

A composite image of Earth from space, showing the Americas and the Atlantic Ocean, with two text overlays. The top half shows a clear view of the Earth with blue oceans and brown/green landmasses. The bottom half shows a similar view but with a dark, smoky or hazy atmosphere, suggesting environmental degradation. Two semi-transparent grey boxes with blue text are overlaid on the image.

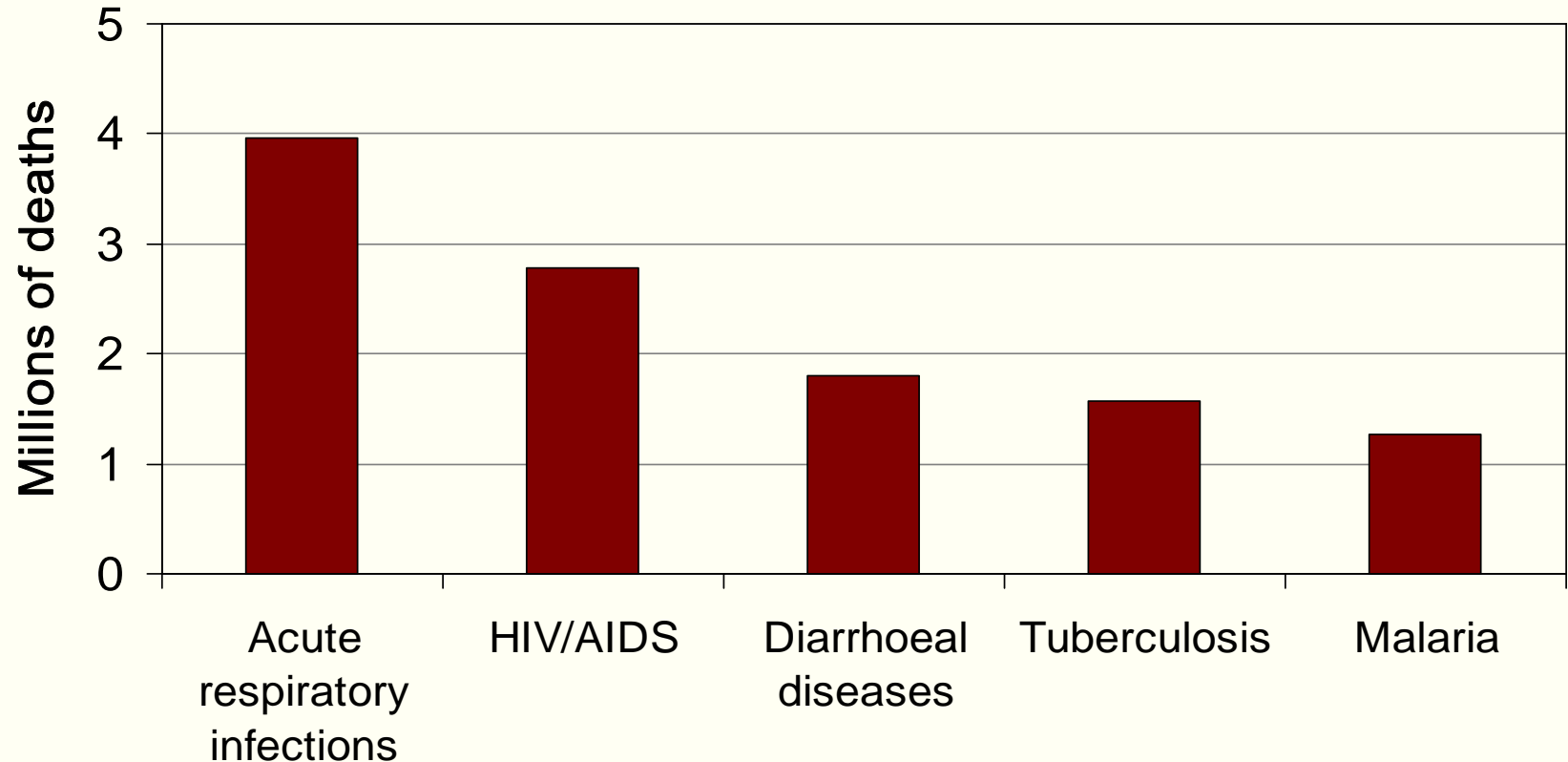
Antibiotics have saved millions of lives

Antibiotics are losing their effect



Global mortality in infectious diseases

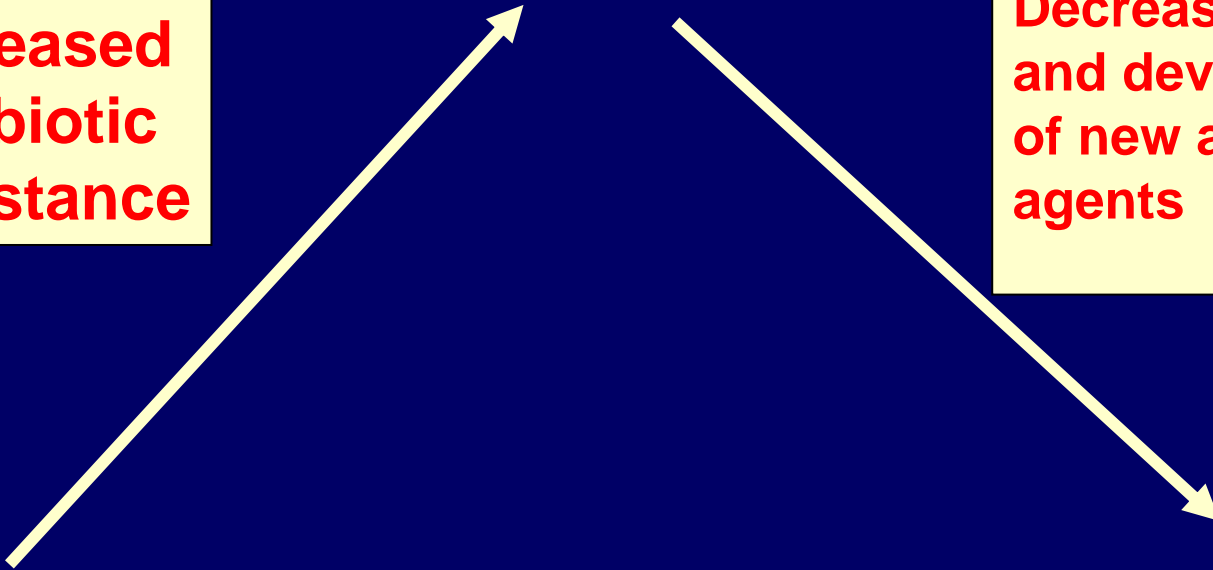
(WHO estimates for 2002, from World Health Report 2004)



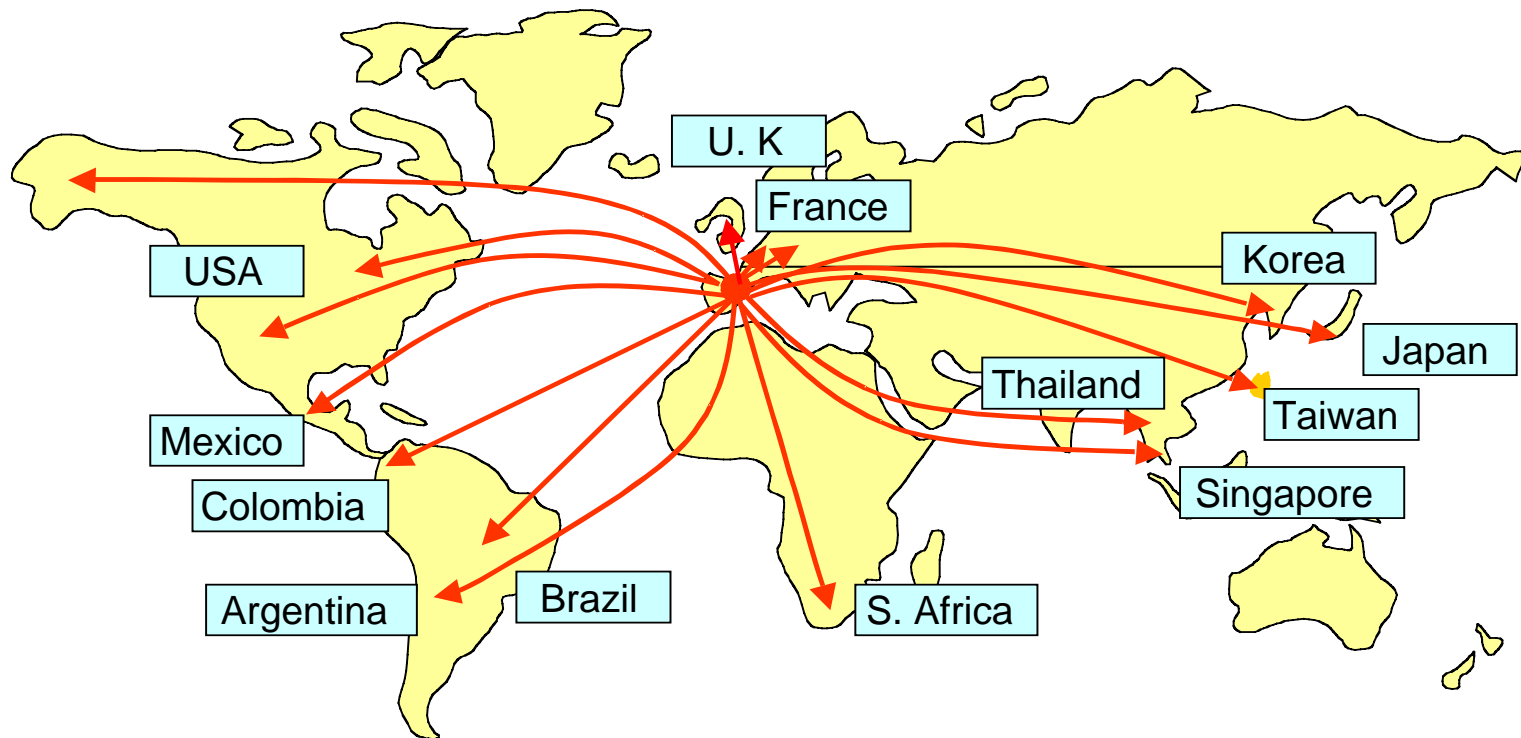
The current paradox

**Increased
antibiotic
resistance**

**Decreased research
and development
of new antibacterial
agents**



The Global Spread of a pneumococcal strain resistant to penicillin



Death of 4 Children Amplifies Threat From Drug-Resistant Bacteria

By Sheryl Gay Stolberg
New York Times Service

WASHINGTON — More than 200 people in Minnesota and North Dakota have become sick, and four children died, over the past two years after becoming infected with a drug-resistant germ that until recently has been confined to hospitals and nursing homes, federal health officials said Thursday.

The fatalities are the first to be reported in the United States, and are worrisome because they suggest that a lethal strain of *Staphylococcus aureus* may threaten the public. Some cases were reported last year among youngsters in Chicago and Tennessee.

"These cases are a warning sign, sort of

like cleaning out infected cuts, washing hands frequently and seeking medical care if their children appeared sick. But other experts said the deaths, which are being reported Friday in the agency's Morbidity and Mortality Report, were a frightening development.

Dr. Stuart Levy, director of the Center for Adaptation Genetics and Drug Resistance at Tufts University in Boston, said that it was particularly unsettling that robust youngsters lost their lives.

The children ranged in age from 1 to 13 and had various symptoms, including extremely high fever, rash, low blood pressure and difficulty in breathing.

All were treated in the hospital with very powerful antibiotics that should have worked against the germs. But they

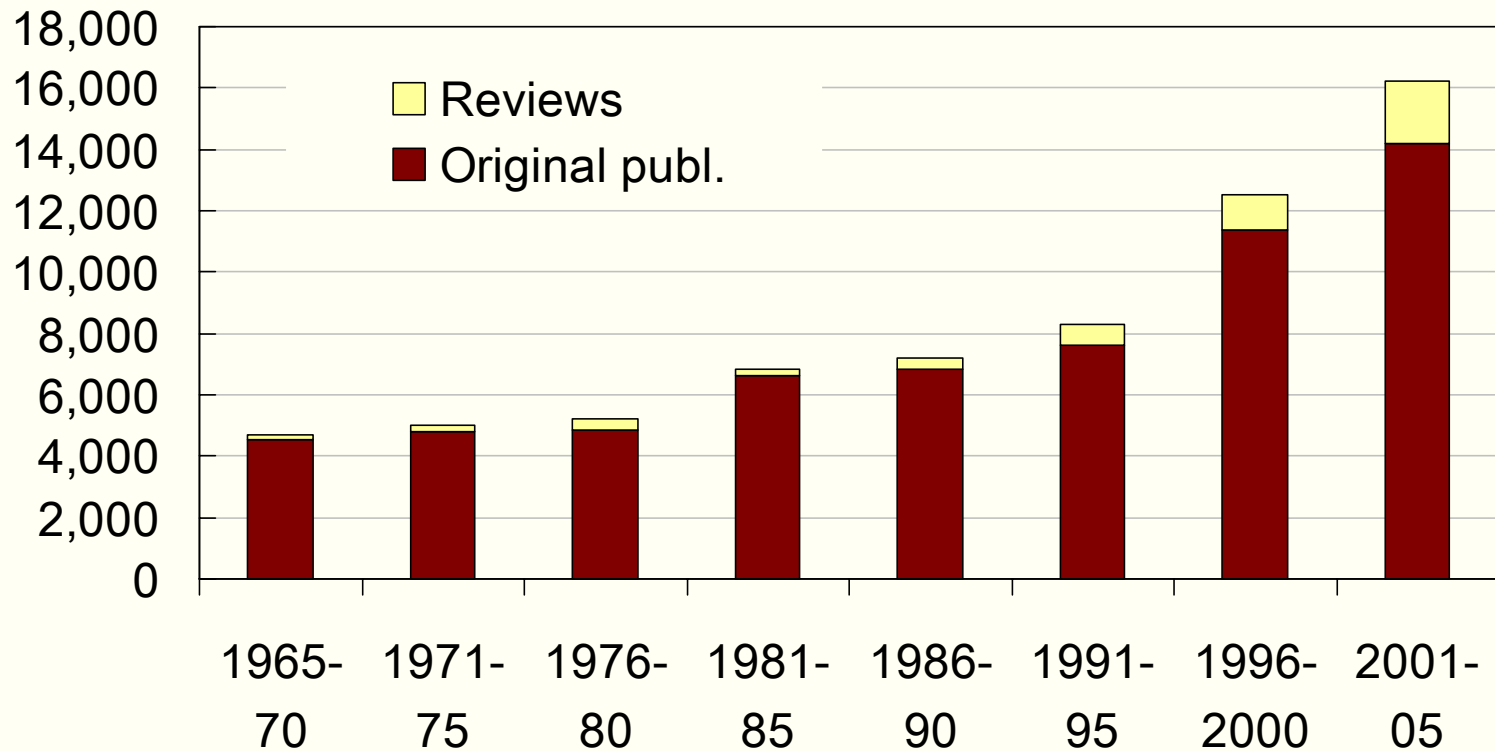


The tip of the iceberg...

- Crude estimate from Israel:
4% of all fatalities in hospitals related to Gram-neg multiresistant nosocomial inf. (Carmeli 2005)
- Crude estimate from EU-15:
5,800 excess deaths in ICU related to resistance (Harbarth et al 2005)
- Rough estimate of global gonorrhoea treatment failure:
3 million cases annually (of total 62 million cases) (Tapsall 2005)

Increased knowledge on an increasing problem

number of hits in Pub-MED
for (antibiotic or antimicrobial) + resistance by 5 year's periods





Importance of appropriate response attributes

Importance of response attributes
Attribute: "Importance of response attributes"
to 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

2014-2015
2014-2015
2014-2015

2014-2015
2014-2015
2014-2015

2014-2015
2014-2015
2014-2015

***Will we have effective
antibacterial therapy
for the future?***





***Seminar on the Global Threat
of Antibiotic Resistance***

**Exploring Roads towards
Concerted Action**

Uppsala 5-7 May, 2004

www.reactgroup.org

Since May 2004.....

- **The clusters**
 - Communicating the message
 - Ensuring appropriate use
 - Ensuring supply of new antibiotics
- **Some outcomes**
 - Website (www.reatgroup.org)
 - WHA resolution
 - Priority medicines
 - Innovation study
 - Network broadened

Will we respond to antibiotic resistance in time?



*A seminar on the growing threat of antibiotic resistance
September 14-17, 2005, Uppsala*



DAG HAMMARSKJÖLD FOUNDATION

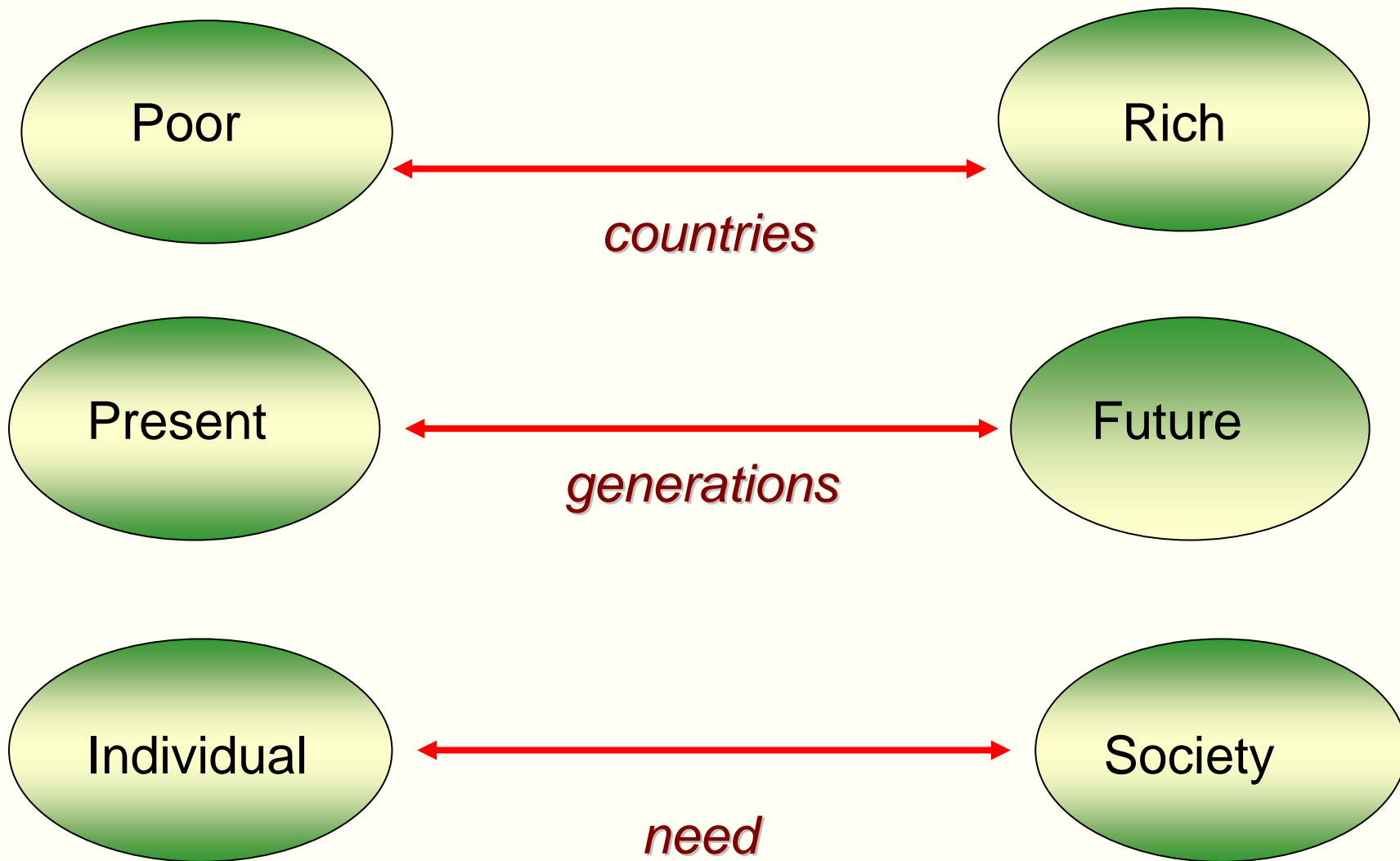
STRAMA

IHCAR

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Sponsors

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**Current and future generations of people
around the globe
should have
access to effective
treatment of bacterial infections.**

ANDERSSON, Dan

Sweden

ARONSSON, Bo

EMEA

BAVESTRELLO, Luis

Chile

BEZBARUAH, Supriya

India

BHUTTA, Zulfiqar

Pakistan

BOLT, Paul

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Int. Campaign to Ban
Landmines

CARRASCO, Frescia

Latin American and
Caribbean Women's
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STRAMA, Sweden

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Institute of Drug
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GRAY, Andy

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WHO Geneva

HONG, Evelyn

Third World Network

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National Public Health
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HÄLLSTRÖM, Niclas

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JAIN, Anurag

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and Action

LAING, Richard

WHO Geneva

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Swedish Radio

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(MSH)

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European
Commission -
Research DG

MARSHALL, Kireen

Consumers
Association of Penang

McCONNELL, John

The Lancet Infectious
Diseases

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NORDBERG, Per

STRAMA, Sweden

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Ecumenical
pharmaceutical
network, Kenya

PEHRSON, PehrOlov

MFS

PERROT, Sylvain

France

PITAYARANGSARIT,
Siriwan

International Health
Policy Program,
Thailand

QUIZHPE PERALTA, Arturo

Peoples Health
Movement, Ecuador

SANDASI, Mary

Women and AIDS
Support Network
Harare, Zimbabwe

SCLAFFER, Jérôme

La revue Prescrire,
France

SIVARAMAN, Satya

India

SMITH, Jeremy

Health Action Int.

SMITH, Richard

UK

SO, Anthony

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SOSA, Anibal

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STÅLSBY LUNDBORG,
Cecilia

STRAMA and IHCAR

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Kingdom

TOMSON, Göran

IHCAR, Sweden

TÜLL, Peet

ECDC

TURNIDGE, John

Australia

WEERASURIYA, Kisantha

WHO –SEARO, India

WHITE, Anthony R

United Kingdom

WIBULPOLPRASERT, Suwit

Min. of Public Health,
Thailand

ZHANG Jianzhong

China CDC

The way forward?

$$1 + 1 > 2$$

Antimicrobial Resistance Determinants and Future Control

Stephan Harbarth* and Matthew H. Samore†

Emerging Infectious Diseases • www.cdc.gov/eid • Vol. 11, No. 6,
June 2005

Dark Scenario

“A continuing flood of consensus conference statements, position papers, and surveillance network reports will be issued about the problem of antimicrobial resistance, without any measurable and sustained effect on containment”

”We may look back at the antibiotic era as just a passing phase in the history of medicine, an era when a great natural resource was squandered, and the bugs proved smarter than the scientists”

Cannon G. 1995

Never Give Up,
Faith moves Mountains!



www.humor.is