

October 8, 2009

The 7<sup>th</sup> NCGM International Infectious Disease Forum

# AMR: Global Trend

Hajime INOUE

National Center for Global Health and Medicine (NCGM)



# “Greatest invention ranking”

	shareranks.com	famousinventors.org	livescience.com	history.com	theatlantic.com	levotron.com
1	Wheel	Steam engine	Wheel	Printing press	Printing press	Internet
2	Electricity	Wheel	Nail	Compass	Electricity	Computer
3	Language	Printing press	Compass	Paper currency	Penicillin	Light bulb
4	Printing Press	Computer	Printing Press	Steel	Semiconductor electronics	Communications
5	Computer	Internet	Internal combustion engine	Electric light	Optical lenses	Printing Press
6	Internet	World Wide Web	telephone	Domestication of horse	Paper	Wheel
7	Antibiotics	Television	Light bulb	Transistor	Internal combustion engine	Compass
8	Telephone	Light bulb	Penicillin	Magnifying lenses	Vaccine	Photography
9	Toilet	Penicillin	Contraceptives	Telegraph	Internet	Penicillin
10	Transistor	Telephone	Internet	Antibiotics	Steam engine	Plough

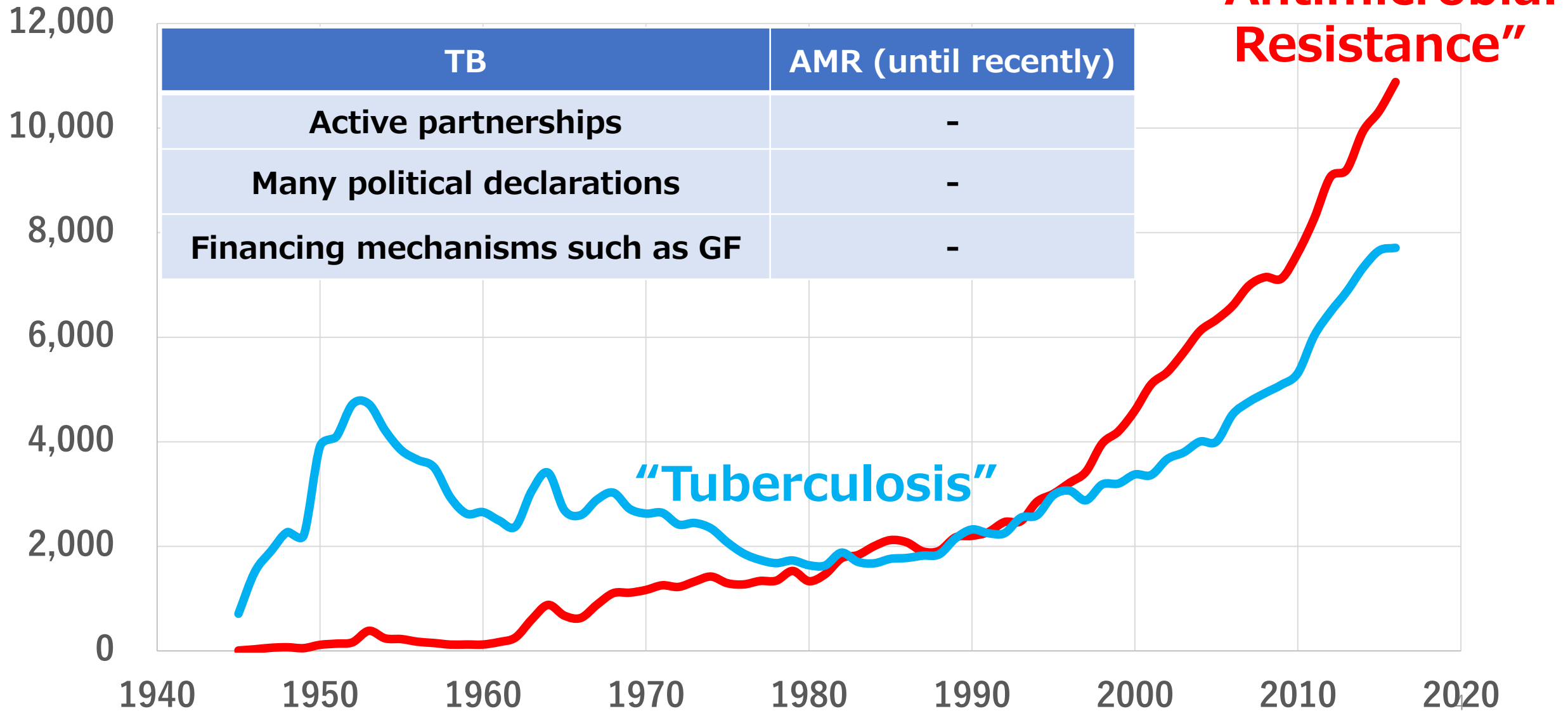
# The First warning on AMR

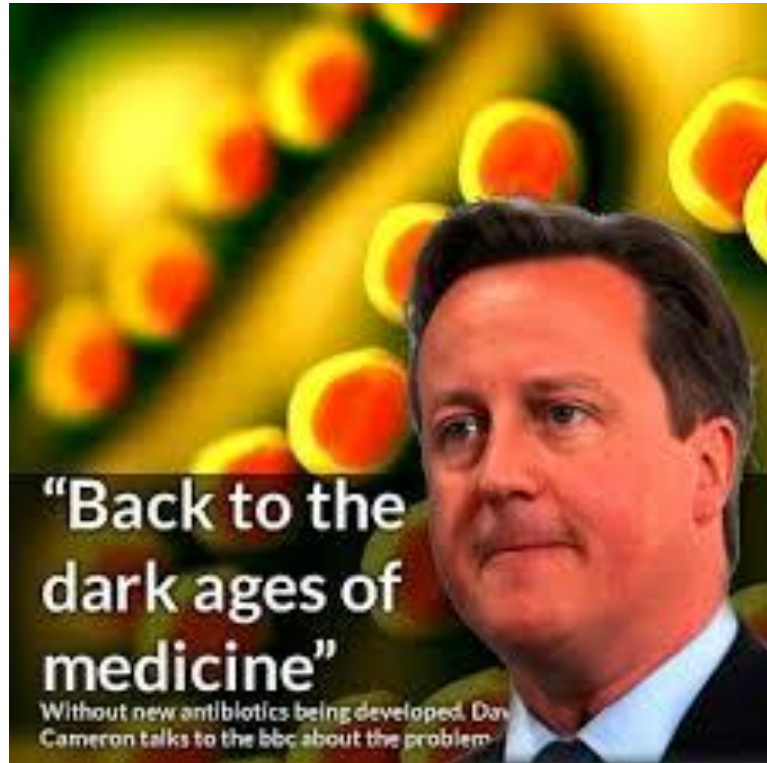
**“The time may come when penicillin can be bought by anyone in the shops. Then there is a danger that the ignorant man may easily underdose himself and exposing his microbes to non-lethal quantities of the drug make them resistant”**

Alexander Fleming

Nobel Lecture, December 11, 1945

# Academic papers on AMR (1945-2016, PubMed Search)





“We are in danger of going back to dark ages of medicine”

UK Prime Minister Cameron  
July 2014, BBC Interview





“Antibiotic resistance is one of the most pressing public health issues facing the world today”

US President Obama  
March 2015, Press Conference



“This is an issue of crucial importance for the entire human race”

German Chancellor Merkel  
May 2015, World Health  
Assembly



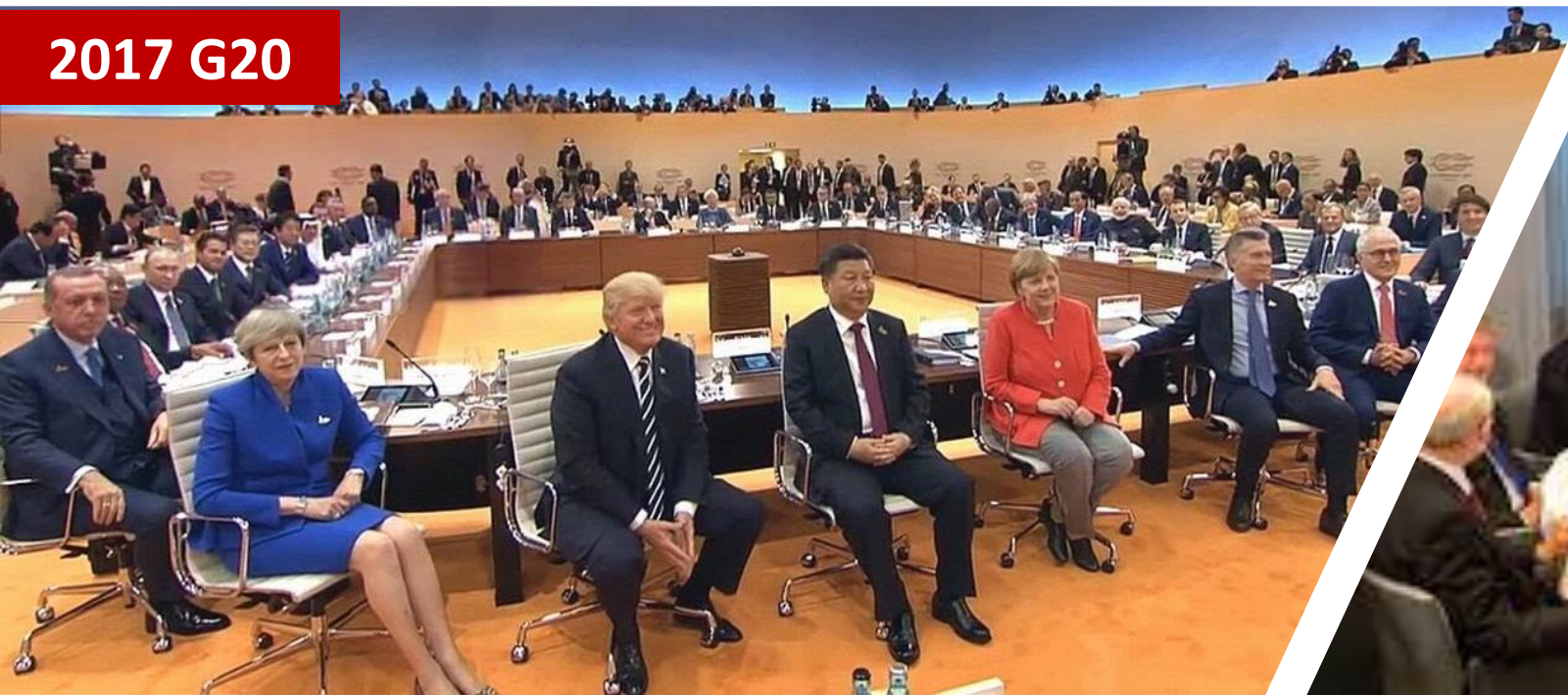
2015 G7



2016 UNGA



2017 G20



2016 G7





# One Health + 5 objectives

- 1. Awareness**
- 2. Surveillance**
- 3. Reduce infections**
- 4. Optimize the use**
- 5. Invest in R&D**