



Bundesministerium  
für Gesundheit

# German Antimicrobial Resistance Strategy „DART 2020“

## Interim Reports

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# Outline

- Background „DART“
- Yearly Interim Reports
- Additional Information
- Outlook



# German Antimicrobial Resistance Strategy „DART“

- first „DART“ published in 2008
  - Joint Strategy of the ministries of health, of food and agriculture and of education and research
  - Followed the one health-approach but with separate chapters
- 
- **Interim Report** published at the occasion of the World Health Day (7. April) in 2011, which in Germany stood under the motto "DART – prevent and fight antibiotic resistance together"
  - created in collaboration with external stakeholders who provided input
  - No **Final Report** was published, but results were taken up in the follow-up strategy “DART 2020”





# „DART 2020“

Further developed and adopted by the federal cabinet in May 2015

**Goal 1:** Strengthening the One Health approach nationally and internationally

**Goal 2:** Recognising changes in resistance at an early stage

**Goal 3:** Retaining and improving therapy options

**Goal 4:** Breaking chains of infection early and avoiding infection

**Goal 5:** Raising awareness and strengthening skills

**Goal 6:** Supporting research and development





## Contents

<b>I. The problem: antibiotic resistance</b>	<b>5</b>
Resistance rates and antibiotics consumption: a European comparison	6
Resistance rates and antibiotic consumption in Germany	7
<b>II. Our goals and what we are doing to achieve them</b>	<b>9</b>
GOAL 1: Strengthening the One Health approach nationally and internationally	9
GOAL 2: Recognising changes in resistance at an early stage	11
GOAL 3: Retaining and improving therapy options	13
GOAL 4: Breaking chains of infection early and avoiding infections	15
GOAL 5: Raising awareness and strengthening skills	18
GOAL 6: Supporting research and development	20
<b>III. Summary</b>	<b>24</b>
<b>IV. Participants</b>	<b>27</b>
<b>V. List of abbreviations</b>	<b>28</b>
<b>Legal Notice</b>	<b>30</b>

### Each Goal:

- Description
- „What we have achieved“
- „Our next steps are“ (separate for human medicine and veterinary medicine if appropriate)



## Examples Next Steps - Goal 1 (Joint)

### One Health

- Continuing the interministerial working group on antibiotic resistance to achieve overarching coordination, evaluation, and adaptation of the national approach, also taking into account the problems of resistance in sewage
- Providing intensive assistance to the WHO Global Action Plan to be adopted in May 2015 by the World Health Assembly (WHA)
- Supporting selected partner states in the implementation of the WHO Global Action Plan within the framework of the GHSA through the development of bilateral cooperations
- Introducing specific measures to encourage the prudent use of antibiotics worldwide, and increasing the prevention of infections and the associated research and development within the scope of the focal theme of antibiotic research as part of the German G7 presidency. The main element is the strengthening of the One Health approach to counter antibiotic resistance

## Examples Next Steps – Goal 2

### Human medicine

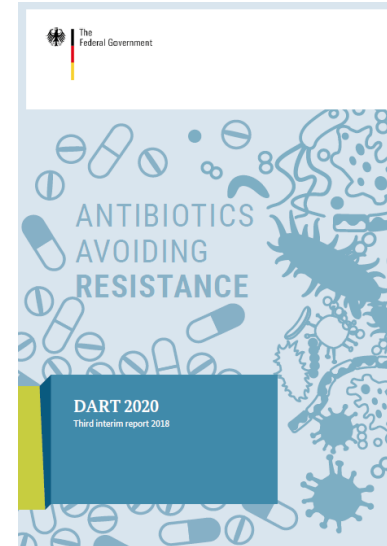
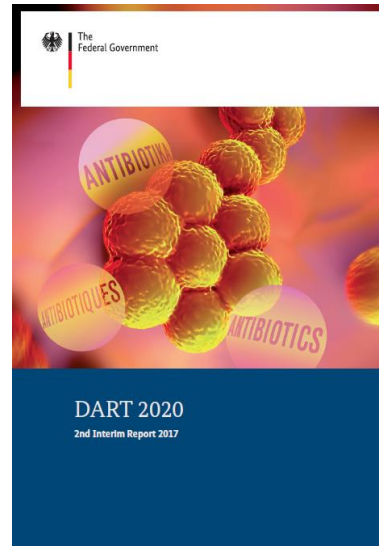
- To expand the notification obligation to cover further multi-resistant pathogens
- To expand ARS at the RKI with the aim of achieving complete, representative surveillance
- To expand the existing feedback system to send back data to doctors prescribing antibiotics for resistant pathogens

### Veterinary medicine

- Adapting the resistance monitoring of zoonotic pathogens and commensals to the new EU legislative situation by incorporating the selective detection of ESBL/AmpC-producing and carbapenemase-producing enterobacteria
- Expanding the national resistance monitoring of zoonotic pathogens and commensals to enterococci and, if necessary, other species of bacteria which can be transferred from livestock farming to humans (e.g. Klebsiellae, Clostridium difficile). In this, Germany goes well beyond the mandatory requirements of the EU



## Yearly Interim Reports





## Why did we publish interim reports?

- Publication of the Global Action Plan on AMR in 2015
- Germany's G7 Presidency in 2015, Focus Areas: AMR and Ebola Lessons Learned.

Declaration of the G7 Health Ministers 8-9 October 2015 in Berlin:

*„7. We are committed to develop or review and implement our national AMR Action Plans taking into account the requirements of the WHO Global Action Plan. The One Health approach is a crucial element of our Action Plans, and we will work at the national and international levels to ensure an integrated involvement of all relevant sectors including human and animal health, agriculture, environment and research.*

*8. We will support other countries with the development and implementation of their National Action Plans, building global capacity to combat AMR and coordinating activities through the WHO, FAO, OIE and mechanisms such as the Global Health Security Agenda (GHS) AMR Action package, as appropriate.”*

- Decision was taken to publish a first Interim Report on the occasion of the World Health Assembly and the General Assembly of the OIE in 2016
- It proved to be helpful for internal and external communication -> repeated yearly





# Concept of the Interim Reports

## Information included:

- Description of Activities/Research Projects/Initiatives: content, background, motivation
- Progress
  - e.g. number of participating hospitals in voluntary surveillance systems, compared to the year before
  - Number of countries we are working with
- In 2017 (German G20 Presidency) more detailed information on certain initiatives/structures were included in „Boxes“

## Information NOT included:

- Data on resistances or antimicrobial use
- Data that are not available at government level, e.g. progress in the number of trained personal in hospitals
- Assessment of the impact of measures



## GOAL 2: Recognising changes in resistance at an early stage

Representative data about the appearance of new pathogens and resistances is required to be able to adapt therapy and hygiene recommendations to the current situation on an ongoing basis and to be able to develop targeted prevention strategies. This data can also contribute to changing individual prescription behaviour, among other things. The development of resistance rates over time gives an indication of the effectiveness of countermeasures.

### What was achieved

The RKI has continuously developed further the laboratory-based Antimicrobial Resistance Surveillance (ARS)<sup>5</sup>. The participation of additional laboratories also increased the share of care institutions covered by the surveillance system; in 2016 it was at around 23 per cent of general hospitals and 17 doctor's practices / 100,000 inhabitants. In the last three years, in particular, it has been possible to significantly improve coverage of the federal Laender that were previously somewhat under-represented. This significantly strengthens the basis for a regional analysis of antimicrobial resistance data in Germany.

In 2017, for the first time Germany provided ARS data for 2016 to WHO's Global Antimicrobial Resistance Surveillance System (GLASS), besides the annual data transfer to the EARS-Net network coordinated by the European Centre for Disease Prevention and Control (ECDC).

Within the framework of the Northern Dimension Partnership in Public Health and Social Wellbeing, the RKI participated in the NorthernGLASS project, whose focus was on the early implementation of GLASS. The objective of the project, which received funding

<sup>5</sup> <https://ars.rki.de/>

Antimicrobial resistance monitoring in zoonotic pathogens and commensal germs in the food chain<sup>7</sup> was continued and adapted by the BfR to new requirements, e.g. in respect of the study methods to be employed. It was also extended by the study of enterococci and *Clostridium difficile* and from 2018 by the obligatory selective detection of Carbapenemase-forming *E. coli*. The special studies into the appearance of colistin resistance genes were continued with the methods being continuously adapted in line with the latest knowledge.

The results of the resistance monitoring of veterinary pathogens<sup>8</sup> from the years 2014 and 2015 were published by the Federal Office of Consumer Protection and Food Safety (BVL). This data makes it possible to take coordinating measures and give the treating veterinarian decision-making assistance on empiric therapy. Additional studies on resistance in animal pathogens were carried out at the FLI. The collected data are used to estimate the resistance situation among notifiable epizootic diseases and reportable animal diseases.

### Outlook

Knowledge gained from the genome-based typing of infectious agents (molecular surveillance) represents an important basis for identifying related cases and possible causative agents of an infectious disease. It can help contribute to clarifying outbreak incidents more quickly and introducing specific monitoring measures at an earlier stage. Within the framework of the funding priorities described under Goal 1 some of the projects funded are intended to deal with the integrated genome-based surveillance of zoonotic pathogens or bacterial infectious agents with special antimicrobial resistance in day-to-day care (outbreak clarification, source attribution and identification of outbreak vehicles).

<sup>7</sup> [https://www.bvl.bund.de/DE/01\\_Lebensmittel/01\\_Aufgaben/02\\_AmtlicheLebensmittelueberwachung/06\\_ZoonosenMonitoring/lm\\_zoonosen\\_monitoring\\_node.html](https://www.bvl.bund.de/DE/01_Lebensmittel/01_Aufgaben/02_AmtlicheLebensmittelueberwachung/06_ZoonosenMonitoring/lm_zoonosen_monitoring_node.html)

<sup>8</sup> [https://www.bvl.bund.de/DE/09\\_Untersuchungen/01\\_Aufgaben/03\\_Nationales%20Resistenz-Monitoring/untersuchungen\\_NatResistenzmonitoring\\_node.html](https://www.bvl.bund.de/DE/09_Untersuchungen/01_Aufgaben/03_Nationales%20Resistenz-Monitoring/untersuchungen_NatResistenzmonitoring_node.html)



# Additional Information available (human)

## Erregerstatistik

Erläuterungen und Kommentare zu Abfragen und Ergebnisdarstellung finden Sie in der Einführung.



Zeitraum:    stationär  ambulant"/>

Erregergruppe:  Bakterien  Pilze

Material:  Alle  Blutkultur

Länge der Rangliste:  10  25  50



### Stand-AMR

Entwicklung eines Labor-Prototyps für AMR-Surveillance in Sub-Sahara-Afrika



### CPA und CPA PLUS

Bekämpfung antimikrobieller Resistenzen - Wissenschaftliches Training zum rationalen Antinfektivagebrauch



Bericht des GKV-Spitzenverbandes zum Hygienesonderprogramm in den Förderjahren 2013 bis 2020

an das Bundesministerium für Gesundheit

Berlin, 31.08.2021



Deutsche nationale Punkt-Prävalenzerhebung zu nosokomialen Infektionen und Antibiotika-Anwendung 2016 Abschlussbericht



# Additional Information available (veterinary)



Yearly report on resistance in animal pathogens

Yearly report on antibiotics sales data

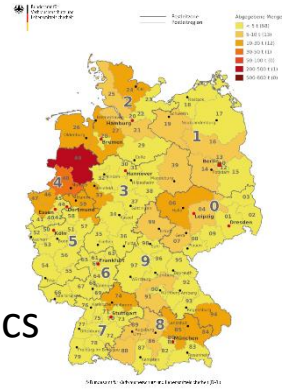
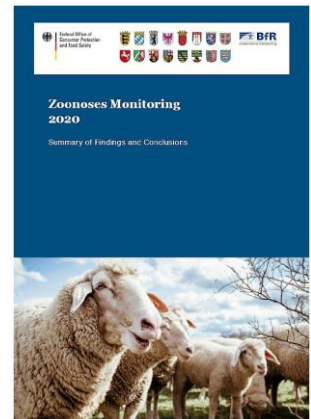
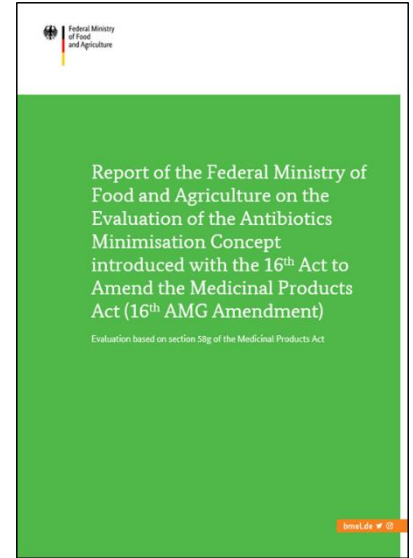


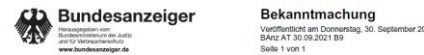
Abbildung 4: Antibiotika-Verkäufe in der Humanmedizin nach Bundesländern im Jahr 2019

Report on evaluation of antibiotics minimisation concepts, with i.a. antibiotics usage data 2014 – 2017



Yearly report on resistance in zoonotic and commensal bacteria

Half-yearly publication of nationwide indicators of therapy frequency



### Bundesamt für Verbraucherschutz und Lebensmittelsicherheit

Bekanntmachung des Medians und des dritten Quartils der vom 1. Januar 2021 bis 30. Juni 2021 erfassten bundesweiten betrieblichen Therapieaufgehäen für Mastriinder, Mastschweine, Masthühner und Mastputen nach § 56c Absatz 4 des Arzneimittelgesetzes

Vom 8. September 2021

Das Bundesamt für Verbraucherschutz und Lebensmittelsicherheit hat aus den ihm mitgeteilten Angaben zur jeweiligen halbjährlichen betrieblichen Therapieaufgehäen für Rinder, Schweine, Hühner und Puten, die zum Zweck der Mast gehalten werden, 1. als Kennzahl 1 den Median (Wert, unter dem 50 Prozent aller erfassten halbjährlichen Therapieaufgehäen liegen) und 2. als Kennzahl 2 das dritte Quartil (Wert, unter dem 75 Prozent aller erfassten halbjährlichen betrieblichen Therapieaufgehäen liegen) gemäß § 56c Absatz 4 des Arzneimittelgesetzes in der Fassung vom 12. Dezember 2005 (BGBl. I S. 3394), der durch Artikel 1 Nummer 7 des Gesetzes vom 10. Oktober 2013 (BGBl. I S. 3813) eingetragt worden ist, für den Zeitraum 1. Januar 2021 bis 30. Juni 2021 ermittelt und macht diese nachfolgend bekannt:

Tierart/Nutzungsart	Median	drittes Quartil
Masthühner bis 8 Monate	0	1.810
Mastriinder älter als 8 Monate	0	0
Ferkel bis 30 kg Körpergewicht	1.848	8.768
Mastschweine über 30 kg Körpergewicht	0,300	3,117
Masthühner	24,813	35,378
Mastputen	14,704	28,696

Berlin, den 8. September 2021

Bundesamt für Verbraucherschutz und Lebensmittelsicherheit  
Im Auftrag  
Prof. Dr. Thomas Heberer



### Bekanntmachung

Vorfestsetzung am Donnerstag, 30. September 2021  
BAZ AT 30.09.2021 B9  
Seite 1 von 1

Arbeitsgruppe Antibiotikaresistenz des Bundesamts für Verbraucherschutz und Lebensmittelsicherheit (BVL) und des Bundesinstituts für Risikobewertung (BfR)

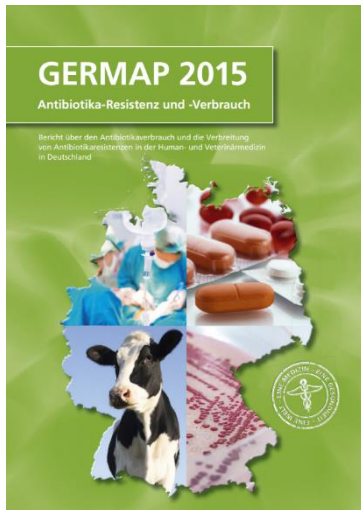
Lagebild zur Antibiotikaresistenz im Bereich Tierhaltung und Lebensmittelkette

2021





## Additional Information available (One Health)



- four reports available, fifth under development
- compilation of data on antibiotic use and AMR in human and veterinary medicine.
- help to assess the risks of existing and potential resistance developments and to develop recommendations for the treatment of humans and animals with antibiotics.



### German G7 Presidency 2022:

Commitment of Health and Agriculture ministers to establish and/or strengthen national integrated surveillance systems on AMR and AMU in the human, animal, plant and environment sector



## Advantages

- **Helpful in the internal and external communication (press, parliament, citizens)**
  - > „DART 2020“ and all interim reports published on one website (MoH)
- Yearly reports showed that the topic is still on the agenda of the government
- Strengthened the cooperation between all authorities involved
- Helpful in tracking activities (did we get as far as we intended, did we miss anything, did adaptations become necessary?)



## Disadvantages

- Reports did not contain data on AMR and AMU: main problem are the different surveillance and monitoring systems that have grown over the years in the human and animal sector, which prevent a generally understandable presentation of data and their development from both sectors
  - Integrated Surveillance System!
- Following the same structure as the DART 2020 with its six goals, since many measures can be assigned to more than one goal -> duplication should be avoided.
- upon publication of the first report it was not clear that they will be repeated -> with regard to the structure, no plans were made for the future
- the reports did not build on each other, often they contained information that was already provided in the previous year's report -> they became longer, difficult to read and sometimes confusing
- Process of development was very time-consuming
- There were no reports on measures from the first “DART” that have already been completed or measures that have been legally established for many years. This gave the impression that these measures do not exist in Germany



# Outlook

New DART 2030, currently under development, will follow a different structure with effects on the reporting:

## 1. Strategy

- Planned to be published in Nov. 2022 (EAAD)
- Will cover the entire term (2022-2030)
- “One Health-Strategy”

## 2. Action plan *(not yet decided)*

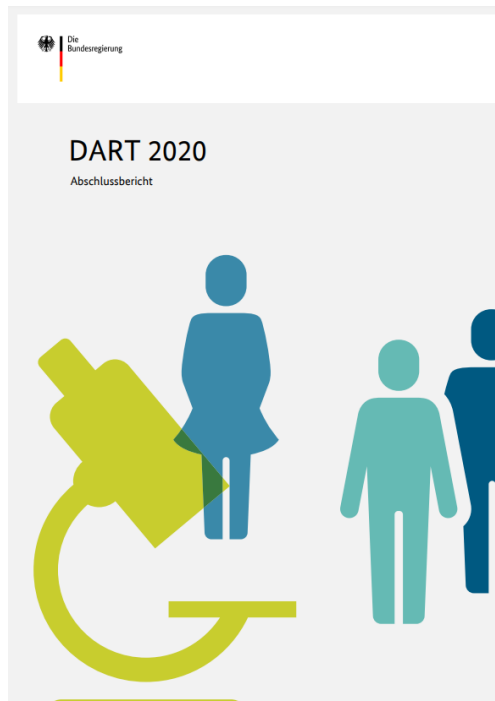
- Planned to be published in 2023
- Reviewed every 1-2 years and if necessary adapted according to the situation (stepwise approach to achieve certain goals)
- Reporting will refer to the current action plan and only cover this period of time
- “One Health-Actionplan” with sector-specific annexes if applicable
- Presentation of measures that are continuously implemented (e.g. monitoring and surveillance)

→ Reports should be easier to read, less time-consuming in the preparation





## Final Report DART 2020



- published in May 2022
- Included data on AMR and AMU from the human and animal sector
- Presentation of trends
- Outlook on activities to be included in the „DART 2030“
- Outlook on the integration of other areas (environment, development cooperation)



Thank you for the attention!

<https://www.bundesgesundheitsministerium.de/themen/praevention/antibiotika-resistenzen/antibiotika-resistenzstrategie.html>