

Orlando



POST MIDYEAR 2017

CREATING THE FUTURE

13 FEBRERO 2018

Debates y desafíos terapéuticos en pacientes hospitalizados.

Avances en la especialización clínica farmacéutica.

Irene Zarra Ferro.

Complejo Hospitalario de Santiago de Compostela.

Para el servicio de Farmacia es fundamental establecer alianzas con el Servicio de :

- Informática
- Oncología
- Pediatría
- Cuidados intensivos



Antimicrobial Stewardship Programs(ASP).

ANTIBIOTIC-RESISTANCE

FOUR STRATEGIES TO COMBAT ANTIBIOTIC-RESISTANCE

1 PREVENTING INFECTIONS,
PREVENTING THE SPREAD OF
RESISTANCE



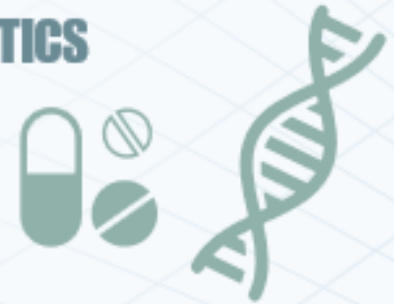
2 TRACKING



3 IMPROVING ANTIBIOTIC
PRESCRIBING AND USE,
AKA "STEWARDSHIP"



4 DEVELOPING NEW DRUGS
AND DIAGNOSTICS



OUTPATIENT INPATIENT

30%

50%

CDC Antibiotic Prescribing and Use in Hospitals and Long-Term care



¿Antimicrobial Stewardship Programs?

CENTER FOR DISEASE CONTROL AND PREVENTION



← → ↻ 🏠 <https://gis.cdc.gov/grasp/PSA/STMapView.html> ... 📄 ☆ 🔍 Buscar



Have questions or feedback? Email us

ABOUT THE DATA

MAP VIEW

Select Other Dataset ▾

SELECT STATE ▾

SELECT STATE ▾

SELECT STATE ▾

SELECT YEAR ▾

SELECT YEAR ▾

SELECT YEAR ▾

2014

2015

2016

2014

2015

2016

2014

2015

2016

National 2014 percentage

39%

1642 Facilities meeting all 7 elements

4184 National survey respondents

National 2015 percentage

48%

2199 Facilities meeting all 7 elements

4549 National survey respondents

National 2016 percentage

64%

3057 Facilities meeting all 7 elements

4764 National survey respondents

The Antibiotic Stewardship Practices data reporting in this Atlas is collected by a survey that acute care facilities participating in CDC's National Healthcare Safety Network (NHSN) complete each year.

CENTER FOR DISEASE CONTROL AND PREVENTION



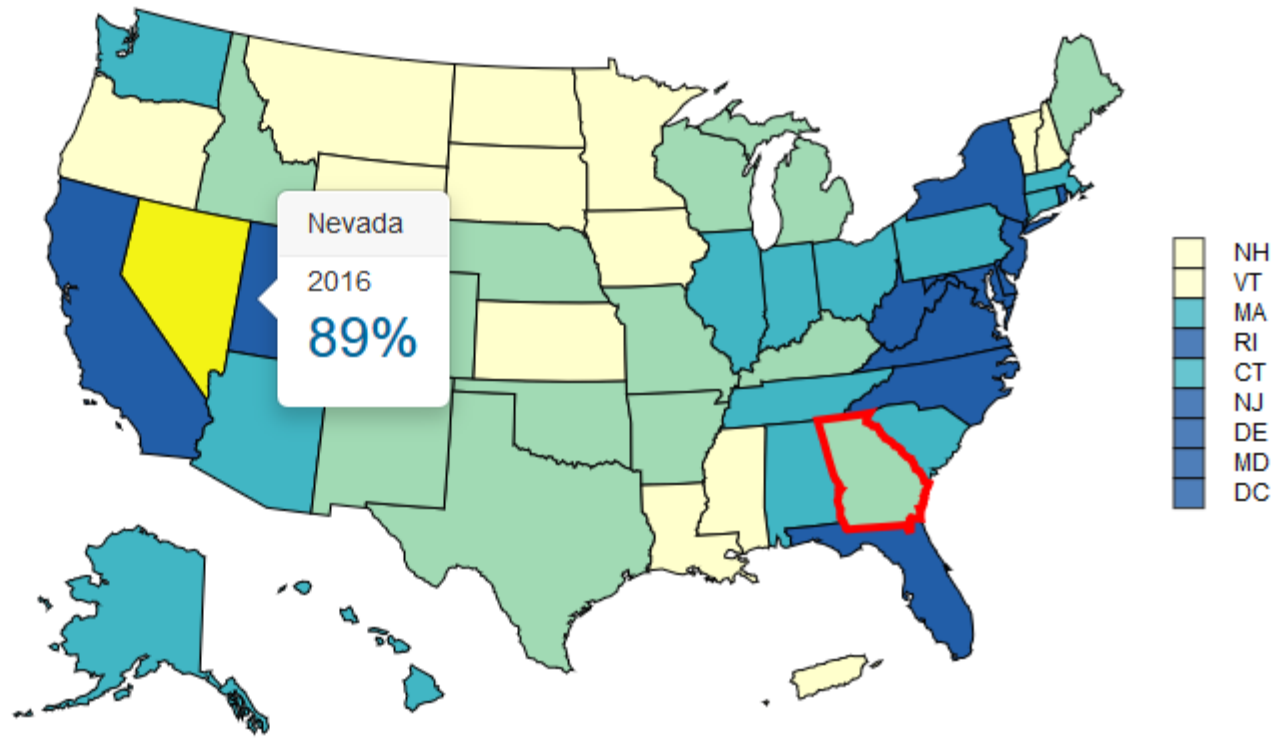
Antibiotic Stewardship in Acute Care Hospitals by State | 2016



Map



Table



ents

CENTER FOR DISEASE CONTROL AND PREVENTION



ABOUT THE DATA

MAP VIEW

STATE SUMMARY

CUSTOM CHARTS

Select Other Dataset ▾

Carbapenem-Resistant *Klebsiella* spp. | All HAIs | 2014

SELECT STATE OR REGION ▾

SELECT PHENOTYPE ▾

CNS (R+) to vancomycin
CNS R to vancomycin

Gram Negative

Enterobacter spp. R to carbapenems
Enterobacter spp. R to ES cephalosporins
Enterobacter spp. MDR
E.coli R to carbapenems
E.coli R to ES cephalosporins
E.coli R to fluoroquinolones
E.coli MDR

Klebsiella spp. R to carbapenems

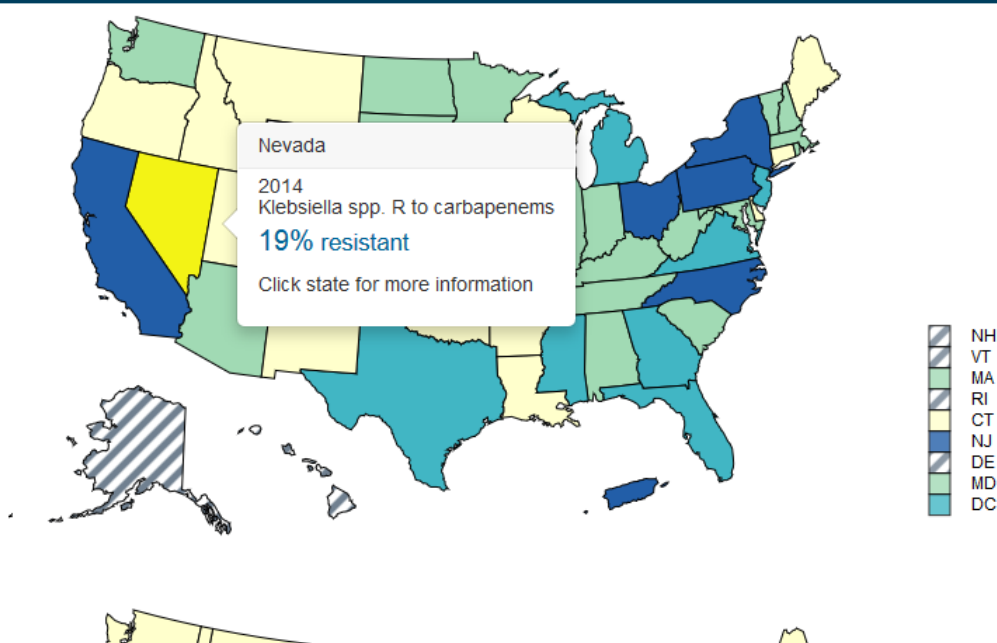
Klebsiella spp. R to ES cephalosporins
Klebsiella spp. MDR
CRE
P. aeruginosa (R+) to carbapenems
P. aeruginosa R to aminoglycosides
P. aeruginosa R to ES cephalosporins

SELECT INFECTION TYPE ▾

SELECT YEAR ▾

Table

DOWNLOAD ▾






POST MIDYEAR 2017
CREATING THE FUTURE



2014



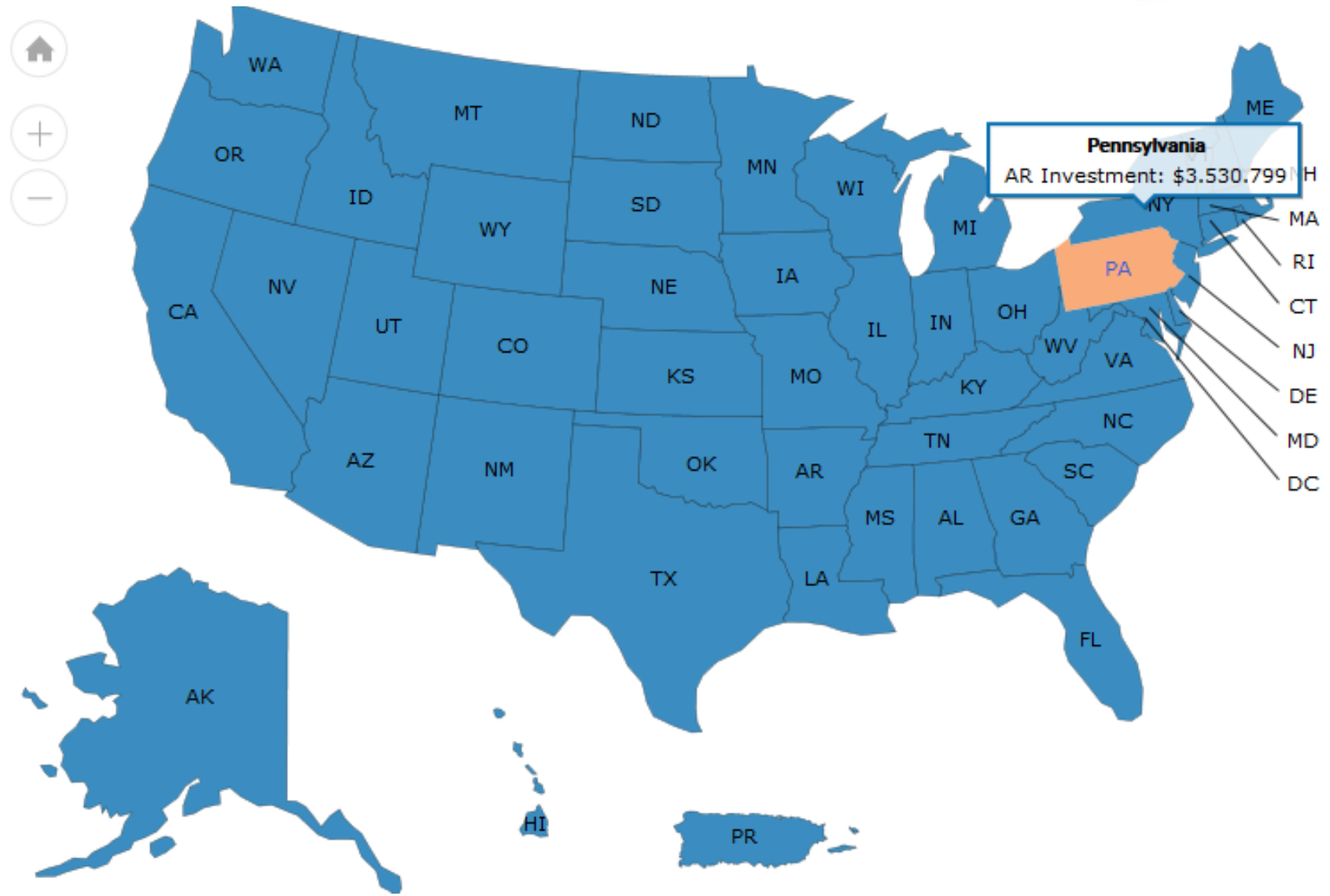


**NATIONAL STRATEGY
FOR COMBATING ANTIBIOTIC-
RESISTANT
BACTERIA**





Key Investments to Combat Antibiotic Resistance



2020

- ✓ **100% Antimicrobial Stewardship Programs.**
- ✓ **↓ PRESCRIPCIÓN INAPROPIADA:**
 - **OUTPATIENT ↓ 50%.**
 - **INPATIENT ↓ 20%.**
 - **↓ 50% *C.difficile***
 - **↓ 60% EPC**
 - **↓ 35% *Ps.aeruginosa* MR**
 - **↓ 50% SAMR.**



The Core Elements of Antibiotic Stewardship Programs:

- 2014 Hospital
- 2015 Nursing Homes.
- 2016 Outpatient Settings.
- 2017 Small and Critical Access Hospitals.

The Core Elements of Hospital Antibiotic Stewardship Programs



The Core Elements of Hospital Antibiotic Stewardship Programs

Pharmacy Roles



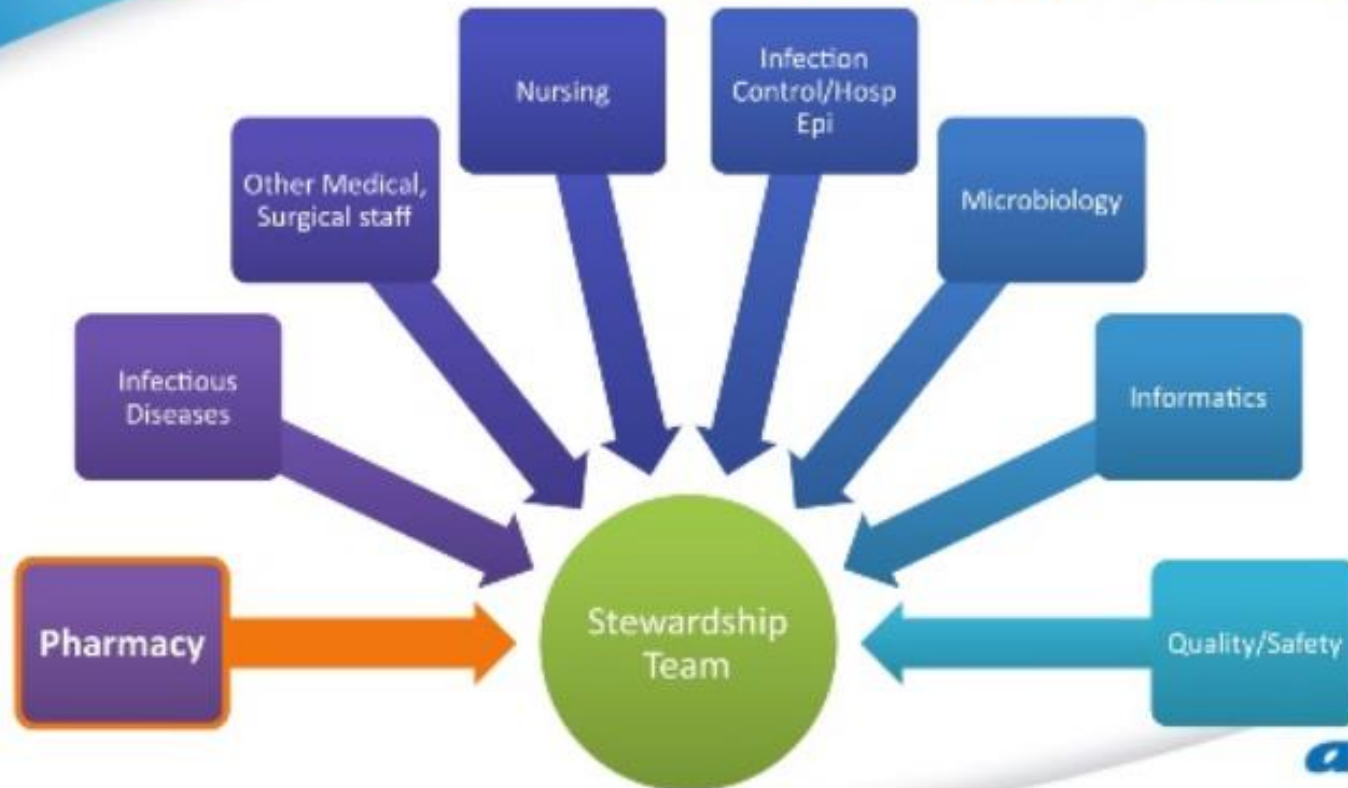
The Core Elements of Hospital Antibiotic Stewardship Programs

Pharmacy Roles



TEAM ANTIMICROBIAL STEWARDSHIP PROGRAM

Who is on the team?



Action: Core Elements of Hospital Antibiotic Stewardship Programs



Action

All Pharmacists

ACTION

BROAD INTERVENTIONS	PHARMACY-DRIVEN INTERVENTIONS	INFECTION/SYNDROME SPECIFIC INTERVENTIONS
ANTIBIOTIC "TIME OUTS"	AUTOMATIC CHANGES FROM IV TO ORAL	COMMUNITY-ACQUIRED PNEUMONIA
PRIOR AUTHORIZATION	DOSE ADJUSTMENTS	URINARY TRACT INFECTIONS
PROSPECTIVE AUDIT AND FEEDBACK	DOSE OPTIMIZATION PK/PD	CLOSTRIDIUM DIFFICILE
	AUTOMATIC STOP ORDER	BLOOD STREAM INFECTIONS
	AUTOMATIC ALERTS IN DUPLICATE THERAPY	

Antibiotic Stewardship Programs: *C.difficile*



VS

C. difficile:

- 500.000 ingresos
- 15.000 muertes
- 1/5 recidivan

Antibiotic Stewardship Programs: *C.difficile*



Antibiotic Exposure

High risk:

- Fluoroquinolones
- 3rd and 4th generation cephalosporins
- Clindamycin
- Carbapenems



Exposure to *C. difficile* spores

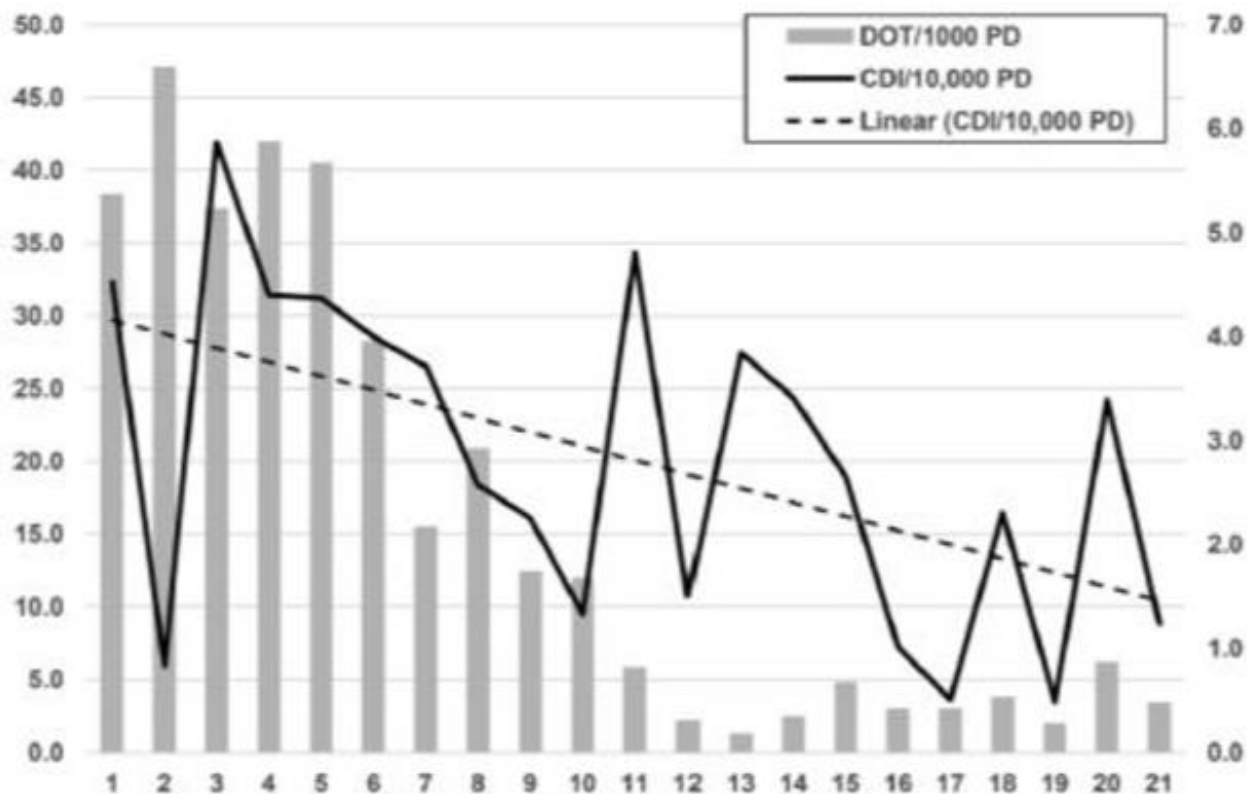
- Spores can remain viable for months
- Contamination ↑ in rooms of pts with active *C. diff*
- Hands easily contaminated



Gastric Acid Suppression

- Data implicates PPI use
- Need more studies: PPI restriction and ↓ *C. diff*

Restricción quinolonas & *C.difficile*



Pre-Intervention	Education	Restriction
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FQ DOT/1,000 PD	41.0 ± 4.4	4.8 ± 3.6
CDI cases/10,000 PD	4.0 ± 2.1	2.2 ± 1.35



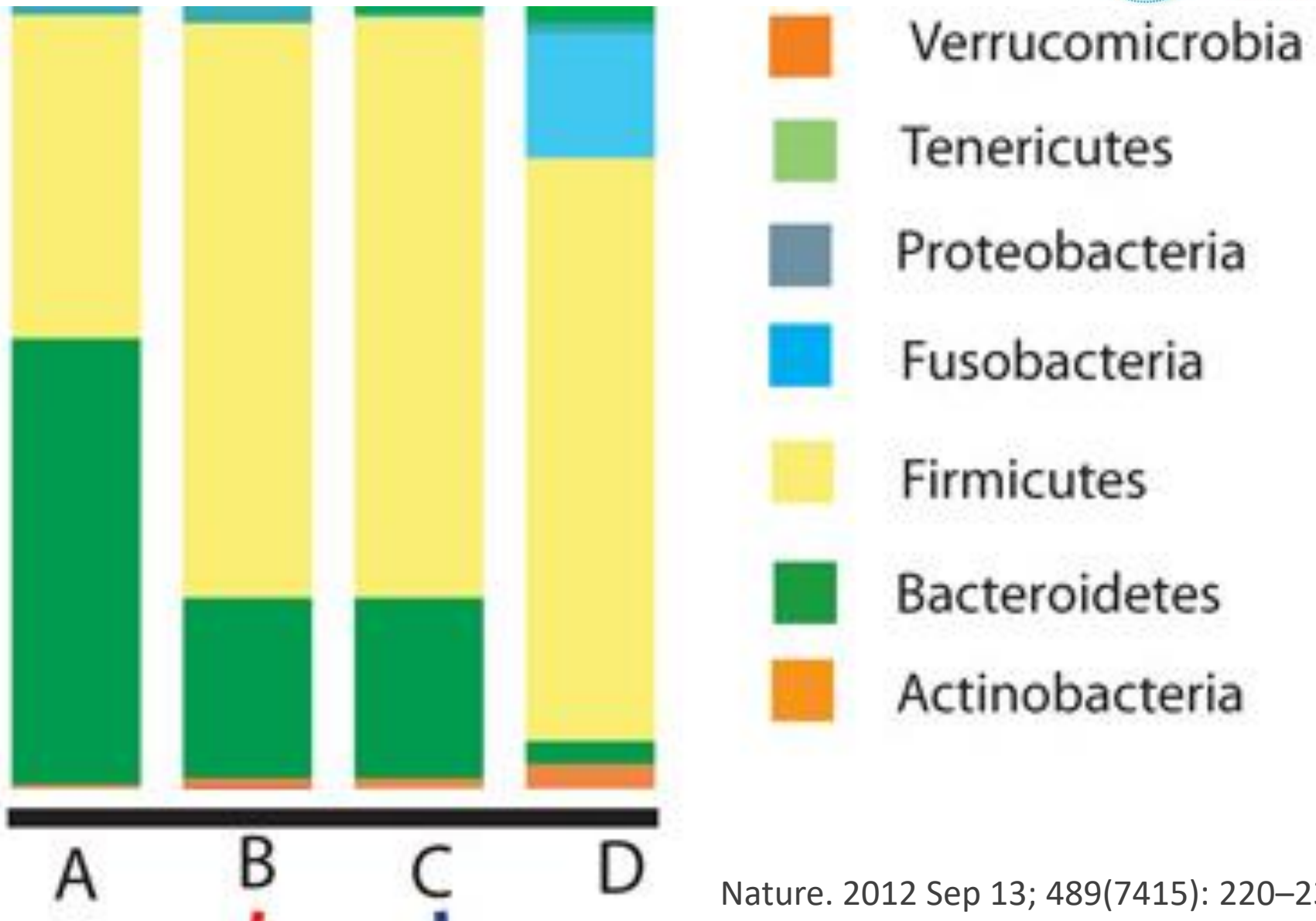
Non-antibiotic interventions for C.difficile Stewardship



FMT:

FECAL MICROBIOTA TRANSPLANTATION

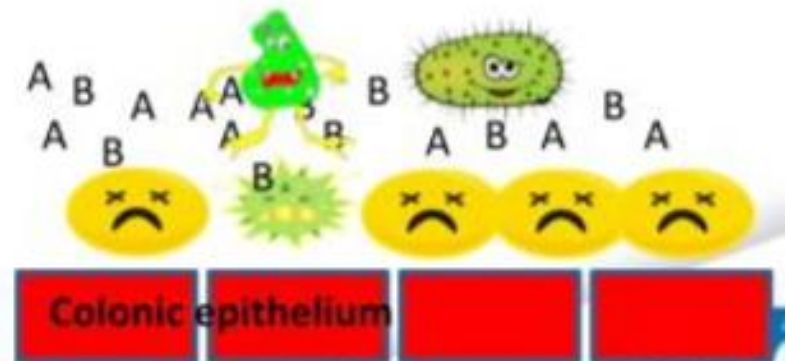
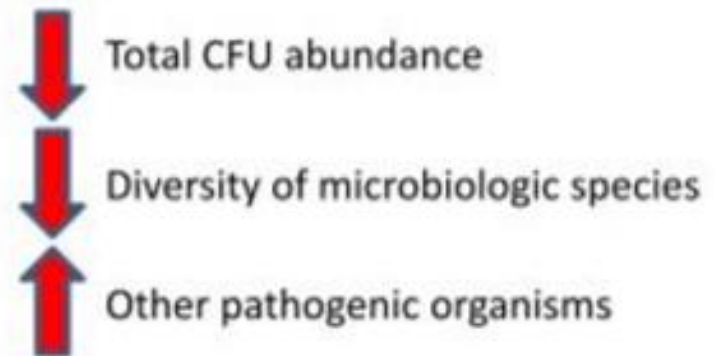
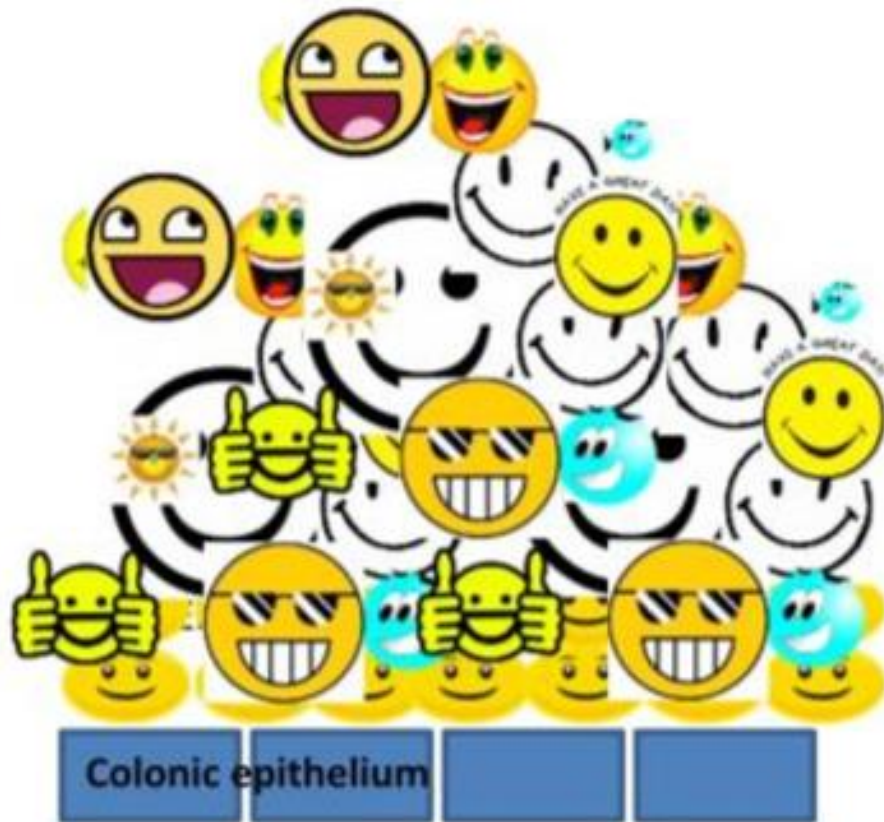
Diversity of the human microbiota



Nature. 2012 Sep 13; 489(7415): 220–230.

Human microbiota CDI patients

Microbiome of non-CDI patients vs. CDI patients



FECAL MICROBIOTA TRANSPLANTATION



SON ESPASES (SPAIN)

SACRAMENTO.CA

Non-profits collaborating with FDA to provide frozen, screened FMT material

Open Biome (Medford, MA)

www.openbiome.org



\$485/dose
250 mL

\$485/dose
30 mL

\$635/dose
30 caps

AdvancingBio (Sacramento, CA)

www.advancingbio.org



Stool donations are accepted Tuesdays and Wednesdays from 7 a.m. to 1 p.m.
Closed for lunch between 11 a.m.-11:30 a.m..



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