



# Good Practice Recommendations for Use of Antibiotics Towards the End of Life

## Background

Antibiotics are used widely for patients in all care settings in the months, weeks, days and even hours before death. However, the decision to start, or not start, antibiotic therapy in this context requires careful consideration. As in all clinical situations, there is the potential for harm, both for the individual patient (through side-effects, including *Clostridioides difficile*) and for the wider community (through promotion of antimicrobial resistance). Towards the end of life, though, there is added complexity: antibiotics may not change the clinical outcome but may mean that the patient's care is overly medicalised and not aligned to what matters most to them.

In March 2019, the Scottish Antimicrobial Prescribing Group (SAPG) convened a short life multi-professional subgroup to explore the use of antibiotics towards the end of life in all settings, from the community and care homes to hospitals and hospices. Membership of the group included General Practitioners, physicians in Acute Medicine, Geriatric Medicine, Palliative Medicine, Infectious Disease and Public Health, Old Age Psychiatrists, specialist nurses and clinical pharmacists.

The aim of the group was to optimise antibiotic prescribing practices towards the end of life and to align this with the founding principles of Realistic Medicine: building a personalised approach to care; changing style to shared decision-making; reducing harm and waste; adding value; tackling unwarranted variation in practice.

Two important pieces of work informed the development of these good practice recommendations: a systematic review of antibiotic prescribing at the end of life (see Appendix 1) and an electronic survey of prescriber attitudes and behaviours across all health and care settings in Scotland (see Appendix 2). Following review and discussion of this evidence, the group agreed a number of key recommendations to support clinicians making decisions about antibiotics towards the end of life.

## Good Practice Recommendations for use of antibiotics towards the end of life

These recommendations apply to adults approaching the end of life. Here, 'End of life' is defined as the last few days or weeks of life, but it is acknowledged that the diagnosis or prediction of the actual 'end of life' is not always easy. Anticipatory care discussions with patient and families should ideally take place long before this point is reached.

### 1. Make shared decisions about future care

The evidence suggests this is the most important aspect of care for patients and their families/carers.

- a. Decisions about antibiotic prescribing towards the end of life should be taken jointly between the clinician, or in some settings the multi-disciplinary team, through discussion with the patient and, where appropriate, their family/carer. This shared decision-making process not only involves informing the patient of the potential benefits and risks of antibiotics but also taking the time to understand the patient's immediate priorities.
- b. Current and future antibiotic prescribing decisions should be discussed as part of anticipatory care planning conversations, documented in the clinical notes and included in the patient's Key Information Summary. This discussion should include route of antibiotic therapy as intravenous treatment would usually necessitate hospital admission.

### 2. Agree clear goals and limits of therapy

These should be defined and agreed with the patient/family/carer after considering the following:

- a. The principal purpose of antibiotics at the end of life may be to relieve symptoms or may potentially be to cure infection.
- b. An infection should not necessarily be treated simply because it is treatable. Likewise, a positive microbiology result should not lead to an antibiotic prescription if there are no significant symptoms.
- c. Consider whether hospital admission if required for IV antibiotics is in keeping with the patient's preferred place of care towards end of life.
- d. There are risks associated with giving antibiotics (including side effects, *C. difficile* and antimicrobial resistance).
- e. Infection may be reversible and clinicians may feel compelled to offer treatment. However, this should be balanced against potential antibiotic-related toxicity.
- f. If an antibiotic is prescribed, follow local guidance on drug choice, dose and duration and ensure a stop date is recorded.
- g. Overall benefit for each individual patient should be the goal of any treatment as per General Medical Council guidance on 'Treatment and Care Towards End of Life' [1].

- h.** Where patients lack capacity, guidance from the Adults with Incapacity Act 2000 should be followed, including, for example, involvement of a Power of Attorney /Guardian where appropriate. The pre-existing wishes of the patient should be explored and considered in the context of the clinical situation. The benefits and risks of antibiotic therapy should be discussed with any proxy decision maker or family acting in the patient's best interests.
- i.** Other medicines including mucolytics, muscle relaxants, analgesics, anti-pyretics and antitussives should be considered as alternatives to antibiotics for relief of infection-related symptoms.
- j.** Oxygen and non-pharmacological methods such as a hand held fan may be helpful for dyspnoea. See Scottish Palliative Care Guidelines for further advice [2].
- k.** Delirium is very common and often attributed wrongly to infection. It is important to consider other contributing factors (including that the person may be dying and terminally agitated)
- l.** Seek advice from Palliative Care specialists if required.

### **3. Review all antibiotic prescribing decisions regularly**

- a.** If, in the context of an acute severe infection, it emerges that the patient is at the end of life, clinical decisions relating to antibiotic prescribing should be reviewed and discussed immediately.
- b.** If it emerges that an antibiotic is not helping or is causing side effects, the discontinuation of treatment should be discussed with the patient and/or their carer/family.
- c.** If the patient wishes to stop an antibiotic at any time, this decision should be respected and treatment should be discontinued.
- d.** Antibiotic therapy should not routinely be escalated in the deteriorating patient at the end of life (this includes use of broad spectrum or intravenous antibiotics).

## **References**

1. Treatment and care towards the end of life: good practice in decision making, General Medical Council, 1<sup>st</sup> July 2010 <https://www.gmc-uk.org/ethical-guidance/ethical-guidance-for-doctors/treatment-and-care-towards-the-end-of-life>
2. Scottish Palliative Care Guidelines, NHS Scotland, 2020 <https://www.palliativecareguidelines.scot.nhs.uk/>

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- Andrew Seaton, Chair of Scottish Antimicrobial Prescribing Group & Consultant in Infectious Diseases and General Medicine, NHS Greater Glasgow and Clyde (Chair)
- Fiona Baker, Senior Practice Pharmacist, NHS Fife
- Paul Baughan, General Practitioner, NHS Forth Valley, and National Clinical Lead (Primary Care), Healthcare Improvement Scotland
- David Boggon, General Practitioner, Oakley Health Centre, NHS Fife
- Lesley Cooper, Health Service Researcher, Healthcare Improvement Scotland
- Frances Downer, Quality Improvement Practitioner, St Vincent's Hospice, Renfrewshire
- Tony Duffy, Specialty Doctor in Palliative Care, St Margaret of Scotland Hospice, Glasgow
- Jack Fairweather, Scottish Clinical Leadership Fellow, Royal College of Physicians and Surgeons of Glasgow
- Stephen Fenning, Scottish Clinical Leadership Fellow and Palliative Care STR, CMOs Office/NHS Lothian
- Libby Ferguson, Consultant in Palliative Medicine, Marie Curie Hospice, Glasgow
- Lynsey Fielden, Ageing & Health Consultant/Hospital Palliative Lead, NHS Forth Valley
- Dianne Foster, Associate Improvement Advisor, Healthcare Improvement Scotland
- Susan Galbraith, Prescribing Adviser, NHS Greater Glasgow & Clyde
- Thomas Gillespie, Consultant Microbiologist, NHS Lanarkshire
- David Gray, Palliative Care Consultant, NHS Greater Glasgow & Clyde
- David Marshall, Improvement Adviser, Care Inspectorate
- Abigail Mullings, Consultant Nurse Epidemiologist, Community Antimicrobial Resistance & healthcare Associated Infection Lead, Health Protection Scotland
- Kate Nelson, St Margaret of Scotland Hospice, Clydebank
- Euan Paterson, General Practitioner, NHS Greater Glasgow and Clyde
- Marion Pirie, Project Officer, Scottish Antimicrobial Prescribing Group
- Cesar Rodriguez, Consultant Old Age Psychiatry, NHS Tayside & National Clinical Lead (Psychiatry), Healthcare Improvement Scotland
- Jacqueline Sneddon, Project Lead, Scottish Antimicrobial Prescribing Group
- Janine Thoullass, Consultant in Public Health, Health Protection Scotland
- Jayne Walden, Antimicrobial Stewardship Nurse, NHS Dumfries & Galloway

## Appendix 1

### Systematic review of antibiotics towards the end of life

83 papers from 80 studies were included in the review.

Most studies involved adults with diagnoses of advanced cancer, advanced dementia or multi-morbidity from a variety of study settings and there was broad international spread.

Urine and chest infections are the most commonly reported indications for antibiotic use.

Key findings included:

- The review found a number of uncontrolled, observational studies of variable quality.
- Antibiotic use in patients approaching the end of life was commonly reported and there was significant variation in practice.
- Prescribing was influenced by several factors including but not restricted to the underlying diagnosis.
- When reported, time to death was increased in those receiving antibiotics – but this was at the cost of higher symptom burden.
- Only a small number of studies provided detailed data on adverse events and antimicrobial resistance.
- There was extensive commentary about attitudes related to antibiotic use and decision making at the end of life.

## Appendix 2

### Summary of findings from the survey of antibiotic prescribing at the end of life

- There was agreement that the End of life was ‘the last weeks’ and that, during this period, the primary goal of treating infections with antibiotics is to palliate symptoms.
- Almost a third of clinicians would prescribe antibiotics if the infection was treatable (irrespective of patient’s prognosis) although a few would prescribe antibiotics to increase patient/family hope. Clinicians can feel under pressure from patients and especially families to prescribe antibiotics. Some clinicians prescribe antibiotics to make themselves or patients/families feel they are doing something.
- Although symptoms of infection are often treated with medications other than antibiotics, most said they would occasionally prescribe antibiotics to manage symptoms.
- More than half of respondents did not think escalation from oral to IV administration was appropriate and almost half would not use 2<sup>nd</sup> or 3<sup>rd</sup> line antibiotics unless guided by sensitivities. It was acknowledged that escalation of therapy (particularly to IV treatment) would impact on the patient’s preferred place of care.
- In terms of discussing antibiotic decisions at end of life, there was agreement that healthcare professionals should initiate these conversations and that patients have the right to decline treatment. There was strong consensus around the importance of: good communication with patients and their families; making patient-centred treatment decisions; documenting a patient’s preferences for their future care; keeping patients and families informed; avoiding false hope.
- There was agreement that clinical decision making should be individualised and that this was made more difficult when there was uncertainty in prognosis or in risks/benefits of antibiotics and particularly when clinicians had limited prior knowledge of the patient (e.g. in acute hospital care or GP out of hours practice). When there is clinical uncertainty, it was acknowledged that peer support is beneficial.
- Antibiotics to improve symptoms of urinary tract infections, respiratory infections and cellulitis were often thought to be beneficial.
- Overall, the potential harms associated with antibiotics are less well considered by clinicians than the benefits.
- The theme of ‘avoid creating policy’ was also emphasised across several questions and clinicians were clear that, while guidance could be helpful, it should support but not replace individualised patient-centred care.