ANTIMICROBIAL RESISTANCE IN G7 COUNTRIES

Economic Issues, Policies and Options for Action

Stefan Kapferer
Deputy Secretary General
Antimicrobial Resistance is a Global Threat

• Modern medicine and surgery are not possible without antibiotics

• AMR is largely human-driven
  – Inappropriate use in humans
  – Overuse in livestock
  – Insufficient hygiene in hospitals
  – Global trade & travel

• The development pipeline of new antibiotics is drying up
Higher Use of Antibiotics Drives Resistance

Penicillin-resistant S. pneumonia (%) vs. Total antibiotic use (DDD/1000 people/day)
AMR Causes a Significant Health Burden

1 in 5 human *infections* in G7 countries *is resistant* to antibiotics

Patients *infected* by resistant bacteria are more likely to incur *health complications*

- **x3** probability of *local progression* for resistant infections
- **x2** risk of *any complication* for resistant infections
- **x3** Risk of *death* for resistant infections
AMR has a Large Cost for Healthcare Systems

Hospitalized patients with antibiotic-resistant infections costs an additional 10-40k USD

Over half of extra expenditure is due to nursing and medical care

23b USD additional healthcare spending in Europe and North America per year
AMR has a Negative Economic Impact

Productivity loss

**38K USD**
per patient due to AMR

labour force

**2.1m deaths** by 2050
amongst working age population

wider economy impact
affecting mostly

**trade & agriculture**

Total GDP effects of AMR including increased healthcare expenditure

- **2020**
  - current resistance rates: -0.03%
  - 100% resistance rates: -0.2%

- **2030**
  - current resistance rates: -0.1%
  - 100% resistance rates: -0.3%

- **2050**
  - current resistance rates: -0.2%
  - 100% resistance rates: -0.8%
Responding to the Rise of Antimicrobial Resistance

Globally:
- 25% Countries have a national policy to tackle AMR
- 40% Countries have infection & control programmes for AMR

Good practices
- Avoiding the emergence
  - Stewardship programmes
  - Immunisation programmes
- Avoiding the spread
  - Early detection
  - Measures to reduce infectivity
  - Enhance sanitation and hygiene in medical facilities
- Stimulating R&D
  - De-linking development incentives from sales
  - Global research platforms
OECD Recommendations to Move Forward in the Fight Against AMR

- Coordinating with global partners like the G20 to efficiently upscale G7 efforts into a global action
- Strengthening existing surveillance and monitoring systems
- Adopting globally agreed sets of measurable targets on AMR incidence and efficient antibiotic use
- Strengthening ongoing efforts to rationalise antibiotics use and prevention of AMR spread
- Fostering R&D through a global collaborative research platform, and by delinking development from sales