

EVALUATION OF THE ANTIBIOTIC MANAGEMENT TEAMS (AMT) (GGA/ABTBG)

A nationwide survey to describe the current landscape of antimicrobial stewardship (AMS) programs in Belgian hospitals

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Dear GGA/ABTBG members,

We are pleased to announce that an evaluation of Antibiotic Management Teams, AMT (GGA/ABTBG) in Belgian hospitals is currently underway. This initiative, funded by BAPCOC and coordinated by Sciensano, aims to optimise the efficiency of AMTs (GGA/ABTBG) in Belgian hospitals through legislative adaptations. This aligns Belgium's "One Health" national action plan to combat antimicrobial resistance 2020-2024 (NAP-AMR).

We kindly request each AMT (GGA/ABTBG) to complete the following structural questionnaire (one questionnaire per team), available in four parts :

- **Part 1: General information**
<https://surveys.sciensano.be/index.php/155912?lang=en>
- **Part 2: Antibiotic management team (AMT) information**
<https://surveys.sciensano.be/index.php/887724?lang=en>
- **Part 3: Stewardship objectives and improvement strategies**
<https://surveys.sciensano.be/index.php/389587?lang=en>
- **Part 4: Hospital resources for antimicrobial stewardship (AMS) programs**
<https://surveys.sciensano.be/index.php/113645?lang=en>

Prior to completing the online questionnaire (LimeSurvey), we suggest reviewing the questions sent via e-mail in a Word format and preparing the answers within your respective AMT (GGA/ABTBG). Subsequently, we recommend that a designated person, such as the AMT (GGA/ABTBG) president or delegate, completes the four parts of the survey online before **19 February 2024**.

Please note that this online questionnaire should be filled out once as there is no option to save and return to it later. Moreover, the respondent and their email address must be consistent across all four parts of the survey. This variable will be utilized to connect the four parts of the questionnaire for one AMT (GGA/ABTBG).

It is essential to highlight that this survey will replace the BAPCOC activity report for the year 2023. Additionally, please be aware that audits may be conducted and evidence of activities may be requested in the future. We therefore ask for the utmost transparency from you.

Should you have any questions about the survey, please contact Christelle Vercheval by email (christelle.vercheval@sciensano.be).

Sincerely yours,

Christelle Vercheval, project manager, Sciensano
Caroline Briquet, hospital pharmacist, Cliniques Universitaires Saint-Luc
Diana Huis in 't Veld, infectious diseases physician, UZ Gent
Lucy Catteau, project coordinator, Sciensano

PART 1/4: General information

1.1. General information

This part of the survey aims to identify your **Antibiotic Management Team (AMT)** - known as **Groupe de Gestion de l'Antibiothérapie (GGA)** in French or **Antibiotherapiebeleidsgroepen (ABTBG)** in Dutch – and the hospital sites on which your AMT operates.

Some hospitals have only one hospital site, while others may have multiple due to hospital mergers. Even in cases where a hospital has multiple sites, there is typically one NIHDI (INAMI/RIZIV) number, one AMT and one federal funding source for the AMT.

However, due to recent mergers some hospitals may still have more than one NIHDI (INAMI/RIZIV) registration number and more than one AMT (GGA/ABTBG) and, as a result more than one source of funding. To address this complexity, in this first part of the survey we ask to clarify which hospital sites your AMT serves.

There are also a few general questions about your hospital and your hospital network.

1.1.1. What is your role in the Antibiotic Management Team (AMT) (GGA/ABTBG)?

Please choose **only one** of the following:

- I am the delegate (“afgevaardigde” / “délégué à la gestion”)
- I am the president (“voorzitter” / ”president”)

1.1.2. What is your name? * Please write your answer here:

1.1.3. Please provide your email address below. * Please write your answer here:

1.2. Please select the NIHDI (RIZIV/INAMI) number(s) for which your AMT (GGA/ABTBG) operates.

To facilitate the identification of NIHDI (RIZIV/INAMI) number(s), we kindly request you to utilize the hospital list provided in **Appendix 1** attached to the email invitation.

(Multiple answers are possible here.)

Please choose **all** that apply:

1.2.1. Please select from the list below the hospital sites for which your AMT (GGA/ABTBG) operates.

To facilitate the identification of hospital sites associated with your hospital, we kindly request you to utilize the hospital list provided in **Appendix 1** attached to the email invitation.

If your hospital comprises only one site, please select « not applicable ».

Please choose **all** that apply:

1.2.2. If your AMT (GGA/ABTBG) has any remarks about the selection of the hospital sites, please provide them below.

1.3. What is the total number of beds for which your AMT (GGA/ABTBG) serves? * Only numbers may be entered in this field.

Please write your answer here:

1.4. Is your hospital accredited by an external commission? *Please choose **only one of the following:**

- Yes
- No

1.4.1. By which external commission? *

Only answer this question if the following conditions are met:
Answer was 'Yes' at question 1.4. Is your hospital accredited by an external commission?

Please choose **only one** of the following:

- Joint Commission International (JCI)
- Accreditation Canada (ACI)
- Nederlands Instituut voor Accreditatie in de Zorg (NIAZ)
- Other

1.4.2. When was your hospital last accredited?

(If you don't know the exact date, please select the first day of the corresponding month)

Only answer this question if the following conditions are met:
Answer was 'Yes' at question 1.4. Is your hospital accredited by an external commission?

Please enter a date:

1.5. In which hospital network is your hospital? *

Please choose **only one** of the following:

- BRIANT Vzw
- CUROZ Vzw
- E17 Vzw
- ELIPSE Réseau Hospitalier Universitaire
- GENT Vzw
- HELIX Vzw
- HELORA Réseau Hospitalier
- KEMPEN Vzw
- KOM Netwerk Vzw
- MIRA Vzw
- Netwerk GZA - ZNA Vzw
- Noord-Oost Limburg Vzw
- PLEXUS Vzw
- Réseau Hospitalier CHORUS
- Réseau Hospitalier H.Uni
- Réseau Hospitalier de Charleroi Métropole (RHCM)
- Réseau Hospitalier Namurois (R.H.N.)
- Réseau HUmani Santé
- Réseau MOVE
- Réseau PHARE
- Réseau VIVALIA
- TRIaz Vzw
- Ziekenhuisnetwerk Andreaz
- Other

1.6. In which region is your hospital network ? *

Please choose **all** that apply:

- Flanders
- Wallonia
- Brussels

PART 2/4: Antibiotic management team (AMT) information

This survey section aims to outline the composition, funding, and operational aspects of your AMT (GGA/ABTBG).

Identification of the respondent

Please fill in your email address below.

Attention: The email address must be consistent across all four sections of the survey. This variable will be utilized to connect the four parts of the questionnaire for one AMT (GGA/ABTBG).

Please write your answer here:

2.1. Composition

2.1.1. Does your AMT (GGA/ABTBG) make the distinction between the core management team and the formal organizational multidisciplinary structure responsible for antimicrobial stewardship ?

Core management team (= AMS team) = This refers to the core team of healthcare professionals (led by the clinical leader) responsible for implementing the antimicrobial stewardship strategy through regular contacts and frequent meetings. The composition of this (usually multidisciplinary) AMS team is flexible and should align with international recommendations and adapt to the local context.

Formal organizational multidisciplinary structure (= AMS committee) = This is a distinct, larger organizational structure that includes AMS team members and other relevant professionals and administrators. This committee explicitly oversees the establishment and coordination of the AMS program/strategy as outlined in its mandate/ terms of reference.

Please choose **only one** of the following:

- Yes
- No

2.1.2. Professionals that were part of the AMT (GGA/ABTBG) in 2023.

If your AMT (GGA/ABTBG) makes a distinction between the core management team and the formal organizational multidisciplinary structure, please specify the professionals that were part of the core management team in 2023 here.

For each member of the AMT (GGA/ABTBG) (or for each member of the core management team if you make the distinction), please provide the following information :

- Q1 Member's profession (profession list available in the **Appendix 2**)
- Q2 Portion of his/her salary provided by the hospital for AMS activities in 2023 (expressed in number of full-time equivalent (FTEs))
- Q3 Delegate status (“afgevaardigde” / “délégué à la gestion”) of the member in the AMT (GGA/ABTBG)
 - Q4 If the member holds the delegate status, specify whether AMS activities are included in his/her job description and/or annual review.
- Q5 President status (“voorzitter” / “president”) of the member in the AMT (GGA/ABTBG) (only one answer possible)
 - Q6 If the member is the president, specify whether AMS activities are included in his/her job description and/or annual review.
- Q7 Completion of any additional training in antibiotic therapy principles and methods (“Formation interuniversitaire en gestion de l’antibiothérapie” / “Interuniversitaire opleiding in Antibioticabeleid”) organized by the Belgian Universities or an equivalent
- Q8 Completion of additional training in infectious diseases (“Interuniversitair getuigschrift klinische infectiologie en medische microbiologie” / “Cours Interuniversitaire en Infectiologie et Microbiologie”) organized by the Belgian Universities or an equivalent.

AMS activities = Strategies directly aimed at measuring and improving the appropriateness of in-hospital antibiotic use (stewardship activities), rather than activities inherently related to the specialties of the antibiotic management team members that encompass prescriber-initiated consultation and diagnostic-driven advice.

Core management team = This refers to the core team of healthcare professionals (led by the clinical leader) responsible for implementing the antimicrobial stewardship strategy through regular contact and frequent meetings. The composition of this (usually multidisciplinary) AMS team is flexible and should align with international recommendations and adapt to the local context.

	Q1. Profession list available in the Appendix 2	Q2. Number of FTEs dedicated to AMS	Q3. Delegate of the AMT?	Q4. If Q3=Yes: Are AMS activities included in the job description?	Q5. President of the AMT?	Q6. If Q5=Yes: Are AMS activities included in the job description?	Q7. Training in AMS?	Q8. Training in ID?
Member 1			<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Member 2			<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Member 3			<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Member 4			<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Member 5			<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Member 6			<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Member 7			<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Member 8			<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Member 9			<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Member 10			<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Member 11			<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Member 12			<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Member 13			<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Member 14			<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Member 15			<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Member 16			<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Member 17			<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Member 18			<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Member 19			<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Member 20			<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Etc.								

2.1.3. How often does your AMT (GGA/ABTBG) meet?

If your AMT (GGA/ABTBG) makes a distinction between the core management team and the formal organizational multidisciplinary structure, specify the frequency of meetings for the core management team here.

Please choose **only one** of the following:

- Daily
- Weekly
- Once a week
- Once every other week
- Once a month
- Once every other month
- Four times a year
- Once a year
- Other

Only answer these two questions (2.1.4. and 2.1.5.) if the following conditions are met: Answer was 'Yes' at question 2.1.1. Does your AMT (GGA/ABTBG) make the distinction between the core management team and the formal organizational multidisciplinary structure responsible for antimicrobial stewardship ?

2.1.4. Professionals that were part of the formal organizational multidisciplinary structure (= AMS committee) in 2023.

Please do not include the members of the core management team.

Please fill in the table below with the following information about each member of your formal organizational multidisciplinary structure (=AMS committee), excluding those members already listed above :

- Q1 The member's profession (profession list available in **Appendix 2**)
- Q2 Completion of additional training in antibiotic therapy principles and methods (“Formation interuniversitaire en gestion de l’antibiothérapie” / “Interuniversitaire opleiding in Antibioticabeleid”) organized by the Belgian Universities or an equivalent.
- Q3 Completion of additional training in infectious diseases (“Interuniversitair getuigschrift klinische infectiologie en medische microbiologie” / “Cours Interuniversitaire en Infectiologie et Microbiologie”) organized by the Belgian Universities or an equivalent.

Formal organizational multidisciplinary structure (= AMS committee) = This is a distinct, larger organizational structure that includes AMS team members and other relevant professionals and administrators. This committee explicitly oversees the establishment and coordination of the AMS program/strategy as outlined in its mandate/ terms of reference.

	Q1. Profession list available in the Appendix 2	Q2. Training in AMS?	Q3. Training in ID?
Member 1		<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Member 2		<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Member 3		<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Member 4		<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Member 5		<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Member 6		<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Member 7		<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Member 8		<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Member 9		<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Member 10		<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Member 11		<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Member 12		<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Member 13		<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Member 14		<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Member 15		<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Member 16		<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Member 17		<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Member 18		<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Member 19		<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Member 20		<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Etc.			

2.1.5. How often does the formal organizational multidisciplinary structure (=AMS committee) meet?

Please choose **only one** of the following:

- Once a month
- Once every other month
- Four times a year
- Once a year
- Other

2.2. Funding

2.2.1. Does your AMT (GGA/ABTBG) have a separate cost center for allocating expenses and revenues?

Please choose **only one** of the following:

- Yes
- No

2.2.1.1. Who is responsible of this AMT (GGA/ABTBG) cost center?

Only answer this question if the following conditions are met: Answer was 'Yes' at question 2.2.1.

Please choose **all** that apply:

- The delegate (“afgevaardigde” / “délégué à la gestion”) of the AMT (GGA/ABTBG)
- The president (“voorzitter” / ”president”) of the AMT (GGA/ABTBG)
- Other:

2.2.2. Does your AMT (GGA/ABTBG) receive a federal funding officially allocated to your AMT (GGA/ABTBG) activities? *

Please choose **only one** of the following:

- Yes
- No

**Only answer these questions 2.2.2.1 and 2.2.2.2. if the following conditions are met:
Answer was 'Yes' at question 2.2.2.**

2.2.2.1. How much federal funding was officially allocated to your AMT (GGA/ABTBG) activities in 2023?

Please state the amount in euros :

2.2.2.2. What is the actual use of the federal funding within the hospital? *

Please choose **all** that apply:

- Support for salary for any of the AMT (GGA/ABTBG) member
- Support for trainings / symposia / conferences / workshops
- IT (information technology) support
- Purchase of IGGI guide
- Purchase of international guides in the field of AMS (infectiology, microbiology, etc.)
- Purchase of AMS software (e.g. antimicrobial use and resistance)
- Purchase of a subscription to a scientific journal in the field of AMS (infectiology, microbiology, etc.)
- Scientific research (e.g. scientific publication, PhD training)
- Other:

2.2.3. Does your hospital management provide a local funding for the AMT (GGA/ABTBG)? *

Please choose **only one** of the following:

- Yes
- No

**Only answer these questions 2.2.3.1 and 2.2.3.2. if the following conditions are met:
Answer was 'Yes' at question 2.2.3.**

2.2.3.1. What was the amount (in euros) of local funding in 2023?

Please write your answer here:

2.2.3.2. What is the actual use of the local funding? * Please choose **all** that apply:

- Support for salary for any of the AMT (GGA/ABTBG) members
- Support for trainings / symposia / conferences / workshops
- IT (information technology) support
- Purchase of IGGI guide
- Purchase of international recommendations in the field of AMS (infectiology, microbiology, etc.)
- Purchase of an AMS software (e.g. antimicrobial use and resistance)
- Purchase of the subscription of a scientific journal in the field of AMS (infectiology, microbiology, etc.)
- Scientific research (e.g. scientific publication, PhD training)
- Other:

2.2.4. Are there other sources of funding available for your AMT (GGA/ABTBG)?

Please choose **only one** of the following:

- Yes
- No

**Only answer these questions 2.2.4.1 and 2.2.4.2. if the following conditions are met:
Answer was 'Yes' at question 2.2.4.**

2.2.4.1. What other sources of funding are available for the AMT (GGA/ABTBG)? Please choose **all** that apply:

- Research money
- Pilot project HOST
- Other:

2.2.4.2. Taken together, how much funding from other sources did your AMT (GGA/ABTBG) receive in 2023? Please state the amount in euros.

Please write your answer here:

2.2.4.3. If your AMT (GGA/ABTBG) has any comments regarding the funding, please provide them below. Please write your answer here:

2.3. Functioning

2.3.1. In which year was the AMT (GGA/ABTBG) established in your hospital?

[List years]

2.3.2. Did your hospital management formally identify antimicrobial stewardship as a priority objective for the institution and include it in its strategic plan? *

Please choose **only one** of the following:

- Yes
- No

**Only answer these questions 2.3.2.1. and 2.3.2.2. if the following conditions are met:
Answer was 'Yes' at question 2.3.2.**

2.3.2.1. How can this information be accessed by healthcare professionals, committees or official bodies within the hospital? Please choose all that apply:

- Electronically via internet
- Electronically via intranet
- Internal hospital publication (newsletters, emails, social network, etc.)
- External hospital publication (newspapers, social network, etc.)
- Other:

2.3.2.2. When did your hospital management formally identify antimicrobial stewardship as a priority objective for the institution and include it in its strategic plan?
(If you don't know the exact date, please select the first day of the corresponding month.)

Please enter a date:

2.3.3. Does your AMT (GGA/ABTBG) have a formal and written antimicrobial stewardship program / strategic plan accountable for ensuring appropriate antimicrobial use?

Program/strategic plan = An optimal program/strategic plan should encompass the following components: (1) objectives of the AMT (GGA/ABTBG) (what the AMT (GGA/ABTBG) aims to improve), (2) improvement strategies (how the AMT (GGA/ABTBG) plans to achieve these objectives), (3) identification of role players, (4) metrics (measurable indicators of progress) and (5) a defined timeline.

Please reply “yes” if you have at least one of the above components.

Please choose **only one** of the following:

- Yes
- No

Only answer these questions from 2.3.3.1 to 2.3.3.4. if the following conditions are met: Answer was 'Yes' at question 2.3.3.

2.3.3.1. Which of the following components does your formal and written antimicrobial stewardship program / strategic plan encompass? *

Please choose **all** that apply:

- The objectives of the AMT (GGA/ABTBG) (what the AMT (GGA/ABTBG) aims to improve)
- The improvement strategies (how the AMT (GGA/ABTBG) plans to achieve these objectives)
- The identification of role players
- The metrics (measurable indicators of progress)
- The timeline
- Other:

2.3.3.2. How is this formal and written antimicrobial stewardship program / strategic plan accessed by healthcare professionals, committees and official bodies within the hospital? *

Please choose **all** that apply:

- Electronically via **internet**
- Electronically via **intranet**
- Internal hospital publication (newsletters, emails, social network, etc.)
- External hospital publication (newspapers, social network, etc.)
- Internal AMT (GGA/ABTBG) publication (minutes of the meetings)
- Other:

2.3.3.3. When was the most recent formal, written antimicrobial stewardship program / strategic plan published? (If you don't know the exact date, please select the first day of the corresponding month.)

Please write your answer here:

2.3.3.4. Which specific year(s) does the antimicrobial stewardship program / strategic plan cover?

Please provide the effective period from [year] to [year]

2.3.4. What are the three priority objectives of your AMT (GGA/ABTBG) for 2023-2024?

Priority objectives = Examples include timely IV-to-oral switch, streamlining or de-escalation, discontinuation of antibiotic therapy in line with the guidelines, dose optimization (TDM) for vancomycin, performance of blood and site cultures, choice of surgical prophylaxis in line with local guidelines, choice of therapeutic antibiotics following local guidelines etc.

	Fill in	Additional comment
Primary objective		
Secondary objective		
Tertiary objective		
Other		

2.3.5. Does your AMT (GGA/ABTBG) form a dedicated working group to address strategies?

Working group = Association of one or more AMT (GGA/ABTBG) members with other healthcare professionals identified and involved in AMS activities.

Please choose **only one** of the following:

- Yes, always
- Yes, most of the time
- Yes, sometimes
- No

2.3.6. Does your hospital network have a formal written antimicrobial stewardship program / strategic plan accountable for ensuring appropriate antimicrobial use?

Program / strategic plan = A program/strategic plan should encompass the following components : (1) objectives, (2) improvement strategies, (3) identification of role players, (4) metrics (measurable indicators of progress) and (5) a defined timeline.

Please reply “yes” if you have at least one of the above components.

Please choose **only one** of the following:

- Yes
- No

**Only answer these questions from 2.3.6.1. to 2.3.6.4. if the following conditions are met:
Answer was 'Yes' at question 2.3.6.**

2.3.6.1. Which of the following components does the antimicrobial stewardship program / strategic plan of your hospital network encompass?

Please choose **all** that apply:

- The objectives
- The improvement strategies
- The identification of role players
- The metrics (measurable indicators of progress)
- The timeline
- Other:

2.3.6.2. How is this formal and written antimicrobial stewardship program / strategic plan from your hospital network accessed by healthcare professionals, other committees, and official bodies within the hospital?

Please choose **all** that apply:

- Electronically via **internet**
- Electronically via **intranet**
- Internal hospital publication (newsletters, emails, social network, etc.)
- External hospital publication (newspapers, social network, etc.)
- Internal HOST publication (minutes of the meetings)
- Other:

2.3.6.3. When was the most recent formal written antimicrobial stewardship program / strategic plan from your hospital network published? (If you don't know the exact date, please select the first day of the corresponding month.)

Please enter a date:

2.3.6.4. For which specific year(s) does the antimicrobial stewardship program / strategic plan from your hospital network cover?

Please provide the effective period from [year] to [year]

2.3.7. Is there a document available that clearly outlines the roles, the procedures for collaboration and the responsibilities of the AMT (GGA/ABTBG) members?

Please choose **only one** of the following:

- Yes
- No

Only answer these questions 2.3.7.1. and 2.3.7.2. if the following conditions are met: Answer was 'Yes' at question 2.3.7.

2.3.7.1. How is this document accessed by healthcare professionals, committees and official bodies within the hospital? *

Please choose **all** that apply:

- Electronically via **internet**
- Electronically via **intranet**
- Internal hospital publication (newsletters, emails, social network, etc.)
- External hospital publication (newspapers, social network, etc.)
- Internal AMT (GGA/ABTBG) publication (minutes of the meetings)
- Other:

2.3.7.2. When was this document published? (If you don't know the exact date, please select the first day of the corresponding month.)

Please enter a date:

2.3.8. Does your AMT (GGA/ABTBG) communicate and/or interact with other committees and official bodies within the hospital ?

Please check **all** that apply below and then specify the modes of communication and interaction that are employed between each committee or official body and the AMT (GGA/ABTBG).

- Drug and Therapeutics Committee
- Infection prevention and control (IPC) committee
- Infection prevention and control (IPC) team
- Medical director
- Head of the nursing department
- Medical council
- Hospital management
- Hospital Outbreak Support Team (HOST)

2.3.8.1. Drug and Therapeutics Committee

Specify the modes of communication and interaction that are employed between the drugs and therapeutics committee and the AMT (GGA/ABTBG).

Please choose **all** that apply:

- Participation of a Drug and Therapeutics committee representative in the AMT (GGA/ABTBG) meetings
- Participation of an AMT (GGA/ABTBG) representative in the Drug and Therapeutics committee meetings
- Joint meetings Drug and Therapeutics committee and AMT (GGA/ABTBG)
- The minutes of the AMT (GGA/ABTBG) meetings are shared with the Drug and therapeutics committee
- The annual reports on the AMT (GGA/ABTBG) activities are shared with the Drug and therapeutics committee
- Other:

2.3.8.2. Infection prevention and control (IPC) committee

Specify the modes of communication and interaction that are employed between the IPC committee and the AMT (GGA/ABTBG).

Please choose **all** that apply:

- Participation of an AMT (GGA/ABTBG) representative in the IPC committee meetings
- Joint meetings IPC committee and AMT (GGA/ABTBG)
- The minutes of the AMT (GGA/ABTBG) meetings are shared with the IPC committee
- The annual reports on the AMT (GGA/ABTBG) activities are shared with the IPC committee
- Other:

2.3.8.3. Infection prevention and control (IPC) team

Specify the modes of communication and interaction that are employed between the IPC TEAM and the AMT (GGA/ABTBG).

Please choose **all** that apply:

- Participation of IPC specialists in the AMT (GGA/ABTBG) meetings
- Participation of an AMT (GGA/ABTBG) representative in the IPC team meetings
- Joint meetings IPC team and AMT (GGA/ABTBG)
- The minutes of the AMT (GGA/ABTBG) meetings are shared with the IPC team
- The annual reports on the AMT activities are shared with the IPC team
- Other:

2.3.8.4. Medical director

Specify the modes of communication and interaction that are employed between the medical director and the AMT (GGA/ABTBG).

Please choose **all** that apply:

- Participation of the medical director in the AMT (GGA/ABTBG) meetings
- Joint meetings medical director and AMT (GGA/ABTBG)
- The minutes of the AMT (GGA/ABTBG) meetings are shared with the medical director
- The annual reports on the AMT (GGA/ABTBG) activities are shared with the medical director
- Other:

2.3.8.5. Head of the nursing department

Specify the modes of communication and interaction that are employed between the head of the nursing department and the AMT (GGA/ABTBG).

Please choose **all** that apply:

- Participation of the head of the nursing department in the AMT (GGA/ABTBG) meetings
- The minutes of the AMT (GGA/ABTBG) meetings are shared with the head of the nursing department
- The annual reports on the AMT (GGA/ABTBG) activities are shared with the head of the nursing department
- Joint meetings head of the nursing department and AMT (GGA/ABTBG)
- Other:

2.3.8.6. Hospital management

Specify the modes of communication and interaction that are employed between the hospital management and the AMT (GGA/ABTBG).

Please choose **all** that apply:

- Participation of a hospital management representative (with the exception of the medical director or the head of the nursing department) in the AMT (GGA/ABTBG) meetings
- The minutes of the AMT (GGA/ABTBG) meetings are shared with the hospital management
- The annual reports on the AMT (GGA/ABTBG) activities are shared with the hospital management
- Joint meetings hospital management and AMT (GGA/ABTBG)
- Other:

2.3.8.7. Medical council

Specify the modes of communication and interaction that are employed between the medical council and the AMT (GGA/ABTBG).

Please choose **all** that apply:

- Participation of a medical council representative in the AMT (GGA/ABTBG) meetings
- The minutes of the AMT (GGA/ABTBG) meetings are shared with the medical council
- The annual reports on the AMT (GGA/ABTBG) activities are shared with the medical council
- Joint meetings medical council and AMT (GGA/ABTBG)
- Other:

2.3.8.8. Hospital Outbreak Support Team (HOST)

Specify the modes of communication and interaction that are employed between the HOST and the AMT (GGA/ABTBG).

Please choose **all** that apply:

- Participation of a HOST representative in the AMT (GGA/ABTBG) meetings
- Participation of an AMT (GGA/ABTBG) representative in the HOST meetings
- Joint meetings HOST and AMT (GGA/ABTBG)
- The minutes of the AMT (GGA/ABTBG) meetings are shared with the HOST
- The minutes of the HOST meetings are shared with the AMT (GGA/ABTBG)
- The annual reports on the AMT (GGA/ABTBG) activities are shared with the HOST
- The annual reports on the HOST activities are shared to the AMT (GGA/ABTBG)
- Other:

2.3.9. Is there a document available that explicitly defines the procedures of collaboration between the AMT (GGA/ABTBG) and the Drug and Therapeutics committee?

Please choose **only one** of the following:

- Yes
- No

2.3.10. Is there a document available that explicitly defines the procedures of collaboration between the AMT (GGA/ABTBG) and the IPC team/committee?

Please choose **only one** of the following:

- Yes
- No

2.3.11. Is there a document available that explicitly defines the procedures of collaboration between the AMT (GGA/ABTBG) and the Hospital Outbreak Support Team (HOST)?

Please choose **only one** of the following:

- Yes
- No

2.3.12. Do the members of the AMT (GGA/ABTBG) receive regular training in antimicrobial prescribing and stewardship?

Regular training = This training (e.g. symposium, congress, certificate training) is usually not offered at the hospital level, but probably at the regional, national or international level. However, the hospital should ensure that AMT (GGA/ABTBG) members are adequately trained, according to local/regional/national requirements.

Please choose **only one** of the following:

- Yes
- No

2.4. You reached the end of part 2 "Antibiotic Management Team (AMT) information".

If your AMT (GGA/ABTBG) has any additional comments/ thoughts about this part, please share them below.

Please write your answer here:

PART 3/4: Stewardship objectives and improvement strategies

The official responsibilities of the AMT (GGA/ABTBG) encompass various tasks related to anti-infective drugs. These include:

1. Developing and regularly updating an antimicrobial formulary
2. Developing and regularly updating clinical practice guidelines on antimicrobial therapy and prophylaxis
3. Developing and evaluating active initiatives to limit the inappropriate use of antimicrobials
4. Providing training to healthcare professionals on diagnosis, microbiology, epidemiology and appropriate treatment of infectious diseases
5. Conducting audits of medical practices and providing feedback to prescribers
6. Monitoring local antimicrobial consumption
7. Developing and maintaining surveillance of antimicrobial resistance
8. Writing an annual report to the Belgian Antibiotic Policy Coordination Committee (BAPCOC)

This part of the survey aims to summarize the strategies developed by the Belgian AMTs (GGA/ABTBG) according to the law.

Identification of the respondent

Please fill in your email address below.

Attention: The email address must be consistent across all four sections of the survey. This variable will be utilized to connect the four parts of the questionnaire for one AMT (GGA/ABTBG).

Please write your answer here:

3.1. Antimicrobial formulary

3.1.1. Does your hospital have an antimicrobial formulary?

Antimicrobial Formulary = A list of antimicrobials that have been approved for use in a hospital and that the hospital pharmacy stocks, along with information about each specific drug (this may be part of a general drug formulary in your hospital).

Please choose **only one** of the following:

- Yes
- No

Only answer these questions 3.1.1.1 and 3.1.1.2. if the following conditions are met: Answer was 'No' at question 3.1.1.

3.1.1.1. Is the antimicrobial formulary regularly revised and updated (if necessary) ?

Please choose **only one** of the following:

- Yes, every year
- Yes, but not every year
- No

3.1.1.2. How can this local antimicrobial formulary be consulted? *

Please choose **all** that apply:

- Electronically via **internet**
- Electronically via **intranet**
- Electronically through a mobile application
- Electronically through the computerized prescription order entry
- Printed in a pocket guide
- Printed version in the physicians' room
- Other:

Only answer this question 3.1.1.3. if the following conditions are met: Answer was 'No' at question 3.1.1.

3.1.1.3. According to your AMT's opinion, what are the reasons for not having an antimicrobial formulary? *

Please write your answer here:

3.2. Guidelines

3.2.1. Does your AMT (GGA/ABTBG) provide local recommendations for infection management (diagnosis, prevention and treatment)?

Local recommendations = These recommendations should be based on international/national evidence-based guidelines and local/national susceptibility patterns (where possible), to assist antimicrobial selection (indication, agent, dose, route, duration) for common clinical conditions.

Please choose **only one** of the following:

- Yes
- No

Only answer these questions from 3.2.1.1 to 3.2.1.3. if the following conditions are met: Answer was 'Yes' at question 3.2.1.

3.2.1.1. Does your AMT (GGA/ABTBG) have local recommendations to manage the following clinical situations? *

Please choose **all** that apply:

- Respiratory tract infections
- Urinary tract infections
- *Staphylococcus aureus* bacteremia, candidemia, or other bacteremia
- Surgical prophylaxis
- Fever in neutropenic patient
- Skin and soft tissue infections
- Endocarditis
- Intra-abdominal infections

3.2.1.2. Does your AMT (GGA/ABTBG) regularly revise and update (if necessary) the local recommendations for infection management (diagnosis, prevention and treatment)? *

Please choose **only one** of the following:

- Yes, all common clinical situations are revised and updated (if necessary) every year or every other year
- Yes, all common clinical situations are revised and updated (if necessary) every 3-4 years
- Yes, certain clinical situations are revised and updated (if necessary) depending on hospital needs, AMT (GGA/ABTBG) priorities, audit results, literature (new evidence) and/or AMT (GGA/ABTBG) members availability
- No

3.2.1.3. How can these local guidelines be consulted? *

Please choose **all** that apply:

- Electronically via **internet**
- Electronically via **intranet**
- Electronically through a mobile application
- Electronically through the electronic drug prescription
- Printed in a pocket guide
- Printed version in the physicians' room
- Other:

Only answer this question if the following conditions are met: Answer was 'No' at question 3.2.1.

3.2.1.4. According to your AMT's opinion, what are the main reasons for your AMT (GGA/ABTBG) not providing up-to-date local recommendations in your hospital? *

Please write your answer here:

3.2.2. Has your AMT (GGA/ABTBG) implemented standardized criteria for :

Please choose **all** that apply:

- Switch from intravenous to oral antimicrobial therapy
- Dose adjustment in case of organ dysfunction
- Streamlining / de-escalation of empirical antimicrobial therapy
- Dose optimization (therapeutic drug monitoring, TDM)
- Discontinuation of antimicrobial therapy
- Penicillin allergy
- None of these
- Other:

3.2.3. Does your hospital have the IGGI license available for all healthcare professionals? *

Please choose **only one** of the following:

- Yes
- No

3.2.4. Does your AMT (GGA/ABTBG) have a policy, either in written form and/or embedded within an electronic support system, mandating prescribers to thoroughly document an antimicrobial plan in the medical record for all antimicrobial prescriptions?

Antimicrobial plan = This documentation should encompass details such as the indication, name, dosage, duration, route, and administration interval for all prescribed antimicrobials.

Please answer “yes” if you have at least one of the above components.

Please choose **only one** of the following:

- Yes
- No

Only answer this question 3.2.4.1. if the following conditions are met: Answer was 'Yes' at question 3.2.4.

3.2.4.1 Which of the following components does your antimicrobial plan encompass?

Please choose **all** that apply:

- The indication
- The name
- The dosage
- The duration
- The route
- The administration interval
- Other:

3.2.5. Does your AMT (GGA/ABTBG) have a policy, either in written form and/or embedded within an electronic support system, mandating prescribers to thoroughly document the indication during order entry (drug prescription) for all antimicrobial prescriptions? *

Please choose **only one** of the following:

- Yes
- No

3.2.6. Does your AMT (GGA/ABTBG) have a policy, either in written and/or embedded within an electronic support system, mandating prescribers to thoroughly document the treatment duration during order entry (drug prescription) for all antimicrobial prescriptions?

Please choose **only one** of the following:

- Yes
- No

3.3. Initiatives to limit the inappropriate use of antimicrobials

3.3.1. Does your hospital perform preauthorization (expert approval) for specific antimicrobial agents? Please choose **only one** of the following:

- Yes
- No

Only answer these questions from 3.3.1.1. to 3.3.1.5. if the following conditions are met: Answer was 'Yes' at question 3.3.1.

3.3.1.1. For which antimicrobial agents does the prescriber need a preauthorization, and why (antimicrobial resistance, financial reasons, and/or legal reasons)?

Please fill in the table.

In the online questionnaire, the table is already pre-filled. Please simply change the answers from "No" to "Yes" for antimicrobial agents subject to pre-authorization.

Antimicrobial agents list available in Appendix 3	Q1. Preauthorization needed?	If Q1 = Yes, AMR reason?	If Q1 = Yes, financial reason?	If Q1 = Yes, legal reason?
X	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Y	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Z	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Etc.				

3.3.1.2. Is it a routine practice for specific antimicrobial agents to be approved by an expert in your hospital? *

Please choose **only one** of the following:

- Yes, 24h/24 and 7days/7
- Yes, only during office hours
- No

3.3.1.3. Does expert approval for specific antimicrobial agents apply to all prescribers?

Please choose **only one** of the following:

- Yes
- No

3.3.1.3.1. Who are the prescribers authorized to prescribe without expert approval? *

Only answer this question 3.3.1.3.1. if the following conditions are met:
Answer was 'No' at question 3.3.1.3. Does expert approval for specific antimicrobial agents apply to all prescribers?

Please choose **all** that apply:

- ID-physicians
- Intensivists
- Hematologists
- Oncologists
- Depending on the specific antimicrobial agents, list of prescribers authorized to prescribe without approval
- Other:

3.3.1.4. Who can authorize the use ? *

Please choose **all** that apply:

- ID-physicians
- Hospital pharmacists
- Microbiologists
- All members of the AMT (GGA/ABTBG)
- Specific members of the AMT (GGA/ABTBG)
- Depending on the specific antimicrobial agents, list of prescribers who can authorize the use
- Other:

3.3.1.5. Does your antimicrobial stewardship program monitor preauthorization interventions by tracking which agents are being requested for which conditions? *

Please choose **only one** of the following:

- Yes
- No

3.3.1.5.1. Please specify the frequency. *

Only answer this question if the following conditions are met:

Answer was 'Yes' at question 3.3.1.5. Does your antimicrobial stewardship program monitor preauthorization interventions by tracking which agents are being requested for which conditions?

Please choose **all** that apply:

- Continuous monitoring (post-prescription review)
- Occasional monitoring (audit)
- Continuous monitoring of specific patient categories (post-prescription review)
- Occasional monitoring of specific patient categories (audit)
- Continuous monitoring of specific antimicrobial categories (post-prescription review)
- Occasional monitoring of specific antimicrobial categories (audit)

Only answer this question 3.3.1.7. if the following conditions are met: Answer was 'No' at question 3.3.1. Does your hospital perform preauthorization (expert approval) for specific antimicrobial agents?

3.3.1.7. According to your AMT's opinion, what are the main reason(s) for your AMT (GGA/ABTBG) not performing preauthorization (expert approval) for specific antimicrobial agents?

Please write your answer here:

3.3.2. Does your AMT (GGA/ABTBG) review courses of therapy for specific antimicrobial agents (post-prescription review) with immediate feedback to the prescriber in case of inappropriate use?

Post-prescription review = process of monitoring and providing feedback or guidance on antimicrobial prescriptions 48-72 hours after the initial prescription to ensure appropriate use and effectiveness.

Please choose **only one** of the following:

- Yes
- No

**Only answer these questions from 3.3.2.1. to 3.3.2.3. if the following conditions are met:
Answer was 'Yes' at question 3.3.2.**

3.3.2.1. For which antimicrobial agents? *

Please choose **all** that apply.

To facilitate the identification of the antimicrobial agents, please utilize the **Appendix 4**.

3.3.2.2. How often does your AMT (GGA/ABTBG) review courses of therapy for specific antimicrobial agents (post-prescription review) at your hospital?

Post-prescription review = process of monitoring and providing feedback or guidance on antimicrobial prescriptions 48-72 hours after the initial prescription to ensure appropriate use and effectiveness.

Please choose **only one** of the following:

- Continuous review (4-7 days a week)
- Occasional review (1-3 days a week)
- Less than once a week

3.3.2.3. Does your AMT monitor these post-prescription review interventions by tracking the types of interventions and acceptance of recommendations?

Post-prescription review = process of monitoring and providing feedback or guidance on antimicrobial prescriptions 48-72 hours after the initial prescription to ensure appropriate use and effectiveness.

Please choose **only one** of the following:

- Yes
- No

Only answer this question 3.3.2.4. if the following conditions are met: Answer was 'No' at question 3.3.2.

3.3.2.4. According to your AMT's opinion, what are the main reasons for your AMT (GGA/ABTBG) not reviewing courses of therapy for specific antimicrobial agents (post-prescription review) with immediate feedback? *

Please write your answer here:

3.3.3. What other regular initiatives has the AMT (GGA/ABTBG) developed to ensure optimal use of antimicrobials? *

Please choose **all** that apply:

- Systematic advice for defined clinical situations (e.g. positive blood cultures)
- Infection and antimicrobial prescribing focused ward rounds in specific departments in your hospital
- Multidisciplinary meetings focusing on defined clinical situations (e.g. endocarditis, orthopedics, etc.)
- Multidisciplinary meetings in specific departments
- Bedside consultations
- Review of planned outpatient parenteral antibiotic therapy (OPAT)
- Advice on therapeutic drug monitoring
- None
- Other:

3.3.3.1. You mentioned "Systematic advices for defined clinical situations", please specify the clinical situations. *

**Only answer this question if the following conditions are met:
Answer was at question 3.3.3. Systematic advices for defined clinical situations**

Please write your answer here:

3.3.3.2. You mentioned "Infection and antimicrobial prescribing focused ward rounds in specific departments in your hospital ", please specify the departments. *

Only answer this question if the following conditions are met:

Answer was at question 3.3.3. **Infection and antimicrobial prescribing focused ward rounds in specific departments in your hospital**

Please write your answer here:

3.3.3.3. You mentioned "Multidisciplinary meetings focusing on defined clinical situations", please specify the clinical situations. *

Only answer this question if the following conditions are met:

Answer was at question 3.3.3. **Multidisciplinary meetings focusing on defined clinical situations**

Please write your answer here:

3.3.3.4. You mentioned "Multidisciplinary meetings in specific departments ", please specify the departments. *

Only answer this question if the following conditions are met:

Answer was at question 3.3.3. **Multidisciplinary meetings in specific departments**

Please write your answer here:

3.3.4. How are the advices on optimal use of antimicrobials communicated to prescribers? *

Please choose **all** that apply:

- Written in the electronic patient file
- Verbal directly to prescriber e.g. by telephone / face-to-face
- Written directly to prescriber e.g. via email / text / other document
- Other:

3.3.5. Has your AMT (GGA/ABTBG) implemented any of the following actions to improve antimicrobial prescribing? *

Please choose **all** that apply:

- Automatic stop orders (=discontinuation of antimicrobial therapy after a pre-defined duration)
- Automatic review orders (=review of antimicrobial therapy after a pre-defined duration)
- Automatic changes from intravenous to oral antibiotic therapy in appropriate situations
- Automatic alerts (e.g. in situations where therapy might be unnecessarily duplicative)
- Pre-built antimicrobial order sets (including dosing (e.g. mg/kg), infusion volume, infusion rate, type of catheter, ...)
- New diagnostic tests
- Selective reporting of laboratory antimicrobial susceptibility testing
- None of these
- Other:

3.3.6. Does your hospital have an Outpatient Parenteral Antibiotic Therapy (OPAT) service? Please choose **only one of the following:**

- Yes
- No

Only answer these questions from 3.3.6.1 to 3.3.6.3. if the following conditions are met: Answer was 'Yes' at question 3.3.6.

3.3.6.1. Is this service part of the AMT (GGA/ABTBG) activities? * Please choose **only one** of the following:

- Yes
- No

3.3.6.2. How many OPAT days did your hospital perform in 2023? *

Please write your answer here:

3.3.6.3. Are there specific reasons limiting the number of OPAT performed in your hospital?

Please write your answer here:

Only answer this question 3.3.6.4. if the following conditions are met: Answer was 'No' at question 3.3.6. Does your hospital have an Outpatient Parenteral Antibiotic Therapy (OPAT) service?

3.3.6.4. According to your AMT's opinion, what are the reasons for not having an OPAT service?

Please write your answer here:

3.3.7. Does your AMT (GGA/ABTBG) conduct scientific research (e.g. scientific publications, PhD trainings) to improve AMS evidence? * Please choose only one of the following:

- Yes
- No

3.3.8. With respect to the above initiatives (i.e., preauthorization, post-prescription review, etc.) has your hospital management hindered the implementation of any of these initiatives in the past two years? * Please choose only one of the following:

- Yes
- No

3.3.9. If your AMT (GGA/ABTBG) has anything to add regarding the questions from this section "Initiatives to limit the inappropriate use of antimicrobials", please do so below.

Please write your answer here:

3.4. Education and training

3.4.1. Does your AMT (GGA/ABTBG) offer basic training in optimal antimicrobial use for healthcare professionals ?

Basic training = The AMT (GGA/ABTBG) offers basic introduction training (e.g. sensitization on AMR and use of standard treatment guidelines) to staff on how to optimize antimicrobial prescribing, dispensing and administration.

Please choose **only one** of the following:

- Yes
- No

3.4.2. Does your AMT (GGA/ABTBG) offer continuous training in optimal antimicrobial use for healthcare professionals?

Continuous training = The AMT (GGA/ABTBG) offers continuous educational resources (e.g. regular trainings on infection management) to train staff on how to optimize antimicrobial prescribing, dispensing and administration.

Please choose **only one** of the following:

- Yes
- No

3.4.3. Does your AMT (GGA/ABTBG) offer educational material to support staff training on how to optimize antimicrobial using (antimicrobial stewardship)?

Please choose **only one** of the following:

- Yes
- No

3.4.3.1. What sort of educational material has been developed by your AMT (GGA/ABTBG) and still in use in 2023? *

Only answer this question if the following conditions are met: Answer was 'Yes' at question 3.4.3. Does your AMT (GGA/ABTBG) offer educational material to support staff training on how to optimize antimicrobial using (antimicrobial stewardship)?)

Please choose **all** that apply:

- Leaflet
- Booklet
- Poster

- Newsletter
- Newspaper
- Email
- Website (internet)
- Website (intranet)
- Video
- Podcast
- E-learning
- SmartphoneApp
- Social media
- Campaign
- None of these
- Other:

3.4.4. Does your AMT (GGA/ABTBG) organize educational meetings (courses, workshops, conferences or other educational meetings) to support staff training on how to optimize antimicrobial using (antimicrobial stewardship)? *

Please choose **only one** of the following:

- Yes
- No

Only answer these questions from 3.4.4.1 to 3.4.4.2 if the following conditions are met: Answer was 'Yes' at question 3.4.4.

3.4.4.1. How often does your AMT (GGA/ABTBG) organize educational meetings? *

Please choose **only one** of the following:

- ≤ 5 meetings per year
- $> 5 \leq 10$ meetings per year
- $> 10 \leq 15$ meetings per year
- > 15 meetings per year

3.4.4.2. Who is the target audience for your educational meetings? *

Please choose **all** that apply:

- Physicians in training
- Specialist physicians
- Pharmacists
- Nurses
- Patients
- Other:

3.4.5. Does your AMT (GGA/ABTBG) organize educational outreach visits to support staff training on how to optimize antimicrobial using (antimicrobial stewardship)?

Educational outreach visit = Personal visits by a trained person to health workers in their own settings, to provide information with the aim of changing practice.

Please choose **only one** of the following:

- Yes
- No

3.4.5.1. How often does your AMT (GGA/ABTBG) organize education outreach visits? *

Only answer this question if the following conditions are met: Answer was 'Yes' at question 3.4.5.

Please choose **only one** of the following:

- ≤ 5 visits per year
- $> 5 \leq 10$ visits per year
- $> 10 \leq 15$ visits per year
- > 15 visits per year

3.4.6. Does your AMT (GGA/ABTBG) organize educational games to support staff training on how to optimize antimicrobial using (antimicrobial stewardship)?

Educational games = The use of games as an educational strategy to improve standards of care.

Please choose **only one** of the following:

- Yes
- No

3.4.6.1. How many educational games has your AMT (GGA/ABTBG) organized over the past five years? *

Only answer this question if the following conditions are met: Answer was 'Yes' at question 3.4.6. Does your AMT (GGA/ABTBG) organize educational games to support staff training on how to optimize antimicrobial using (antimicrobial stewardship)?

Please write your answer here:

-

3.5. Audit

3.5.1. Did your AMT (GGA/ABTBG) ever participate in one or more point prevalence surveys (PPS) coordinated by a national or international organization (BAPCOC, Sciensano, ECDC, etc.)?

Point Prevalence Survey (PPS) = A cross-section measurement of the quality of antimicrobial use.

Please choose **only one** of the following:

- Yes
- No

Only answer these questions from 3.5.1.1. to 3.5.1.1.3. if the following conditions are met: Answer was 'Yes' at question 3.5.1.

3.5.1.1 Since its establishment, in which surveys has your AMT (GGA/ABTBG) participated from the following options?

Please choose **all** that apply:

- Global PPS
- ECDC PPS
- IRIS scan
- Other

3.5.1.1.1. Please specify "other":

3.5.1.1.2. How many times has your AMT participated in these surveys? Please fill in the table below if applicable.

	Number of participation
Global PPS	
ECDC PPS	
IRIS scan	
Other	

3.5.1.1.3. When was the last participation? Please fill in the table below if applicable.

Last participation (year)	
Global PPS	
ECDC PPS	
IRIS scan	
Other	

3.5.2. Outside of the PPS coordinated by a national or international organization, does your AMT (GGA/ABTBG) monitor compliance with a number of indicators put in place by the AMT (GGA/ABTBG) ? *

Please choose **only one** of the following:

- Yes
- No

Only answer these questions from 3.5.2.1. to 3.5.2.4. if the following conditions are met: Answer was 'Yes' at question 3.5.2.

3.5.2.1. Please select which indicators is your AMT (GGA/ABTBG) using to monitor compliance. *

Please choose **all** that apply:

- Choice of antibiotic therapy following local guidelines
- Indication statement of antibiotic therapy in the medical record
- Choice of surgical antibiotic prophylaxis following local guidelines
- Duration of surgical antibiotic prophylaxis following local guidelines
- Dosage and dosing interval of the antibiotic following local guidelines
- Route of administration following local guidelines
- Duration of antibiotic therapy following local guidelines.
- Switch systemic antibiotic therapy from intravenous to oral antibiotic therapy after 48 to 72 hours on the basis of clinical condition and when oral treatment is possible
- Change empirical to pathogen-directed therapy as soon as culture results become available
- Other

3.5.2.1.1. Please specify "other" :

3.5.2.2. What is the current degree of automation of surveillance of these indicators? *

Please choose the appropriate response for each item:

	Fully manual	Semi-automated	Fully automated	Other
Choice of therapeutic antibiotics following local guidelines				
Indication statement of antibiotic therapy in the medical record				
Choice of surgical antibiotic prophylaxis following local guidelines				
Duration of surgical antibiotic prophylaxis following local guidelines				
Dosage and dosing interval of the antibiotic are compliant with local guidelines				
The route of administration is compliant with local guidelines				
Duration of antibiotic therapy is compliant with local guidelines.				
Switch systemic antibiotic therapy from intravenous to oral antibiotic therapy after 48 to 72 hours on the basis of clinical condition and when oral treatment is possible				
Change empirical to pathogen-directed therapy as soon as culture results become available				
Other				

3.5.2.3. How often does your AMT (GGA/ABTBG) monitor these indicators? *

Please choose the appropriate response for each item:

	Daily	Once a week	Once a month	Once every other month	Three or four times per year	One or two times per year
Choice of therapeutic antibiotics following local guidelines						
Indication statement of antibiotic therapy in the medical record						
Choice of surgical antibiotic prophylaxis following local guidelines						
Duration of surgical antibiotic prophylaxis following local guidelines						
Dosage and dosing interval of the antibiotic are compliant with local guidelines						
The route of administration is compliant with local guidelines						
Duration of antibiotic therapy is compliant with local guidelines.						
Switch systemic antibiotic therapy from intravenous to oral antibiotic therapy after 48 to 72 hours on the basis of clinical condition and when oral treatment is possible						
Change empirical to pathogen-directed therapy as soon as culture results become available						
Other						

3.5.2.4. At what level does your AMT (GGA/ABTBG) monitor these indicators?

	At the hospital level	Only for specific wards / departments	At the ICU level	Only for specific groups of patients	Other
Choice of therapeutic antibiotics following local guidelines	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Indication statement of antibiotic therapy in the medical record	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Choice of surgical antibiotic prophylaxis following local guidelines	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Duration of surgical antibiotic prophylaxis following local guidelines	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Dosage and dosing interval of the antibiotic are compliant with local guidelines	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
The route of administration is compliant with local guidelines	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Duration of antibiotic therapy is compliant with local guidelines.	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Switch systemic antibiotic therapy from intravenous to oral antibiotic therapy after 48 to 72 hours on the basis of clinical condition and when oral treatment is possible	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Change empirical to pathogen-directed therapy as soon as culture results become available	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
Other	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No

3.6. Surveillance of antimicrobial consumption (AMC)

3.6.1. Does your AMT (GGA/ABTBG) monitor the antimicrobial consumption (AMC) at the hospital level?

Please choose **only one** of the following:

- Yes
- No

Only answer these questions from 3.6.1.1. to 3.6.1.10. if the following conditions are met: Answer was 'Yes' at question 3.6.1. Does your AMT (GGA/ABTBG) monitor the antimicrobial consumption (AMC) at the hospital level?

3.6.1.1. What is the source of AMC data used by the AMT (GGA/ABTBG)? *

Please choose **all** that apply:

- Purchase data : Procurement data of the hospital administration/hospital pharmacy
- Unit-based dispensing data : Dispensing data to wards/departments by the pharmacy
- Patient-based dispensing/billing data : Dispensing data or purchase data of antimicrobials to individual patients
- Patient-based prescription data : Data on the prescription of antimicrobials (e.g. electronic medical records)
- Admission, Discharge and Transfer (ADT) data
- Healthstat
- Other:

3.6.1.2. What is the delay in availability of AMC data? * Please choose **only one** of the following:

- No delay (the data is available in real time)
- <1 month
- 1-3 months
- 3-6 months
- 6-12 months
- One year
- > 2 years

3.6.1.3. How often does the AMT (GGA/ABTBG) analyze AMC data? * Please choose **only one of the following:**

- Less than once a year
- Once a year
- Twice a year
- Quarterly a year
- Monthly
- Weekly
- Daily

3.6.1.4. How does the AMT (GGA/ABTBG) perform the analysis of AMC data? * Please choose **all that apply:**

- HealthStat
- Local analysis (Excel File)
- Local software developed by IT
- Purchased software (hospital- or network-wide level)
- Purchased specific software (ward level; e.g. for ICU)
- Other:

3.6.1.4.1. Please specify the purchased software

- Pharmachallenge
- IBM
- 3M
- Baxter
- PowerBI
- Nexus
- Other

3.6.1.4.2. Please specify other

3.6.1.5. What unit of measurement does your AMT use as numerator for AMC analysis?

Please choose **all** that apply:

- Defined Daily Dose (DDD)
- Daily Dose Administered (DDA) : DDD adjusted to the Belgian context
- Days of Therapy (DOT) : number of days that a patient receives a certain antimicrobial, independently of the quantity and used doses
- Cost
- Units : Kg active substance
- Number of prescriptions
- Number of tablets or packages
- Other:

3.6.1.6. What unit of measurement does your AMT use as denominator in AMC analyses? * Please choose **all that apply:**

- Number of patients days : total number of patient days including the day of admission and discharge
- Number of patient nights : total number of patient nights
- Number of admissions or discharges
- Number of antimicrobial patient days : total number of patient days during which antimicrobial agents were administered
- Occupied bed days
- Other:

3.6.1.7. At which level does the AMT(GGA/ABTBG) display the AMC analyses? Please choose **all that apply:**

- Entire hospital
- By hospital site
- By ward/department
- For only specific ward/department (ICU, hematology-oncology, geriatry etc.)
- By prescriber
- By type of patient
- By OPAT
- Other:

3.6.1.8. For which products does the AMT(GGA/ABTBG) display the AMC analyses? Please choose **all that apply:**

- All ATC levels
- Selection of specific antimicrobial classes
- Selection of specific antimicrobials
- By imported products
- By non-reimbursed products
- Other:

3.6.1.9. Which types of analyses does your AMT (GGA/ABTBG) perform at hospital level? * Please choose **all that apply:**

- Analysis of AWaRe categories
- Analysis of oral/parenteral forms
- Assessment of trends in antimicrobial consumption over time
- Comparison between different units within the hospital
- Comparison between different hospitals (benchmarking)
- Correlations with antimicrobial resistance patterns
- None of these
- Other:

3.6.1.10. Does your AMT (GGA/ABTBG) perform the link between the antimicrobial consumption data and APR-DRG (All Patient Refined Diagnosis Related Groups)? *

Please choose **only one** of the following:

- Yes
- No

3.6.10.1. How does the AMT (GGA/ABTBG) perform the link between the antimicrobial consumption data and APR-DRG? *

Only answer this question if the following conditions are met: Answer was 'Yes' at question 3.6.1.10.

Please choose **all** that apply:

- Local analysis (Excel File)
- Local software developed by IT
- Purchased software or paid service of a company
- Other:

3.6.1.10.1.2. Please specify the purchased software or the company. *

Please choose **all** that apply:

- Pharmachallenge
- IBM
- 3M
- Baxter
- PowerBI
- Nexus
- Other:

Only answer this question 3.6.1.11. if the following conditions are met: Answer was 'No' at 3.6.1. Does your AMT (GGA/ABTBG) monitor the antimicrobial consumption (AMC) at the hospital level?

3.6.1.11. According to your AMT's opinion, what are the reasons for not monitoring the antimicrobial consumption (AMC) at the hospital level? *

Please write your answer here:

3.7. Surveillance of antimicrobial resistance

3.7.1. Does your AMT (GGA/ABTBG) monitor antimicrobial susceptibility rates for a range of pathogens? Please choose **only one** of the following:

- Yes
- No

Only answer these questions from 3.7.1.1. to 3.7.1.5. if the following conditions are met: Answer was 'Yes' at question 3.7.1.

3.7.1.1. What is the delay in availability of antimicrobial susceptibility rates data? *
Please choose **only one** of the following:

- Real-time
- <1 month
- 1-3 months
- 3-6 months
- 6-12 months
- One year
- > 2 years

3.7.1.2. How often does the AMT (GGA/ABTBG) analyze antimicrobial susceptibility rates? Please choose **only one** of the following:

- Less than once a year
- Once a year
- Twice a year
- Quarterly a year
- Monthly
- Weekly
- Daily
- Other

3.7.1.3. How does the AMT (GGA/ABTBG) perform the analysis of antimicrobial susceptibility rates? * Please choose **all** that apply:

- Local analysis from the laboratory information system, LIS (Excel File)
- Local software developed by IT
- Sciensano reports from the national AMR surveillance
- Sciensano reports from the EARS-BE surveillance
- Purchased software
- Other:

3.7.1.3.1. Specify the purchased software. *

Please write your answer here:

3.7.1.4. At which level does the AMT(GGA/ABTBG) display the analysis of antimicrobial susceptibility rates? * Please choose all that apply:

- Entire hospital
- By hospital site
- By ward/department
- For only specific ward/department (ICU, hematology-oncology, geriatry etc.)
- By type of patient (outpatient/hospitalized)
- By sample site (urine, blood, etc.)
- Other:

3.7.1.5. For which pathogens does the AMT(GGA/ABTBG) perform the analysis of antimicrobial susceptibility rates? * Please choose all that apply:

- All pathogens are analyzed
- Pathogens from the WHO Global priority pathogens list
- Only selected pathogens

3.7.1.5.1. Please specify which pathogens :

Only answer this question 3.7.2. if the following conditions are met : Answer was 'No' at question 3.7.1. Does your AMT (GGA/ABTBG) monitor antimicrobial susceptibility rates for a range of pathogens?

3.7.2. According to your AMT's opinion, what are the reasons for not monitoring antimicrobial susceptibility rates for a range of pathogens? *

Please write your answer here:

3.7.3. Does your AMT (GGA/ABTBG) use the new definitions of antimicrobial susceptibility testing categories S, I and R from EUCAST recommendations (version 10 and above)? * Please choose only one of the following:

- Yes
- No

3.7.3.1. What does your AMT (GGA/ABTBG) use for interpreting the antimicrobial susceptibility rates? *

Only answer this question 3.7.3.1. if the following conditions are met: Answer was 'No' at question 3.7.3.

Please choose **only one** of the following:

- Previous EUCAST versions
- CLSI
- Other

3.8. Report

3.8.1. Does the AMT (GGA/ABTBG) fill in the BAPCOC activity report?

Please choose **only one** of the following:

- Yes
- No

3.8.2. Does the AMT (GGA/ABTBG) produce a dedicated report (other than BAPCOC activity report) on its objectives and strategies? Please choose **only one** of the following:

- Yes
- No

Only answer these questions from 3.8.2.1. to 3.8.2.3. if the following conditions are met: Answer was 'Yes' at question 3.8.2.

3.8.2.1. How is this dedicated report (other than BAPCOC activity report) accessed by healthcare professionals, committees and official bodies within the hospital? *

Please choose **all** that apply:

- Electronically via **internet**
- Electronically via **intranet**
- Internal hospital publication (newsletters, emails, social network, etc.)
- External hospital publication (newspapers, social network, etc.)
- Internal AMT (GGA/ABTBG) publication (minutes of the meetings)
- Other:

3.8.2.2. When was the last dedicated report published? (If you don't know the exact date, please select the first day of the corresponding month.)

Please enter a date:

3.8.2.3. Which period does this report cover?

From [date] to [date]

3.8.3. Does your AMT (GGA/ABTBG) share with prescribers hospital-specific reports on the antimicrobial consumption data?

Please choose **only one** of the following:

- Yes
- No

3.8.4. Does your AMT (GGA/ABTBG) share with head physicians yearly ward/department-specific reports on their antimicrobial consumption data? Please choose **only one of the following:**

- Yes
- No

3.8.5. Does your AMT (GGA/ABTBG) share with prescribers facility-specific reports on antibiotic susceptibility rates? Please choose **only one of the following:**

- Yes
- No

3.8.6. Are results of audits/reviews of the quality/appropriateness of antimicrobial use communicated directly with prescribers? Please choose **only one of the following:**

- Yes
- No

3.8.7. Does your AMT (GGA/ABTBG) have any comments/thoughts about the reports done within your hospital?

Please write your answer here:

3.9. You reached the end of part 3 "Stewardship objectives and improvement strategies". If your AMT (GGA/ABTBG) has any additional comments/ thoughts about this part, please share them below.

Please write your answer here:

PART 4/4: Hospital resources for antimicrobial stewardship (AMS) programs

Identification of the respondent

Please fill in your email address below.

Attention: The email address must be consistent across all four sections of the survey. This variable will be utilized to connect the four parts of the questionnaire for one AMT (GGA/ABTBG).

Please write your answer here:

4.1. Hospital Information Systems (HIS)

The ongoing digital transformation in healthcare, commonly known as 'eHealth,' represents a crucial evolution for hospitals. The effective harnessing of data through intelligent collection, processing, linkage, and analysis has become indispensable in shaping the strategic direction of every organization.

This survey segment is designed to gather comprehensive insights into the software infrastructure, available data resources and IT tools within your hospital. By examining these technological elements, we aim to gain a nuanced understanding of the current landscape within the hospitals.

4.1.1. What software are used in your hospital?

	Is it available in your hospital?	If yes*, what is the name of the software?	Additional comment
Electronic patient file	<input type="radio"/> Yes, in all wards* <input type="radio"/> Yes, but not in all wards* <input type="radio"/> No		
Electronic drug prescription	<input type="radio"/> Yes, in all wards* <input type="radio"/> Yes, but not in all wards* <input type="radio"/> No		
Microbiology laboratory	<input type="radio"/> Yes, in all wards* <input type="radio"/> Yes, but not in all wards* <input type="radio"/> No		
Pharmacy (billing system)	<input type="radio"/> Yes, in all wards* <input type="radio"/> Yes, but not in all wards* <input type="radio"/> No		
Nursing care	<input type="radio"/> Yes, in all wards* <input type="radio"/> Yes, but not in all wards* <input type="radio"/> No		
Operating room	<input type="radio"/> Yes, in all wards* <input type="radio"/> Yes, but not in all wards* <input type="radio"/> No		
ADT (admission departure transfer)	<input type="radio"/> Yes, in all wards* <input type="radio"/> Yes, but not in all wards* <input type="radio"/> No		
Antimicrobial stewardship (AMS) ¹	<input type="radio"/> Yes, in all wards* <input type="radio"/> Yes, but not in all wards* <input type="radio"/> No		
Infection prevention and control (IPC)	<input type="radio"/> Yes, in all wards* <input type="radio"/> Yes, but not in all wards* <input type="radio"/> No		

¹ Does your hospital invest in a specific software dedicated to AMS? For example : ICNET Clinical Surveillance software, Antibios from NOSOTECH, etc. The questions regarding informatic tools developed in your electronic systems (e.g. electronic drug prescription) that focus on AMS (e.g. indication mentioned in the prescription) are treated later in this survey.

4.1.2. Please specify below which types of data are stored digitally and whether it can be relatively easily used* for data reporting or secondary data analysis (data reuse**)?

*By **easily used** we mean that it does not require a lot of manual work and that the data are stored in a structured format, so not as free text notes but as coded or standardized information.

** **Data reuse** = Data Reuse, or Secondary Data Analysis, is the analysis of existing data collected by your institution for following some objectives implemented by your AMT (GGA/ABTBG). It can refer to statistical, quantitative data or descriptive, qualitative data.

--- Please change in the table "Unknown" to the appropriate answer when is the case. ---

	Are the data stored digitally?	If yes*, indicate whether the data are stored in a structured format (e.g. not as free text notes but as coded or standardized information)	Additional comments
Age	<input type="radio"/> Unknown <input type="radio"/> Yes, in all wards* <input type="radio"/> Yes, but not in all wards* <input type="radio"/> No	<input type="radio"/> Unknown <input type="radio"/> Yes <input type="radio"/> No	
Gender	<input type="radio"/> Unknown <input type="radio"/> Yes, in all wards* <input type="radio"/> Yes, but not in all wards* <input type="radio"/> No	<input type="radio"/> Unknown <input type="radio"/> Yes <input type="radio"/> No	
Weight	<input type="radio"/> Unknown <input type="radio"/> Yes, in all wards* <input type="radio"/> Yes, but not in all wards* <input type="radio"/> No	<input type="radio"/> Unknown <input type="radio"/> Yes <input type="radio"/> No	
Height	<input type="radio"/> Unknown <input type="radio"/> Yes, in all wards* <input type="radio"/> Yes, but not in all wards* <input type="radio"/> No	<input type="radio"/> Unknown <input type="radio"/> Yes <input type="radio"/> No	
BMI	<input type="radio"/> Unknown <input type="radio"/> Yes, in all wards* <input type="radio"/> Yes, but not in all wards* <input type="radio"/> No	<input type="radio"/> Unknown <input type="radio"/> Yes <input type="radio"/> No	
Diagnosis code (via ICD/SNOMED coding)	<input type="radio"/> Unknown <input type="radio"/> Yes, in all wards* <input type="radio"/> Yes, but not in all wards* <input type="radio"/> No	<input type="radio"/> Unknown <input type="radio"/> Yes <input type="radio"/> No	
Reason of entry	<input type="radio"/> Unknown <input type="radio"/> Yes, in all wards* <input type="radio"/> Yes, but not in all wards* <input type="radio"/> No	<input type="radio"/> Unknown <input type="radio"/> Yes <input type="radio"/> No	
Allergy data	<input type="radio"/> Unknown <input type="radio"/> Yes, in all wards* <input type="radio"/> Yes, but not in all wards* <input type="radio"/> No	<input type="radio"/> Unknown <input type="radio"/> Yes <input type="radio"/> No	
Comorbidities	<input type="radio"/> Unknown <input type="radio"/> Yes, in all wards* <input type="radio"/> Yes, but not in all wards* <input type="radio"/> No	<input type="radio"/> Unknown <input type="radio"/> Yes <input type="radio"/> No	
Admission date (hospital level)	<input type="radio"/> Unknown <input type="radio"/> Yes, in all wards* <input type="radio"/> Yes, but not in all wards* <input type="radio"/> No	<input type="radio"/> Unknown <input type="radio"/> Yes <input type="radio"/> No	
Discharge date (hospital level)	<input type="radio"/> Unknown <input type="radio"/> Yes, in all wards* <input type="radio"/> Yes, but not in all wards* <input type="radio"/> No	<input type="radio"/> Unknown <input type="radio"/> Yes <input type="radio"/> No	
Admission date (unit level)	<input type="radio"/> Unknown <input type="radio"/> Yes, in all wards* <input type="radio"/> Yes, but not in all wards* <input type="radio"/> No	<input type="radio"/> Unknown <input type="radio"/> Yes <input type="radio"/> No	
Discharge date (unit level)	<input type="radio"/> Unknown <input type="radio"/> Yes, in all wards* <input type="radio"/> Yes, but not in all wards* <input type="radio"/> No	<input type="radio"/> Unknown <input type="radio"/> Yes <input type="radio"/> No	
Antimicrobial name or code (preferable ATC code 5th level)	<input type="radio"/> Unknown <input type="radio"/> Yes, in all wards* <input type="radio"/> Yes, but not in all wards* <input type="radio"/> No	<input type="radio"/> Unknown <input type="radio"/> Yes <input type="radio"/> No	
Start date of antimicrobial	<input type="radio"/> Unknown <input type="radio"/> Yes, in all wards* <input type="radio"/> Yes, but not in all wards* <input type="radio"/> No	<input type="radio"/> Unknown <input type="radio"/> Yes <input type="radio"/> No	
End date of antimicrobial	<input type="radio"/> Unknown <input type="radio"/> Yes, in all wards*	<input type="radio"/> Unknown <input type="radio"/> Yes	

	<input type="radio"/> Yes, but not in all wards* <input type="radio"/> No	<input type="radio"/> No	
Antimicrobial data : name, dosage, route and administration interval	<input type="radio"/> Unknown <input type="radio"/> Yes, in all wards* <input type="radio"/> Yes, but not in all wards* <input type="radio"/> No	<input type="radio"/> Unknown <input type="radio"/> Yes <input type="radio"/> No	
Antimicrobial indication	<input type="radio"/> Unknown <input type="radio"/> Yes, in all wards* <input type="radio"/> Yes, but not in all wards* <input type="radio"/> No	<input type="radio"/> Unknown <input type="radio"/> Yes <input type="radio"/> No	
Antimicrobial duration	<input type="radio"/> Unknown <input type="radio"/> Yes, in all wards* <input type="radio"/> Yes, but not in all wards* <input type="radio"/> No	<input type="radio"/> Unknown <input type="radio"/> Yes <input type="radio"/> No	
Microbiological data : date of sampling, culture result, specimen type	<input type="radio"/> Unknown <input type="radio"/> Yes, in all wards* <input type="radio"/> Yes, but not in all wards* <input type="radio"/> No	<input type="radio"/> Unknown <input type="radio"/> Yes <input type="radio"/> No	
Resistance patterns	<input type="radio"/> Unknown <input type="radio"/> Yes, in all wards* <input type="radio"/> Yes, but not in all wards* <input type="radio"/> No	<input type="radio"/> Unknown <input type="radio"/> Yes <input type="radio"/> No	
Serology	<input type="radio"/> Unknown <input type="radio"/> Yes, in all wards* <input type="radio"/> Yes, but not in all wards* <input type="radio"/> No	<input type="radio"/> Unknown <input type="radio"/> Yes <input type="radio"/> No	
Chemistry	<input type="radio"/> Unknown <input type="radio"/> Yes, in all wards* <input type="radio"/> Yes, but not in all wards* <input type="radio"/> No	<input type="radio"/> Unknown <input type="radio"/> Yes <input type="radio"/> No	
Results of TDM (therapeutic drug monitoring)	<input type="radio"/> Unknown <input type="radio"/> Yes, in all wards* <input type="radio"/> Yes, but not in all wards* <input type="radio"/> No	<input type="radio"/> Unknown <input type="radio"/> Yes <input type="radio"/> No	
Surgical procedure code such as ICD-10	<input type="radio"/> Unknown <input type="radio"/> Yes, in all wards* <input type="radio"/> Yes, but not in all wards* <input type="radio"/> No	<input type="radio"/> Unknown <input type="radio"/> Yes <input type="radio"/> No	
Date of surgery	<input type="radio"/> Unknown <input type="radio"/> Yes, in all wards* <input type="radio"/> Yes, but not in all wards* <input type="radio"/> No	<input type="radio"/> Unknown <input type="radio"/> Yes <input type="radio"/> No	
Time of surgical induction	<input type="radio"/> Unknown <input type="radio"/> Yes, in all wards* <input type="radio"/> Yes, but not in all wards* <input type="radio"/> No	<input type="radio"/> Unknown <input type="radio"/> Yes <input type="radio"/> No	
Duration of surgical operation	<input type="radio"/> Unknown <input type="radio"/> Yes, in all wards* <input type="radio"/> Yes, but not in all wards* <input type="radio"/> No	<input type="radio"/> Unknown <input type="radio"/> Yes <input type="radio"/> No	
Surgical complications	<input type="radio"/> Unknown <input type="radio"/> Yes, in all wards* <input type="radio"/> Yes, but not in all wards* <input type="radio"/> No	<input type="radio"/> Unknown <input type="radio"/> Yes <input type="radio"/> No	

4.1.3. Within your hospital's electronic drug prescription system, are there alerts in use to identify errors? * Please choose all that apply:

- Not applicable, no electronic drug prescription
- Drug-drug interaction
- Allergy
- Pregnancy/lactation
- (Maximum) Dosing
- Therapeutic duplication
- Restrictive antimicrobial
- None
- Other:

4.1.4. Within your hospital's electronic drug prescription system, are there other systems in use to encourage compliance with guidelines? * Please choose all that apply:

- Not applicable, no electronic drug prescription
- Pre-built order set (including dosing (e.g. mg/kg), infusion volume, infusion rate, type of catheter, ...)
- Restriction of antimicrobial access (compliance with the antimicrobial formulary)
- Mandatory registration of indication
- Mandatory registration of stop date
- Embedded guidelines
- Automatic stop order (=discontinuation of antimicrobial therapy after a pre-defined duration)
- Automatic review order (=review of antimicrobial therapy after a pre-defined duration)
- None
- Other:

4.1.5. Within your hospital, are there electronic antimicrobial approval systems (standalone or integrated with electronic prescribing systems) in use for the AMS activities? * Please choose all that apply:

- Not applicable, no electronic antimicrobial approval system
- Restriction of antimicrobial access (compliance with the antimicrobial formulary)
- Preauthorization (expert approval) process
- Post-prescription review
- Enforcing approved indications by medicine (prescribing according to predefined indications)
- None of these
- Other:

4.1.6. Within your hospital, are there electronic surveillances in place to alert your AMT (GGA/ABTBG) (real-time alerts)? * Please choose all that apply:

- Not applicable, no electronic surveillance
- Microbe–antimicrobial mismatches
- Double coverage
- Identification of opportunities for de-escalation
- Lack of TDM
- Identification of specific patient categories (e.g. at high risk of nosocomial infection, with suboptimal antimicrobial therapy, etc.)
- Identification of specific clinical categories
- Identification of specific antimicrobial agents
- Identification of specific isolates and antimicrobial susceptibility tests
- Correct dosing in EUCAST I-reporting
- Antimicrobial associated electrolyte disturbances
- None of these
- Other:

4.1.7. Within your hospital, are there specific AMS advices in the electronic patient file to provide feedback to prescribers? * Please choose only one of the following:

- Yes
- No

4.2. Available expertise

This part of the survey aims to identify all the expertise available within your hospital (including the persons who work in the AMT (GGA/ABTBG)).

4.2.1. Please provide below information about the available expertise within your hospital. (If your hospital has multiple sites, include the available expertise for all sites.)

Available expertise = refers to the expertise available in your hospital including the persons who work in the AMT (GGA/ABTBG). The questions about the composition of your AMT (GGA/ABTBG), so the expertise inside your AMT (GGA/ABTBG), were treated before in this survey.

	Q.1. Is this profession available?	If Q.1. = Yes : Q.2. How many FTEs (full-time equivalents) are available for this profession in 2023?	If Q.1. = Yes : Q.3. Is advice from this profession easily available to prescribers?	Additional comments
Infectious diseases physician ¹	<input type="radio"/> Yes <input type="radio"/> No		<input type="radio"/> Yes, available 24h/24 and 7days/7 <input type="radio"/> Yes, available only during office hours <input type="radio"/> No	
Clinical pharmacist ² (excluding those specialized in AMS and/or infectious diseases)	<input type="radio"/> Yes <input type="radio"/> No		<input type="radio"/> Yes, available 24h/24 and 7days/7 <input type="radio"/> Yes, available only during office hours <input type="radio"/> No	
Clinical pharmacist ² specialized in AMS and/or infectious diseases	<input type="radio"/> Yes <input type="radio"/> No		<input type="radio"/> Yes, available 24h/24 and 7days/7 <input type="radio"/> Yes, available only during office hours <input type="radio"/> No	
Microbiologist ³	<input type="radio"/> Yes <input type="radio"/> No		<input type="radio"/> Yes, available 24h/24 and 7days/7 <input type="radio"/> Yes, available only during office hours <input type="radio"/> No	
Infection prevention and control (IPC) physician	<input type="radio"/> Yes <input type="radio"/> No		<input type="radio"/> Yes, available 24h/24 and 7days/7 <input type="radio"/> Yes, available only during office hours	

IPC nurse	<input type="radio"/> Yes <input type="radio"/> No		<input type="radio"/> No <input type="radio"/> Yes, available 24h/24 and 7days/7 <input type="radio"/> Yes, available only during office hours <input type="radio"/> No	
AMS nurse ⁴	<input type="radio"/> Yes <input type="radio"/> No		<input type="radio"/> Yes, available 24h/24 and 7days/7 <input type="radio"/> Yes, available only during office hours <input type="radio"/> No	
Information technology (IT) specialist	<input type="radio"/> Yes <input type="radio"/> No		<input type="radio"/> Yes, available 24h/24 and 7days/7 <input type="radio"/> Yes, available only during office hours <input type="radio"/> No	

¹ *Infectious diseases physicians = Holders of the specific professional title in clinical infectiology (= porteurs du titre professionnel particulier en infectiologie clinique/ = bijzondere beroepstitel in de klinische infectiologie)*

² *Clinical pharmacy is a health science discipline in which pharmacists provide patient care that optimizes medication therapy and promotes health, and disease prevention. The practice of clinical pharmacy embraces the philosophy of pharmaceutical care, blending a caring orientation with specialized therapeutic knowledge, experience, and judgment to ensure optimal patient outcomes.*

³ *Microbiologists are physicians or pharmacists specialised in clinical biology with competence in microbiology (recognized specialization or ongoing recognition)*

⁴ *AMS nurse = In Belgium, there is no recognized curriculum for an AMS nurse as opposed to an IPC nurse. However, this question enables to underline if some Belgian hospitals develop this specific role for nurses like in the Netherlands (<https://swab.nl/nl/deskundige-antimicrobial-stewardship>).*

4.2.1.1. If you answered above that an infectious diseases physician is not available, does your hospital have access to other experienced physicians in infectious diseases? *
Please choose **only one** of the following:

- Yes
- No
- Not applicable, an infectious diseases physician is available

4.2.1.2. If yes, please mention which specialists:

4.2.2. Is your hospital a training centre for the 4 following specialisations (specialisation internship)? Please choose **all that apply:**

- Internal medicine
- Infectious diseases
- (Clinical) Microbiology
- Clinical pharmacy
- None of the above

4.2.3. Is testing for penicillin allergy from allergy specialists available to prescribers in your hospital? * Please choose all that apply:

- Yes, available 24h/24 and 7days/7
- Yes, available during office hours
- Yes, available for ambulatory care
- No

4.2.4. Does your hospital have the possibility to perform therapeutic drug monitoring (TDM) for antimicrobial agents? * Please choose only one of the following:

- Yes
- No

4.2.4.1. Please select all the antimicrobial agents for which your hospital performs TDM. *

Only answer this question if the following conditions are met: Answer was 'Yes' at question 4.2.4.

Please choose **all** that apply:

- Temocillin
- Flucloxacillin
- Amoxicillin
- Piperacillin
- Cefuroxime
- Cefotaxime
- Ceftazidime
- Ceftriaxone
- Cefepime
- Meropenem
- Sulfamethoxazole / Triméthoprim
- Tobramycin
- Gentamicin
- Amikacin
- Vancomycin
- Teicoplanin
- Colistin
- Linezolid
- Fluconazole
- Itraconazole
- Voriconazole
- Isavuconazole
- Posaconazole
- Caspofungin
- Anidulafungin
- Rifampicin
- Rifabutin
- Isoniazid

- Pyrazinamide
- Ethambutol
- Aciclovir/valaciclovir
- Foscarnet
- Ganciclovir/valganciclovir
- Oseltamivir
- Ribavirin
- Other:

4.2.5. Please indicate in the table below the microbiological tests available in your hospital to reduce the use of inappropriate antimicrobials.

	Is it available?	If yes, does the patient pay for at least 75% of the price?
Rapid testing for respiratory pathogens (multiplex PCR for viruses and bacteria)	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown
Rapid testing for meningitis pathogens (multiplex PCR for viruses and bacteria)	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown
Rapid testing for pathogens causing diarrheal diseases (multiplex PCR for viruses and bacteria)	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown
Galactomannan	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown
(1.3)- β -D glucan	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown
16S PCR	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown

4.3. Other resources

4.3.1. Does your hospital have the information technology (IT) capacity to support the AMS activities?

AMS activities = Strategies directly aimed at measuring and improving the appropriateness of in-hospital antimicrobial use (stewardship activities), rather than activities inherently related to the specialties of the AMT (GGA/ABTBG) members that encompass prescriber-initiated consultation and diagnostic-driven advice.

Please choose **only one** of the following:

- IT engineer included in the AMT (GGA/ABTBG)
- IT support available upon request
- No IT support available
- Other

4.3.1.1. Does your AMT (GGA/ABTBG) receive IT support within your proposed time frame? *

Only answer this question if the following conditions are met:

----- Scenario 1 -----

Answer was 'IT engineer included in the AMT (GGA/ABTBG)' at question 4.3.1.

----- or Scenario 2 -----

Answer was 'IT support available upon request' at 4.3.1.

Please choose **only one** of the following:

- Yes, always
- Yes, most of the time
- Yes, sometimes
- No

4.3.2. Is support from the communication department available for AMS activities in your hospital?

AMS activities = Strategies directly aimed at measuring and improving the appropriateness of in-hospital antimicrobial use (stewardship activities), rather than activities inherently related to the specialties of the AMT (GGA/ABTBG) members that encompass prescriber-initiated consultation and diagnostic-driven advice.

Please choose **only one** of the following:

- No support available
- Yes, representative of the communication department included in the AMT (GGA/ABTBG) *
- Yes, support available upon request
- Other

4.3.2.1. Does your AMT (GGA/ABTBG) receive support from the communication department within your proposed time frame? *

Only answer this question if the following conditions are met:

----- Scenario 1 -----

Answer was 'Yes, representative of the communication department included in the AMT (GGA/ABTBG) *' at question 4.3.2.

----- or Scenario 2 -----

Answer was 'Yes, support available upon request' at 4.3.2.

Please choose **only one** of the following:

- Yes, always
- Yes, most of the time
- Yes, sometimes
- No

4.3.2.2. Does your AMT (GGA/ABTBG) receive the support of the communication department for the following means or material of communication? *

Only answer this question if the following conditions are met:

----- Scenario 1 -----

Answer was 'Yes, representative of the communication department included in the AMT (GGA/ABTBG) *' at question 4.3.2.

----- or Scenario 2 -----

Answer was 'Yes, support available upon request' at 4.3.2.

Please choose **all** that apply:

- Social medias
- Educational games
- Leaflets
- Booklets
- Posters
- Newsletters
- Newspapers
- Emails
- Website (internet)
- Website (intranet)
- Videos
- Podcasts
- E-learning
- SmartphoneApps
- Campaigns
- E-learnings
- Other:

4.3.3. Is administrative support available for AMS activities in your hospital?

AMS activities = Strategies directly aimed at measuring and improving the appropriateness of in-hospital antimicrobial use (stewardship activities), rather than activities inherently related to the specialties of the AMT (GGA/ABTBG) members that encompass prescriber-initiated consultation and diagnostic-driven advice.

Please choose **only one** of the following:

- There is no administrative support available
- Yes, the secretary is included in the AMT (GGA/ABTBG)
- Yes, but only upon request
- Other

4.4. You reached the end of part 4 "Hospital resources for antimicrobial stewardship programs".

If your AMT (GGA/ABTBG) has any additional comments/ thoughts about this part, please share them below.

Please write your answer here:

5. Final questions

5.1. Did your AMT (GGA/ABTBG) implement any additional antimicrobial stewardship activities that have not been covered in this questionnaire?

Please write your answer here:

5.2. What are the most successful aspects of your hospital's antimicrobial stewardship program?

Please write your answer here:

You reached the end of the questionnaire.

If you have any other remarks/comments, please share them below.

Please write your answer here:

Thank you very much for your participation.

If you have any comments concerning the survey, you can contact Christelle Vercheval by email (christelle.vercheval@sciensano.be).

Yours sincerely,

Christelle Vercheval, project manager, Sciensano

Caroline Briquet, hospital pharmacist, Cliniques Universitaires Saint-Luc

Diana Huis in 't Veld, infectious diseases physician, UZ Gent

Lucy Catteau, project coordinator, Sciensano

**Submit your survey.
Please note that there is no return to it later.
Thank you again for completing this survey.**

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