ADVANCIS

Antimicrobial Stewardship

A Global Emergency



- ✓ Antimicrobial resistance is a global emergency
- ✓ Easier exudate management
- ✓ Superior handling

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What is Antimicrobial Stewardship?

"a systematic approach to educate and support health care professionals to follow evidence-based guidelines for prescribing and administering antimicrobials." (WHO, 2021).





Antimicrobial Resistance is

the ability of a microorganism to survive and resist exposure to antimicrobial drugs, threatening the effectiveness of successful treatment of infection

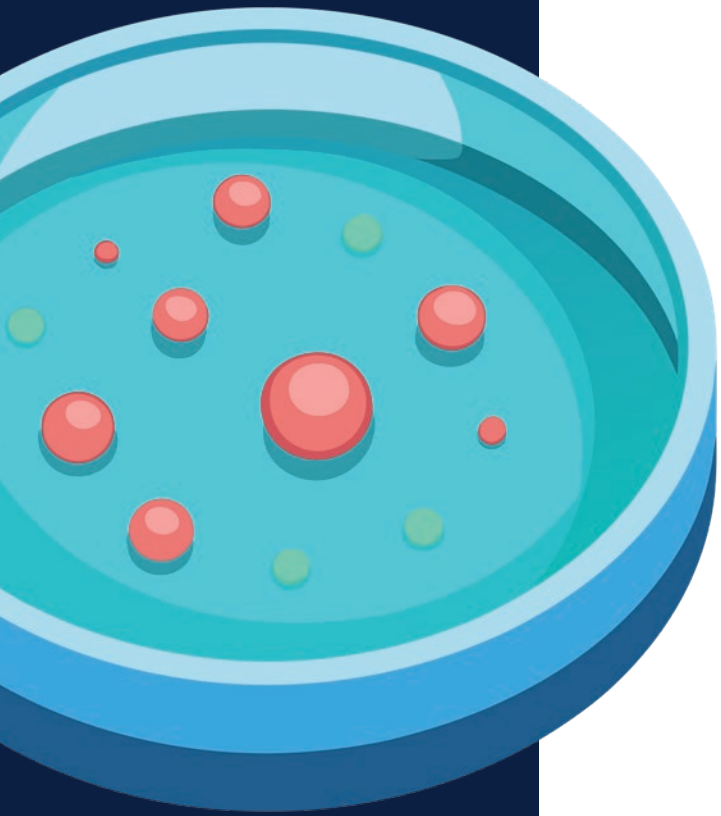


Why Does Antimicrobial Stewardship Matter?

"Antimicrobial resistance (AMR) is a global public health emergency. AMR is the ability of a microorganism to survive and resist exposure to antimicrobial drugs, threatening the effectiveness of successful treatment of infection."

(WHO 2021)





1. Between 2019-2050 could see an increase of 68% in deaths associated with Antimicrobial Resistance. [1]

2. If we don't improve priority treatments like surgery and wound care, it will carry a higher risk.

3. The development of new antibiotics is declining, while resistance to antibiotics is rising. [2]

Comparison of Antibacterial Topical Agents

	Advancis Medical Grade Manuka Honey	Silver (Ag)	Iodine (I)	DACC (Dialkylcarbamoyl Chloride)	PHMB (polyhexamethylene biguanide)
Effective antibacterial activity time	7 days [a]	Varies, limited use of 4 weeks [d]	2 days maximum [f]	18-24 hours [k]	4 days [m]
Any known bacterial resistance	No [b]	Yes [e]	No [g]	No [l]	No [n]
Suitable for debridement	✓		No	No	✓ [o]
Promotes granulation	✓		✓ [h]	✓ [l]	✓ [p]
Reduces odour	✓ [c]	✓ [c]	✓ [c]		✓ [p]
Limitations of Use	Honey and bee venom allergy	Potentially cytotoxic [d]	Contra-indications for kidney [i]	Must be in contact with the bacterial cells to remove	
Limited treatment time	No	✓	✓ [j]	No [l]	No
Natural substance	✓	✓	✓	No	No

Reducing Antimicrobial Resistance (AMR)

An estimated 4.95 million deaths associated with bacterial AMR in 2019. This includes 1.27 million deaths attributable to bacterial AMR. With a forecast of 8.22 million deaths associated with AMR in 2050, globally.[q]

With AMR growing, there has been a search for new antibiotics and alternative treatments, such as medical grade Manuka honey. With importance being placed on having a multidisciplinary approach, both biological and social sciences, to effectively anage and reduce AMR. [r]



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Methicillin-Resistant Staphyloc

Develops clinical signs/symptoms of infection and/or patient has history of MRSA with new ulceration present?

Yes - Follow the below pathway

No - Follow local policies and guidelines

Take and send a wound swab or tissue sample to microbiology for culture and sensitivity, or follow your local policies and guidelines.

Assess results for antibiotic sensitivities and resistances.

If MRSA bacterial growth is present, report to the Infection Prevention team and/or a relevant medical specialist.

Update patient, family and/or carer on findings and document in patient's records, including any domestic team involved in patient care.

occus Aureus (MRSA) Pathway

Following medical advice: start decolonisation process.

1. Antibiotic therapy for 14 days with sensitive antibiotic.
2. Use an antibacterial skin cleanser (i.e. 4% Chlorhexidine Gluconate).
3. Mupirocin nasal spray 3 times daily for 5 days.
4. Use a relevant antimicrobial wound irrigation solution to aid wound decolonisation at each wound review.

Schedule patients with MRSA last to reduce bacterial spread.

Ensure good hand hygiene practices are followed, Aseptic Non-Touch Technique (ANTT) used during treatment and Personal Protective Equipment (PPE) worn throughout patient contact.

When reviewing, follow your local policies and guidelines while reassessing for antibiotic optimisation within a clinically relevant time period.

This pathway was created in conjunction with Laura Seddon, Clinical Lead Podiatrist- High Risk Foot Team at Stockport NHS Foundation Trust | Division of Integrated Care

Should we be doing more to prevent wound infections

and the subsequent requirement for antibiotic prescriptions?





Interpreting UK NHS Data

These graphs reference the publication “Cohort study evaluating the burden of wounds to the UK’s National Health Service in 2017/2018: update from 2012/2013”, a representative sample of 3,000 patients, randomly selected from a cohort of 174,569 patients with a wound related wound read code by IQVIA in 2017 to 2018[5]

Figure 1

shows the measured infection rate of different types of wound. It can be noted that the rate of infection on the type of wounds treated in community, particularly relating to diabetic foot ulcers and venous leg ulcers is disproportionally high.

Figure 2

shows the amount of patients with infections who were subsequently prescribed antibiotics and Figure 3 shows the amount of patients who were admitted to hospital for the treatment of an infection.

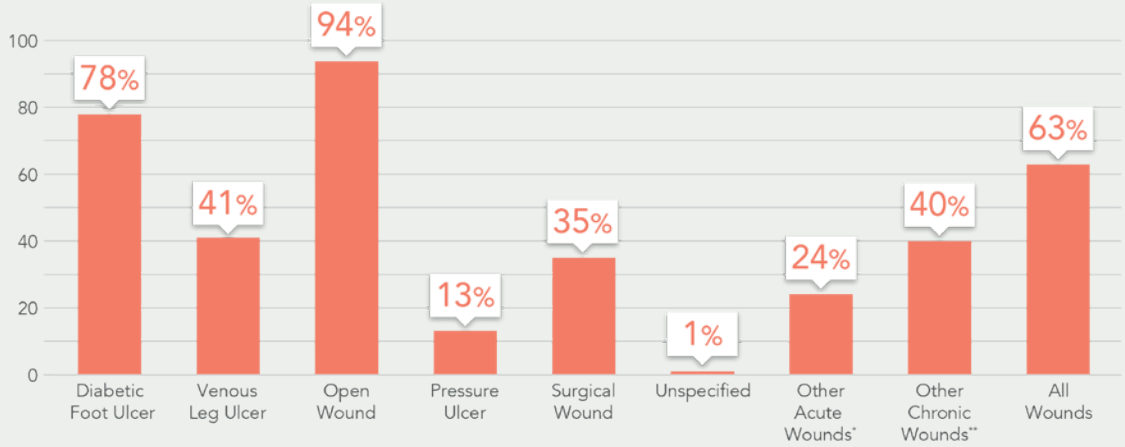


Figure 1: Percentage of all wounds with a recorded infection (1 March 2017 - 28 February 2018)

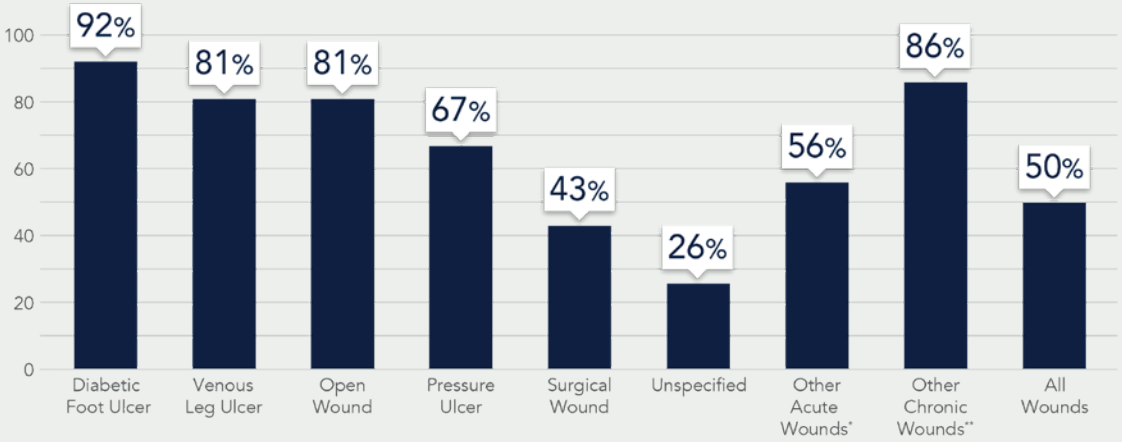
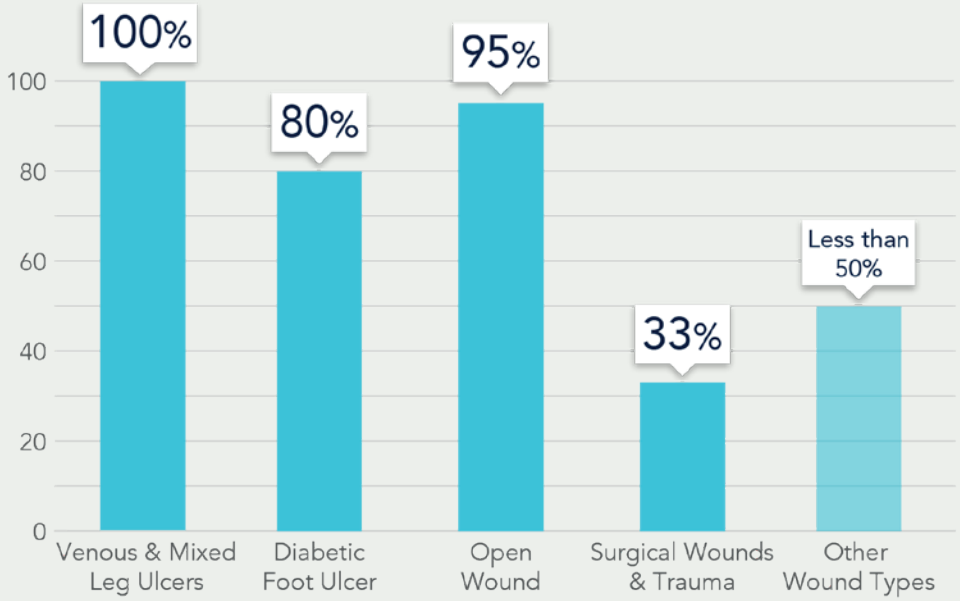


Figure 2: Patients who were prescribed antibiotics in the study year

Figure 3

shows the numbers of patients that were prescribed antibiotics in the study year.

Figure 3: Hospital admissions appearing to be linked to a suspected infection



There is an argument that we should be doing more to prevent infections and the subsequent antibiotic prescriptions that contribute to antimicrobial resistance. This would also reduce clinical time and costs associated with resultant hospital admissions for treatment.

This could be achieved through better education on the subject of infections and antimicrobial resistance and informed practices, or via the prophylactic use and antibacterials to help prevent infections.

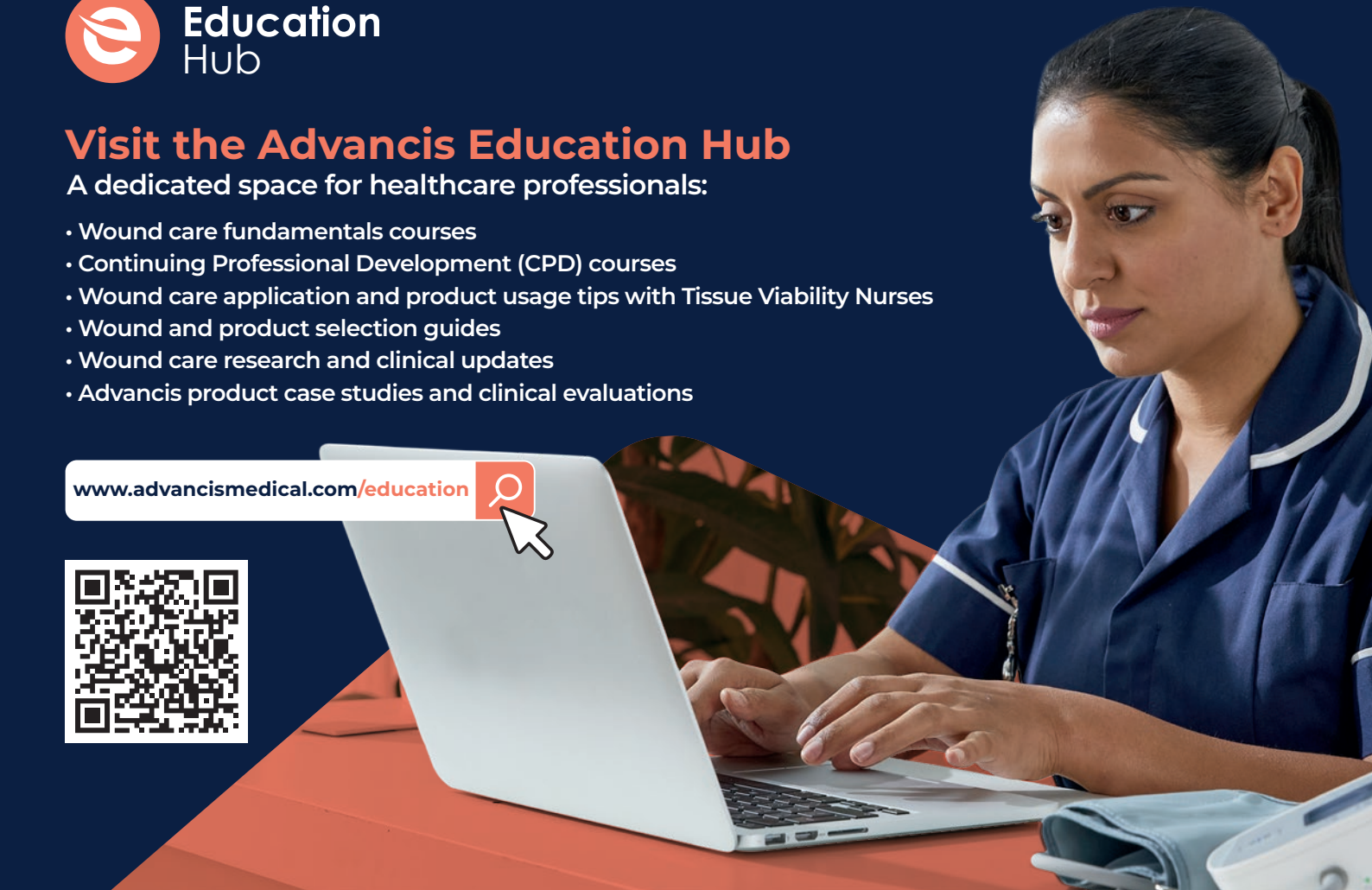
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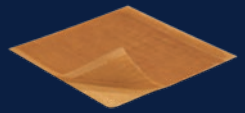
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