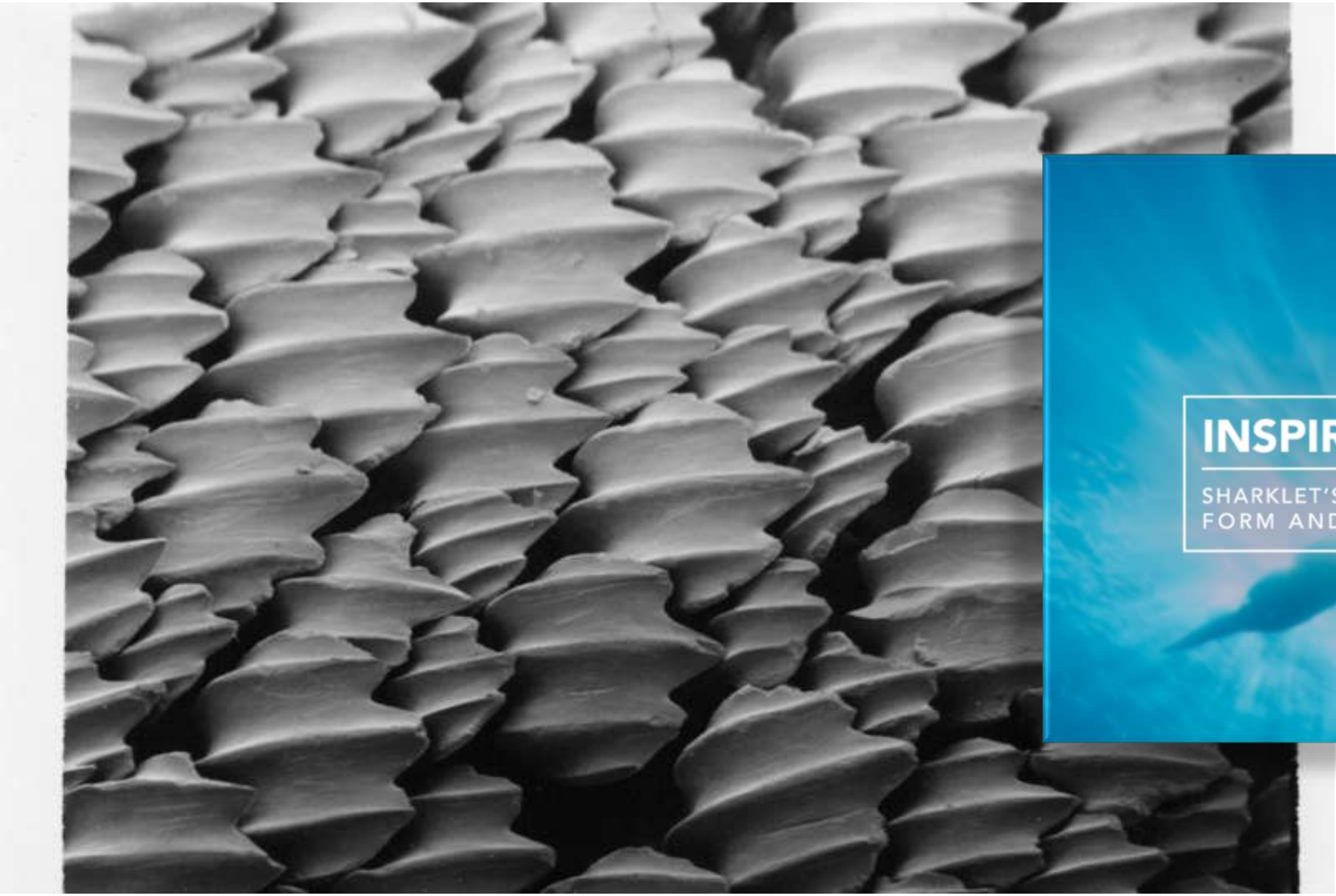
Antimicrobial Delivery



Contact Killing



Representation not to scale



INSPIRED BY NATURE

SHARKLET'S MICROPATTERN MIMICS THE FORM AND FUNCTION OF SHARKSKIN.

No antimicrobials. No chemicals. Just Sharklet.

Sharklet is the world's first technology to inhibit bacterial growth through pattern alone. The Sharklet surface is comprised of millions of microscopic features arranged in a distinct diamond pattern. The structure of the pattern alone inhibits bacteria from attaching, colonizing and forming biofilms. Sharklet contains no toxic additives or chemicals, and uses no antibiotics or antimicrobials.

Sharklet draws inspiration from the shape and pattern of the dermal denticles of sharkskin. Sharks are resistant to fouling organisms in the water including algae and barnacles.

S. aureus
S. epidermidis
MRSA
P. aeruginosa
E. coli
VRE

Normal yüzeylere oranlara bakteri tutunmasını 5 kat azaltıyor

PURTHREAD

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PURTHREAD OFFERS ANOTHER EFFECTIVE AND DURABLE TOOL FOR CLINICS AND HEALTHCARE FACILITIES IN THE FIGHT TO PREVENT INFECTIONS.

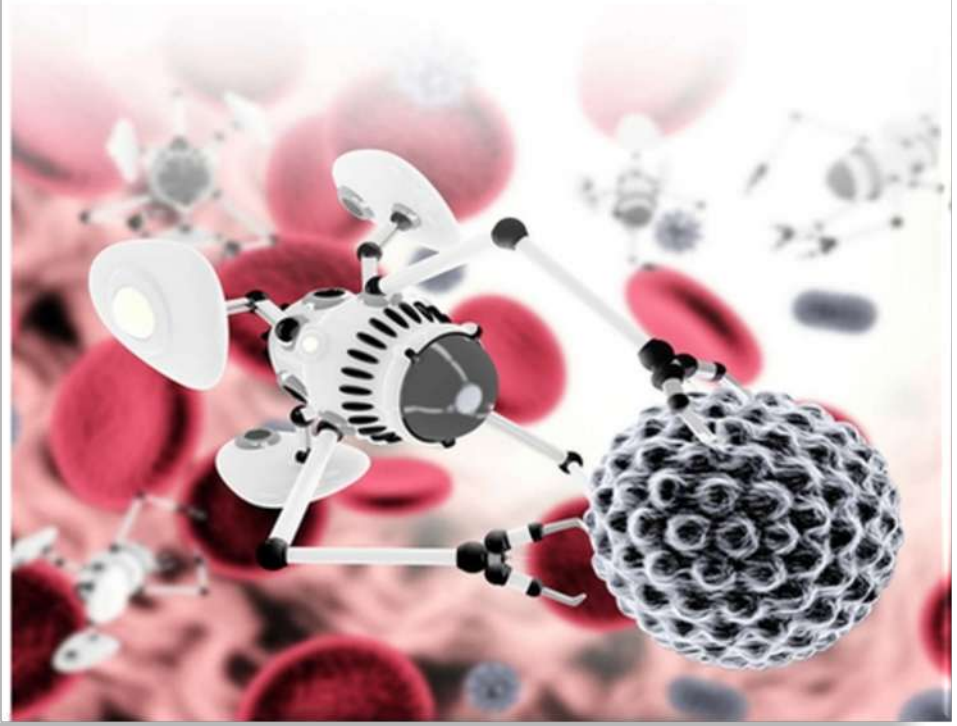
FABRICS IN EXTREME CONDITIONS AND WORN UNWASHED FOR LONG DURATIONS OFFER BACTERIA AND FUNGUS A HOSPITABLE ENVIRONMENT.

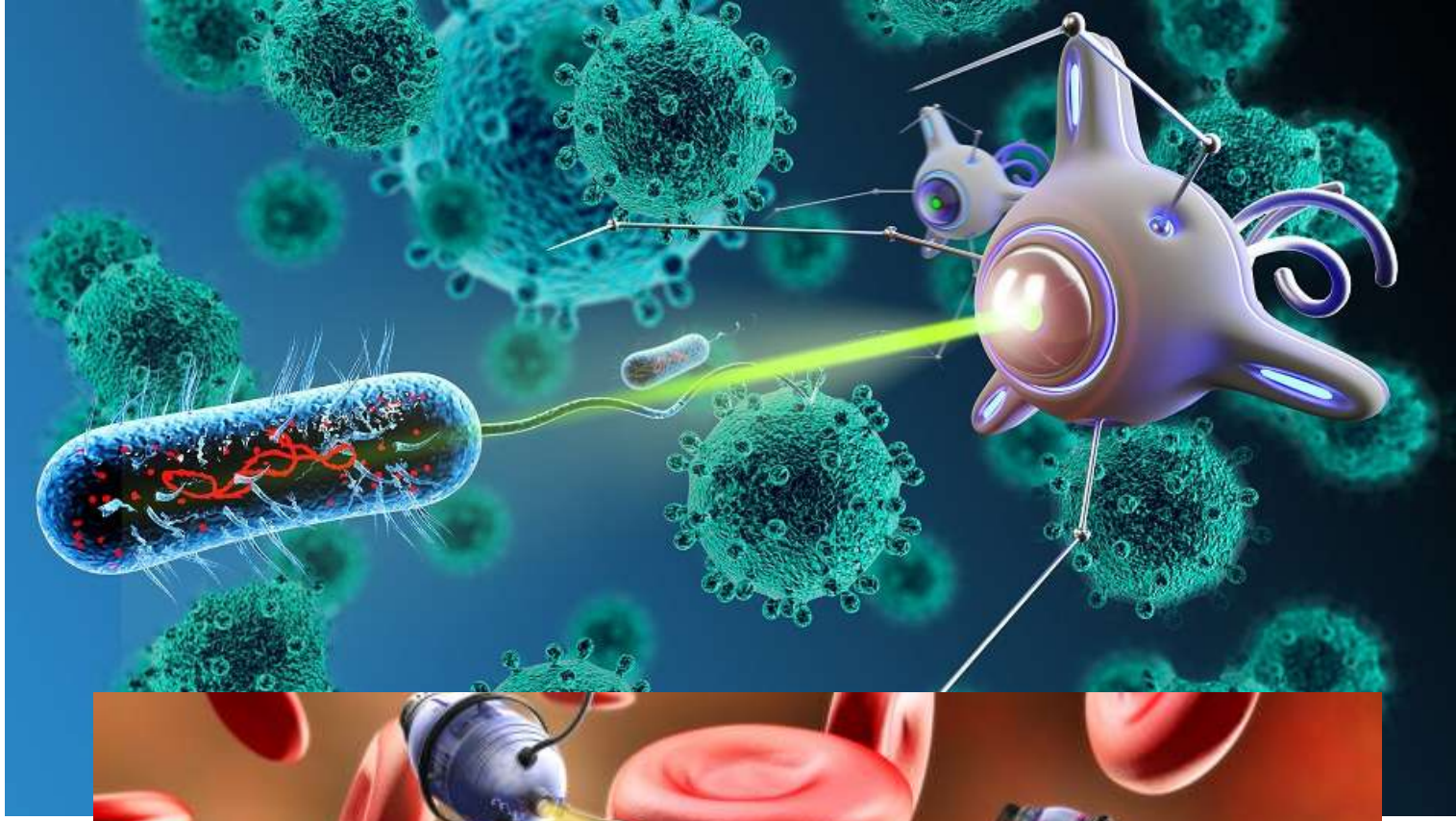
MRSA IS BECOMING A SCOURGE AMONG ATHLETES, AFFECTING THOSE PLAYING CLOSE-CONTACT SPORTS AND SPORTS SUBJECT TO SKIN ABRASIONS THE MOST.

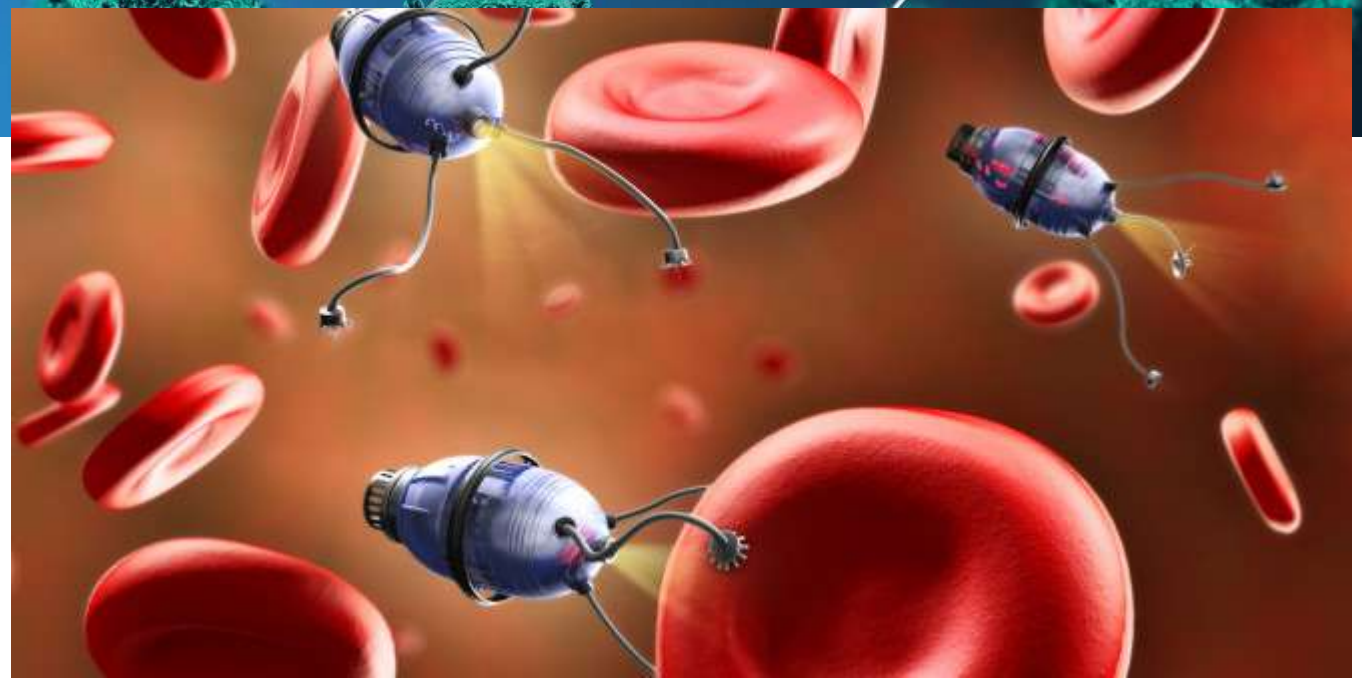
Gümüş tozlarını tekstillerin içine gömen bir sistem

Yıkamadan etkilenmiyor
Kumaşla dört saat temas ettikten sonra mikroorganizmaların% 99,9'unu öldürüyor

HOW NANOTECHNOLOGY IS CHANGING THE FUTURE OF MEDICINE







Christmas

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Research
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