

**EUROPEAN ANTIBIOTIC AWARENESS DAY**  
**Toolkit targeting prudent antibiotic use in hospitals**  
*Guidance note*

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## 1. Introduction

### 1.1 Background and objectives

Concerted long-term efforts to promote prudent antibiotic use are key to turning the tide on antibiotic resistance. The success of campaigns on prudent antibiotic use in some EU countries stimulated the launch of European Antibiotic Awareness Day - a European public health initiative coordinated by the European Centre for Disease Prevention and Control (ECDC) – in 2008. European Antibiotic Awareness Day takes place each year around 18 November with the aim of providing a platform and support for national prudent antibiotic use campaigns. This year, European Antibiotic Awareness Day will focus on prudent use of antibiotics in hospital settings.

This Guidance Note presents the EAAD toolkit targeting prudent antibiotic use in hospitals, provides advice on how best to approach the different target audiences and how to adapt the toolkit materials for use as part of national campaigns.

### 1.2 Overall strategy and objective of the toolkit

The aim of this toolkit is to support efforts at national level to increase prudent use of antibiotics in hospitals through dissemination of evidence-based educational and information materials. The toolkit contains template materials and evidence-based key messages which may be adapted for use at national level, and suggests tactics for getting the messages regarding prudent use of antibiotics through to the target audiences.

The template toolkit materials and more information about the European Antibiotic Awareness Day (EAAD) are available on the European Antibiotic Awareness Day website:

<http://antibiotic.ecdc.europa.eu/>.

### 1.3 Contents of the toolkit

The toolkit includes the template materials described below. These template materials are provided in electronic format and will be made available on the EAAD website. The template materials and their suggested use are described in more detail in the following sections.

- Basic tools
  - Key messages
  - Campaign slogans
  - Hedgehog visuals
- Template materials for hospital prescribers and management
  - Factsheet
  - Presentation
  - Screen saver
- Template materials for prescribers
  - Checklist
  - Prototype advertorial
  - Prototype online banner
- Template materials for hospital management
  - Template letter

## 2. Evidence base

The toolkit is based on key messages which are derived from a thorough review of the scientific literature by ECDC experts (Annex 1). The figures, graphs and data used in the template materials are as recent as was available at the time of drafting (June / July 2010); the Europe-wide prevalence tables are publicly available on the website of the European Antimicrobial Resistance Surveillance System at [www.earss.eu](http://www.earss.eu). Nevertheless, it should be recognised that the available data supports the elaboration of general EU-wide conclusions, key messages and recommendations and that, to be most effective at the national level, these overall considerations should be accompanied by country-specific information and supportive data.

In addition to data from studies and surveillance, the materials have been reviewed through a consultation process (Annex 2): The toolkit structure, key messages and proposed template materials were presented in April 2010 to the ESCMID Post-Graduate Course in antibiotic stewardship and jointly to the National AMR Focal Points and National Bodies for Communications. These groups were asked to provide input through a questionnaire. Sixty six participants to the ESCMID course and nineteen National AMR Focal Points and Communications bodies replied to the questionnaire. The summary results of the questionnaire survey, along with a list of respondents willing to participate in a consensus-type panel using the Delphi method, were then taken over by researchers at the Health Promotion Research Centre National University of Ireland, Galway. The consensus report was based on the replies of 24 of the 30 volunteers and provided results on the key messages, campaign slogans, campaign visuals and information materials. The results of this review process provide the basis for the final template materials, key messages as well as for the selection of target audiences.

## 3. Target audiences

### 3.1 Selection of target audiences

The primary target audience for European Antibiotic Awareness Day 2010 is antibiotic prescribers in hospitals. The secondary audiences are hospital managers and to a lesser extent hospital pharmacists and pharmaceutical / antibiotic stewardship committees. The groups selected as secondary target audiences have different roles and influences in the use of antibiotics in hospitals for example, hospital management is key to decisions about implementing antibiotic stewardship programmes; hospital pharmacists are 'gatekeepers' to the administration of antibiotics and antibiotic stewardship committees and pharmaceutical committees have a role in the definition of hospital antibiotic guidelines and policies.

The selection of these groups as primary and secondary target audiences was based on the outcome of the consensus-building process (see Annex 2) during which there was consistent identification of hospital prescribers as a primary target group for the toolkit. While other groups of hospital practitioners (such as surgeons, microbiologists, nurses, infectious disease clinicians) were pointed out as well, the consensus was that the focus of the communications campaign should be on prescribers as a general group, so that on the one hand no individual medical speciality is pointed out among others; and on the other, the messages and template materials are appropriate across all countries.

### 3.2 Reaching the target audiences

The issues surrounding antibiotic resistance in hospital settings may differ in each member state. It is important to stress that the template materials provide a core of information and common messages but will be most effective if adapted to respond to the needs and situations in each country, even in each hospital. Countries could consider leveraging the national antimicrobial resistance data available from EARSS and consulting with professional associations in their countries on the most appropriate tools to be used. That is why the template materials leave room for adaptation and insertion of targeted

information, for example if a country wants to target surgeons with messages about use of antibiotics for prophylaxis. Possible adaptations include:

- selecting specific groups of hospital prescribers, e.g. surgeons;
- selecting specific messages from the proposed key messages.

### 3.3 Creating partnerships at national level to support reaching the target audiences.

In developing the template toolkit materials, ECDC consulted EU-wide professional societies in the first half of 2010. The organisations that were consulted include the following:

- European Association of Hospital Doctors (AEMH)
- Standing Committee of European Doctors (CPME)
- European Association of Hospital Pharmacists (EAHP)
- Pharmaceutical group of the European Union (PGEU)
- European Hospital Federation (HOPE)
- European Union of Private Hospitals (UEHP)
- European Federation of Nurses (EFN)
- European Respiratory Society (ERS)
- European Public Health Alliance (EPHA)
- European Generics Association (EGA)
- European Federation of Pharmaceutical Industry Associations (EFPIA)

Based on these contacts, ECDC gained the support of these professional organisations, many of which have agreed to help disseminate the toolkit to their national member organisations once they are finalised and launched. A list of national contact points for these organisations is included in Annex 4. In case of uncertainty, please seek advice from ECDC about establishing partnerships and relationships on a case-by-case basis in order to best support national activities and the focus of EAAD in 2010.

## 4. Toolkit materials

The general considerations for the development of the template materials are outlined below.

### 4.1 About the template materials

As mentioned above, the toolkit for hospital prescribers has been developed on the basis of consultations with ECDC experts, the EAAD Technical Advisory Committee, National AMR Focal points, representatives of professional organisations and participants to the ESCMID Post-Graduate Course in antibiotic stewardship.

The feedback was collected and review using a Delphi-like consensus building process. Below is a brief overview of the general results of the consensus process:

- The consensus process outlined the preferred key messages for each target audiences, as well as those messages that may not be appropriate with prescribers or hospital managers.
- The consensus report showed agreement on the overall campaign slogans, as well as the preferred slogans and headings for each target audience.
- The preferred elements of visual aids were identified and fed into the development of the supportive images.
- As for toolkit materials, factsheets and presentations were recognised as the preferred channels for information overall and for each of the target groups. Other materials were identified as more appropriate with prescribers (checklist) or hospital managers (letter).

More details on the consensus process input to each template material and its appropriateness with the target audiences are provided in the respective sections on the individual types of materials.

## 4.2 Key messages

The key messages provide a set of water tight statements, each of which is accompanied by a reference, which guide the content of the template materials. The development of the key messages for the annual European Antibiotic Awareness Day campaign activities has been accompanied by the research, drafting, consultation and finalisation tailored to the overall audience. A list of bibliographical references for the key messages is provided in Annex 2.

The key messages focus on four parts:

- (1) What is the problem (with antibiotic resistance)?
- (2) How does the use of antibiotics contribute to the problem?
- (3) Why promote prudent use of antibiotics
- (4) How to promote prudent use of antibiotics

### (1) What is the problem?

The first set of messages describes the extent of antibiotic resistance and its impact on hospitals, patient safety and patient outcomes.

- Antibiotic-resistant bacteria have become an everyday occurrence and problem in hospitals across Europe (1).
- Misuse of antibiotics may cause patients to become colonised or infected with antibiotic-resistant bacteria, such as methicillin-resistant *Staphylococcus aureus* (MRSA), vancomycin-resistant enterococci (VRE) and highly-resistant Gram-negative bacilli (2-3).
- Misuse of antibiotics is associated with an increased incidence of *Clostridium difficile* infections (4-5).
- The emergence, selection and spread of resistant bacteria is a threat to patient safety in hospitals because:
  - o Infections with antibiotic-resistant bacteria result in increased patient morbidity and mortality, as well as increased hospital length of stay (6-7).
  - o Antibiotic resistance frequently leads to a delay in appropriate antibiotic therapy (8).
  - o Inappropriate or delayed antibiotic therapy in patients with severe infections is associated with worse patient outcomes and sometimes death (9-11).
  - o The current pipeline for new antibiotics is limited and, if antibiotic resistance continues to grow, there will be no effective antibiotics for treatment (12).

### (2) How does the use of antibiotics contribute to the problem?

The second set of messages describes the impact of hospital antibiotic use to overall antibiotic resistance levels and defines the scope of antibiotic misuse.

- Patients who are hospitalized have a high probability of receiving an antibiotic (13) and 50% [TO BE ADAPTED TO NATIONAL FIGURE] of all antibiotic use in hospitals can be inappropriate (4, 14);
- Misuse of antibiotics in hospitals is one of the main factors that drive development of antibiotic resistance (15-17);
- Misuse of antibiotics can include any of the following (18):
  - o When antibiotics are prescribed unnecessarily;
  - o When antibiotic administration is delayed in critically ill patients;
  - o When the spectrum of antibiotic therapy is either too narrow or too broad;
  - o When the dose of antibiotic is either too low or too high compared to what is indicated for that patient;
  - o When the duration of antibiotic treatment is too short or too long;
  - o When antibiotic treatment is not streamlined when microbiological culture data become available.

It is important to adapt the figure on the extent of inappropriate prescribing in hospitals to reflect the situation in each country – the 50% figure is an average based on many countries.

### (3) Why promote prudent use of antibiotics

The third set of key messages describes the reasons why the target audiences should prioritise prudent use of antibiotics.

- Prudent use of antibiotics can prevent the emergence and selection of antibiotic-resistant bacteria (4, 17, 19-21).
- Decreasing antibiotic use has been shown to result in decreasing incidence of Clostridium difficile infections (4, 19, 22).

These key messages emphasise both the patient safety issue and the patient outcomes issue.

### (4) How to promote prudent use of antibiotics

The fourth set of messages outlines the 'how' of prudent antibiotic prescribing, following logically the previous messages on prudent use as a way to ensure better health outcomes.

- Multifaceted strategies which include use of ongoing education, use of evidence-based hospital antibiotic guidelines and policies, restrictive measures and consultations from infectious disease physicians, microbiologists and pharmacists, may result in better antibiotic prescribing practices and decreasing antibiotic resistance (4, 19, 23).
  - o Monitoring of hospital antibiotic resistance and antibiotic use data has been shown to provide useful information to guide empirical antibiotic therapy in severely ill patients (24)
  - o Correct timing and optimal duration of antibiotic prophylaxis for surgery is associated with a lower risk of surgical site infections (25) and lower risk of emergence of antibiotic-resistant bacteria (26)
  - o Studies show that, for some indications, shorter rather than longer duration of treatment can be administered without differences in patient outcome and this has also been associated with lower frequencies of antibiotic resistance (15, 27-28).
  - o Taking microbiological samples before initiating empiric antibiotic therapy, monitoring culture results and streamlining antibiotic treatment based on culture results is a means to reduce unnecessary antibiotic use (29).

As mentioned above, some key messages are more appropriate with certain audiences. The consultation and review processes mentioned above have considered this and identified the top three messages for each audience. The preferred overall key messages based on the consultation are the following:

Rank	General key messages
1	The selection and spread of resistant bacteria in hospitals is a major patient safety issue
2	Infections with antibiotic resistant bacteria are known to increase morbidity and mortality, as well as the length of stay in hospitals.
3	Misuse of antibiotics is driving the development of resistance.

When broken down for target groups, the ranking varies slightly between hospital prescribers, hospital management, pharmacists and antibiotic stewardship committees.

Rank	Key messages for hospital prescribers (e.g. doctors or nurses)
1	The selection and spread of resistant bacteria in hospitals is a major patient safety issue
2	Infections with antibiotic resistant bacteria are known to increase morbidity and mortality, as well as the length of stay in hospitals
3	Inappropriate prescribing' can include: (i) unnecessary prescription of antibiotics, (ii) inappropriate use of broad spectrum antibiotics, (iii) wrong selection of empiric antibiotics, (iv) lengthy durations of treatment

	Key messages for hospital management
1	The selection and spread of resistant bacteria in hospitals is a major patient safety issue
2	Infections with antibiotic resistant bacteria are known to increase morbidity and mortality, as well as the length of stay in hospitals
3	Implementation of structured antimicrobial stewardship plans are proven to improve prudent use of antibiotics

	Key messages for hospital pharmaceutical committees/antibiotic stewardship committees
1	The selection and spread of resistant bacteria in hospitals is a major patient safety issue
2	Implementation of structured antimicrobial stewardship plans are proven to improve prudent use of antibiotics
3	Local surveillance and microbiological data should inform hospital guidance and empirical antibiotic treatment

	Key messages for hospital pharmacists
1	Implementation of structured antimicrobial stewardship plans are proven to improve prudent use of antibiotics
2	The selection and spread of resistant bacteria in hospitals is a major patient safety issue
3	Infections with antibiotic resistant bacteria are known to increase morbidity and mortality, as well as the length of stay in hospitals

The differences in messages appropriate for target audiences reflect further the need to adapt communications to the intended audience. For instance, patient safety is a general concern to all audiences; at the same time, the message about misuse of antibiotics is more relevant to prescribers while the information about antibiotic stewardship was recognised as more relevant to hospital managers and antibiotic stewardship experts.

### 4.3 Campaign slogans

Slogans are a useful tool for communications campaigns as their role is to attract the attention of target audiences to an issue or to call for a behavioural change in a simple, straightforward way. Campaign slogans are simple sentences that are memorable and catchy. They should not be used on their own, but rather as headers on communications materials such as factsheets, brochures, posters, adverts etc.

Because antibiotic resistance is a complex issue, it was decided that an appropriate way of framing the slogans would be to identify simple sentences and sub-headings that would be used together. Therefore, the EAAD campaign slogans consist of two parts: the first is short and memorable (e.g. "Antibiotics – handle with care") and the second one is a slightly longer explanation that provides more information or identifies the campaign objective (e.g., "Misuse of antibiotics leads to antibiotic resistance"). Sub-headings should not be used on their own.

In order to help to promote the key messages of the European Antibiotic Awareness Day with the target audiences, a number of slogans have been proposed through the consultation outlined in section 3.

Rank	Overall campaign slogans
1	Target antibiotic therapy: Take cultures before starting antibiotic therapy!
2	I love antibiotic prophylaxis: For less than 24 hours
3	Antibiotics - handle with care: Misuse of antibiotics leads to antibiotic resistance

In this ranking, the second message was subsequently withdrawn as it is too specific to surgeons among hospital prescribers and as such it does not resonate with the broader target audience. However, it may be appropriate for campaigns that are specific to surgical settings.

The results of the review process have indicated that some of the slogans are perceived to be more effective with certain target groups, e.g. hospital prescribers and hospital management. The messages focusing on clinical practice were considered as more appropriate for prescribers, while the more general messages about promoting prudent use of antibiotics were considered as more appropriate for hospital management.

For instance, the first overall slogan – “Target antibiotic therapy: Take cultures before starting antibiotic therapy!” – was preferred for hospital prescribers. The third slogan – “Antibiotics - handle with care: Misuse of antibiotics leads to antibiotic resistance” – was preferred for hospital management.

Based on the considerations above, the final proposed slogans and sub-headings for the campaign are as follows:

**Antibiotics - handle with care**

Misuse leads to antibiotic resistance

**Target antibiotic therapy**

Take cultures before starting antibiotic therapy

**Take that sample**

Take cultures before starting antibiotic therapy

**Have you consulted the antibiotic expert in your hospital?**

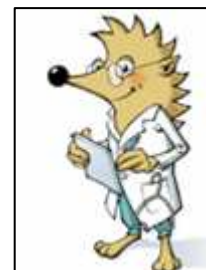
Use antibiotics prudently to keep them working

These slogans will be used in the template communications materials as appropriate for each target audience.

#### 4.4 New campaign visuals

During the preparation of the 2010 campaign, it was decided to update the hedgehog visual. Therefore, a consultation was started about what the new campaign visuals could look like. Following consultation (see section 3), the following three hedgehog visuals were designed to represent hospital prescribers as they are recognisable to a different array of medical cultures.

- A hedgehog wearing a white coat, a stethoscope and holding a chart. This visual represents a prescriber (the chart) or pharmacist in a hospital (the chart and the white coat are common to hospital doctors and pharmacists) checking patient data. It would be appropriate to depict the messages about targeting antibiotic therapy and consulting with antibiotic experts.





- A hedgehog wearing short-sleeve surgical scrubs and hat, putting on gloves. This visual represents a surgeon preparing for an intervention. This visual could be appropriate to accompany materials referring to appropriate antibiotic prophylaxis, where applicable. In this case, the hedgehog wears short-sleeve scrubs which were indicated as a common surgical outfit.
- A hedgehog wearing long-sleeve surgical scrubs and using a stethoscope. This visual represents a hospital doctor or nurse, who could be in surgery preparation and consulting patients. This hedgehog is wearing long-sleeve surgical scrubs, which are common in some countries, and using a stethoscope for the consultation.



The aim of the visuals is to provide a common theme – the campaign character in a different situation - that could be used for communications materials in national campaigns. In this toolkit, the visuals are used as such and as part of the screen saver.

#### 4.5 Template materials for hospital prescribers and management

Following the review process, some communications materials were identified as appropriate for both hospital prescribers and hospital management. These include a factsheet on the emergence and rise of antibiotic resistance in hospital settings and ways to fight this trend; a presentation that could be used for in-hospital trainings which provides the key issues and ways to improve antibiotic use; and a screen saver that can be installed on computers in hospitals, which makes use of the campaign visuals to deliver key messages.

Below is an overview of the results of the consultation on the proposed communications tools.

Rank	Overall information materials
1	Factsheet
2	Presentation
3	Poster

Rank	Information materials for hospital prescribers (e.g. doctors or nurses)
1	Pocket-sized checklist
2	Presentation
3	Factsheet

Rank	Information materials for hospital management
1	Factsheet
2	Presentation
3	Letter

Rank	Information materials for hospital pharmaceutical committees/antibiotic stewardship committees
1	Presentation
2	Factsheet
3	Brochure

Rank	Information materials for hospital pharmacists
1	Factsheet
2	Presentation
3	Poster

#### 4.5.1. Factsheet

The factsheet on antibiotic resistance in hospital settings has been developed to provide hospital prescribers and hospital management with EU and national data. It is a one-page double-sided document which aims to provide information about “why” inappropriate antibiotic use contributes to resistance and “how” prudent antibiotic use can be promoted in hospitals.

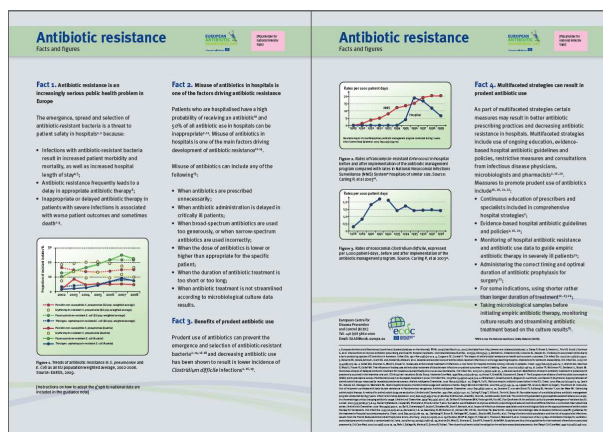
The factsheet emerged as one of the preferred communications material for hospital prescribers and management, as well as for pharmacists and antibiotic stewardship committees, during the consultation of participants to the ESCMID course and of National AMR Focal Points and communications bodies. Moreover, the factsheet addresses the time that many respondents stated they allocate to reading information materials distributed in hospitals – between 5 and 15 minutes.

The factsheet is provided in Microsoft Word and Adobe InDesign format, allowing for its translation and adaptation to national situations (e.g. adapting and inserting country-specific data, graphs, and figures). The factsheet carries the ECDC and EAAD logos and can be adapted for national use by inserting the logo of the national authority and national contacts.

The Microsoft Word version carries embodied tables containing the national data for Figure 1. The template factsheet includes the data for Austria as an example of how national data could complement EU-wide information on antibiotic resistance.

In order to obtain the relevant national data and include it in the graph, the following steps need to be followed:

- Right-click on the chart and press on “Chart Object”
- Press “Edit”. An excel sheet will be opened.
- To select or de-select data shown in the graph, double click on the bar left from the cells which indicate the coloured line of the graph.
- In order to change the colour or type of the graph lines, right click on the desired line and select “format data series”.



#### 4.5.2. PowerPoint presentation

A PowerPoint presentation also ranks among the top materials intended for hospital prescribers and managers alike. In the case of a presentation, there are different objectives with the different audiences: in the case of hospital prescribers (as well as hospital pharmacists) the presentation serves the purpose of an information source. In the case of hospital managers (as well as antibiotic stewardship committees or pharmaceutical committees), a presentation will be more a tool to disseminate important information and useful tips to practitioners in the hospital. In any case, the presentation is foreseen as a template training tool in hospital settings either for trainers or those receiving training.

It is important to bear in mind that the template provided in this toolkit contains general information and data, and should be adapted with national or hospital-specific information.

The presentation contains the following topics:

- About antibiotic resistance and the impact of hospital antibiotic use in this phenomenon
- Information about why inappropriate antibiotic use is driving resistance

- Information about how prudent antibiotic use can be promoted in hospitals
- Information about European Antibiotic Awareness Day and link to the EAAD website for further information and reading

The presentation is provided in universal Microsoft PowerPoint format (\*.ppt), which makes it easily adaptable on any computer with Microsoft Office. The presentation contains several embedded graphs and figures, which can be adapted. In particular, the graph on outpatient antibiotic use in 28 European countries (slide 5) can be accessed and modified to reflect national data. Also, the graph on trends in antibiotic resistance (slide 4) can be adapted as follows:

To add information

- right click on the graph and select “data source”
- in the bottom left of the screen that appears, select “add”.
  - o To the right of the “add button”, click on the arrow icons to select the title of the new data and the rows in the excel sheet that should provide the data in the graph
    - For the title, click on the cell in column A
    - For the data range, select the entire row by clicking to the left of the row
  - o Repeat these steps for every line of additional data

To remove information:

- right click on the graph and select “data source”
- in the bottom left of the screen that appears, select the information you would like to remove and click “remove”.

#### 4.5.3. Screen saver

The idea of a screen saver occurred during the consultation process. The screensaver is foreseen as an attention-grabbing tool that delivers a small number of important messages reflecting the key messages and campaign slogans. The screen saver contains the overall campaign messages that were recognised as appropriate to all target audiences.

The screen saver can be adapted by editing the text in the animation, e.g. translating the messages into the local language. The screensaver will be delivered as an executable file available on the EAAD website. It is animated in Flash and can be modified using a Flash editing programme.

## 4.6 Template materials for hospital prescribers

As outlined above, some materials were considered as more appropriate if targeted directly at hospital prescribers. These materials build on the reality of hospital prescribers being generally busy and allocating relatively little time to information materials outside medical journals and continuous professional training. Therefore, the material that was best received for this target group included a pocket-sized checklist.

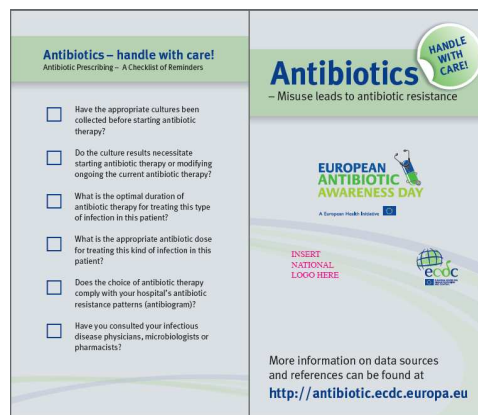
Additionally, following the consultation process, an advertorial and an online banner were developed for placement in print or online journals.

### 4.6.1. Checklist for hospital prescribers

The checklist was conceived as a small card that can be kept in white coat pockets and consulted as a reminder of prudent antibiotic prescribing. Its objective is to provide practical support to prescribers on the considerations of antibiotic prescribing and the questions they need to ask themselves before, during and after making the decision to administer antibiotic treatments to patients.

On the back the checklist carries the logos of European Antibiotic Awareness Day and ECDC and has space for the insertion of national health ministry logo and of logos of supportive organisations. It also contains a link to the EU campaign website and could also include links to national campaign websites.

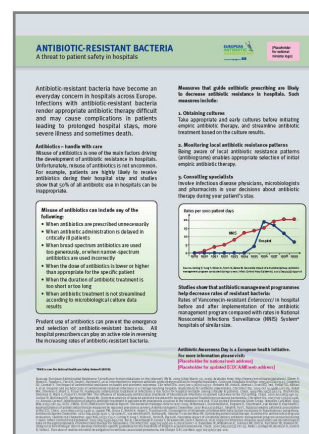
The checklist is provided in Adobe InDesign format, which can be edited by using this professional design programme. The checklist does not include any data or graphs that will require adaptation. It is recommended to add to the strength of this material by gaining endorsement of additional organisations in each Member State, according to the recommendations in section 3, which could also help with the dissemination of this tool to the target audience.



4.6.2. Prototype advertorial

A prototype advertorial is also provided in this toolkit. It is based on the facts and figures presented in the factsheet and on the key messages. The advertorial presents an overview of what misuse of antibiotics is, then it provides prescribers with information on three main ways in which they can contribute to decreasing antibiotic resistance: taking cultures, monitoring antibiograms and consulting hospital antibiotic experts.

ECDC will rely on offers received from professional societies to include the advertorial in their newsletters or journals and campaign coordinators in each member state are encouraged to contact national societies to secure the placement of the advertorial in their journals and publications. The advertorial does not contain any country-specific data, but it allows the space for local data to be inserted if necessary and appropriate.



4.6.3. Prototype online banner

An online banner is a simple tool that can be used on websites to help direct traffic towards the European Antibiotic Awareness Day website. Such a tool could be placed on websites of supportive organisations for a determined period of time, for example around European Antibiotic Awareness Day on 18 November or marking national activities and would be linked to the European or national campaign website. Third party websites could include medical/scientific journals, news websites, government websites etc.



Placing an online banner is a straightforward action as it is analogous to buying advertising space. An online banner could also be proposed to medical publications along with the advertorial, as the two tools complement each other. The template banner proposes three actions to target antibiotic treatment.

The online banner was designed in Graphics Interchange Format (\*.gif). The individual screens can be edited in Adobe Illustrator (or InDesign) and the animation (screen transition) can be edited in Adobe Photoshop.

#### 4.7 Template materials for hospital management

During the consultation, one of the suggested communications tools was perceived as most appropriate when directed specifically to hospital management – this was a template letter which presents the European Antibiotic Awareness day campaign and calls for support in implementing multi-sectoral antibiotic stewardship strategies.

##### 4.7.1. Template letter

The template letter was drafted for use when contacting hospital managers to introduce European Antibiotic Awareness Day. The letter can be signed by the national health minister or other high-level health officials at national level. The letter is provided in Microsoft Word format, allowing for the addition of the logo of national health authorities' logo and the signature of the national health minister where appropriate.

Like the other template materials, the letter can be translated and adapted to include relevant national details, then sent to hospital managers as an introduction of European Antibiotic Awareness Day and a call for their support to this initiative. The letter explains the extent of antibiotic resistance and provides information on the impact of misuse of antibiotics on patient safety and patient outcomes. Furthermore, the letter calls for attention to the alarming rise in antibiotic resistance across Europe and asks hospital managers for their support to fight this negative trend. It also promotes the European Antibiotic Awareness Day website and tools for hospital prescribers – such as the training presentation and factsheet – as useful resources for communicating antibiotic awareness in hospitals.

The letter may also be appropriate with hospital antibiotic stewardship committees and pharmaceutical committees and could be used to accompany other materials targeted at hospital managers such as the factsheet, presentation, screen saver which can more easily be disseminated with hospital management support. Other materials developed nationally for hospital practitioners can also be included (e.g. posters etc).

## 5. Integrating the toolkit into the national EAAD campaign

As mentioned above, toolkit materials are templates and should be adapted to the local situation and the selection of focus for the European Antibiotic Awareness Day campaign activities in 2010. This should include the translation of materials and the use of country-specific data. The campaign materials for hospital prescribers can complement previous campaign materials for primary care prescribers (2009) and the general public (2008). The 2010 materials add a new focus and level of detail to those previously developed and should not be seen as exclusive of previous years' campaign tools.

## 6. Adapting the toolkit – technical specifications

The toolkit materials are provided in an adaptable format (Word, Adobe InDesign/Photoshop) for easy adaptation, translation and use at national level. In addition to this toolkit, it is recommended to continue using the supporting materials developed in previous years, such as the hedgehog and scarf visuals, the tools for primary care prescribers and the media materials, throughout the campaign to consolidate the initiative and continue to ensure a common visual identity for the campaigns across the EU member states. This would contribute to ensuring that the messages are recognisable, consistent and therefore memorable to the target audiences throughout the EU. The template materials share a common general look and all carry the ECDC and EAAD logos, to which logos of national authorities can be added to add weight and show support for the campaign.

Below are the technical specifications of the template materials.

**For additional guidance on adapting the content of each template material to national data, please refer to the respective sections in this document.**

### Hedgehog visuals

- Format: Photoshop files (\*.tif files)

- Branding: No logos used for the visual; it should be used together with the EAAD logo

### Factsheet

- Format 1: Double-sided, A4, InDesign
- Branding: ECDC, EAAD logos; possibility to add national health ministry logo
- Specifics:  
Font: Meta Plus  
Dark blue C: 100, M: 80, Y: 0, K: 20  
Black: K: 100

- Format 2: Double-sided A4 Microsoft Word document (\*.doc)
- Branding: ECDC, EAAD logos; possibility to add national health ministry logo
- Specifics:  
Font: Arial  
Dark blue R: 37; G: 65; B: 133  
Black: R: 0; G: 0; B: 0

### PowerPoint Presentation

- Format: PowerPoint presentation
- Branding:  
EAAD logo; possibility to add logos of national health ministry and supportive organisations
- Specifics:  
Font: Tahoma

### Screen saver

- Format: Flash animation provided as an executable programme (exe)
- Branding: EAAD logo
- Specifics:  
Each screen changes every 5 seconds; sound effects repeat once every animation cycle

### Checklist

- Format: Double-sided 7x12 cm card, InDesign
- Branding: ECDC, EAAD logos; possibility to add logos of national health ministry and supportive organisations
- Specifics:  
Font: Meta Plus
- Font colours:  
Dark blue C: 100, M: 80, Y: 0, K: 20  
Black: K: 100

### Prototype Advertorial

- Format: One sided, 260mm x 186mm, InDesign
- Branding:  
ECDC, EAAD logos; possibility to add national health ministry logo
- Specifics:  
Font: Meta Plus  
Dark blue C: 100, M: 80, Y: 0, K: 20  
Black: K: 100

### Prototype banner

- Format: GIF file, Illustrator / Photoshop
- Branding: EAAD logo
- Specifics:  
Font: Meta Plus  
Dark blue C: 97; M: 73; Y: 7; K: 0

### Template letter to hospital managers

- Format: one page Microsoft Word file (\*.doc)
- Branding: EAAD logo; possibility to add national health ministry logo; Health Minister signature to be secured at national level
- Specifics:  
Font: Tahoma 10 pt.

The template materials are available on the campaign website at <http://antibiotic.ecdc.europa.eu>, which provides a resource for information and materials in a multilingual format for the target audiences in 2010 and in previous years, as well as for the general public.

## 7. Evaluating the EAAD campaign and materials in your country

During annual evaluations of previous European Antibiotic Awareness Day activities, several National AMR Focal Points have pointed out the need to ensure the consistent evaluation of campaign activities across the EU Member States. As a result, below are a few considerations and indicators that aim to help campaign coordinators evaluate the impact of campaign activities from a communications perspective.

### 7.1 Objectives of the evaluation

The evaluation of a communications campaign should take into account several elements:

- The communications problem to solve – i.e. identifying the cause of high levels of unnecessary / inappropriate prescribing (this may be, for example, due to perceptions that longer term prophylaxis may yield better results for patients);
- The campaign objectives (for example, to inform or to change behaviour);
- The obstacles to reaching the communications objectives;
- The audience – identifying who are groups that are more likely to use antibiotics inappropriately and the reasons that would be the case;
- The message delivery tools – the materials, media or online sources which are suited to reaching the target audience.

These criteria should be established prior to the campaign. They should not be exhaustive and should be adapted as the campaign progresses. The evaluation reports of the campaigns should be made public and be accompanied by lessons learned and recommendations on future improvements.

As mentioned before, surveys and field studies can be effective tools that help measure perceptions and behaviour at the beginning, during, and after the completion of a communications campaign. However, in order to design these studies, indicators should be developed and built into the campaign plan of activities. A particular focus should be given to measurable activities.

### 7.2 Development of indicators

The overall goal of the European Antibiotic Awareness Day is to support national efforts promoting prudent use of antibiotics. Communications activities should support this objective; however it is difficult to measure the effectiveness of national campaigns against this overall goal.

Some potential indicators of campaign effectiveness can include a number of outcome indicators which measure the end point:

- change in knowledge, attitudes and behaviour about prudent antibiotic use (questions can be accessed from the *Eurobarometer on antimicrobial resistance* available at [http://ec.europa.eu/health/antimicrobial\\_resistance/docs/ebs\\_338\\_en.pdf](http://ec.europa.eu/health/antimicrobial_resistance/docs/ebs_338_en.pdf); country factsheets available at [http://ec.europa.eu/health/antimicrobial\\_resistance/docs/country\\_factsheets.zip](http://ec.europa.eu/health/antimicrobial_resistance/docs/country_factsheets.zip));
- Decrease in antibiotic use (data should be available at national and/or European level)
- Decrease in antibiotic prescriptions;
- Incidence of resistant bacterial infections in the community or in hospitals (official data should be available).

Additional indicators that could be considered include several process indicators which measure parts of the process:

- media coverage;
- blogs mentioning or tagging the campaign;
- number of internet searches on keywords;
- number of unique visitors of the campaign website;
- number of downloads from the campaign website;
- number of participants to online groups or online discussions;
- number of participants to campaign events;
- uptake of the campaign messages by independent sources;
- campaign recognition;
- reputational impact for the organising authority.

Qualitative analysis may also reveal more about the effects of the campaign:

- number and type of media inquiries about the campaign;
- qualitative analysis of media coverage (positive/neutral/negative);
- surveys of the target audience to identify the reasons for behavioural change;
- direct feedback received from the public via contact details or internet channels (for example on the website, in online discussions, on social networks).

It is important to note that while deliverables and endpoints are an essential component of effective communications campaigns, raising knowledge and changing attitudes and behaviour are long-term processes which should be conducted consistently and regularly, focusing on sustainable results.

The evaluation of a communications campaign's cost-effectiveness could also be envisaged, especially between phases of the same campaign or in advance of the organisation of a new campaign. While there is no single approach to this, several factors could be used to support the cost-effectiveness assessment of a campaign:

- the cost of each component of the campaign, relative to the size of the audience reached;
- the costs of the campaign, relative to the knowledge, attitude or behaviour change measured through the evaluation of the campaign.

The measurement of cost effectiveness should also be done through a comparison exercise either with other campaigns or between the different components of the campaign. The latter can be very useful in mid-term reviews of a campaign, where it can lead to the reallocation of resources to those components of the campaign (materials, actions, or events) that have greater reach, were more publicised, or are less costly.

## 8. Key contacts

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**Annex 1. Key message references**

**Annex 2. Report by University of Galway**

**Annex 3. List of medical professionals who are members of the European Parliament**

**Annex 4. List of links to the membership of relevant European professional associations**