

From Fleming to *Lifeline*: theatre, narrative and public engagement in antimicrobial stewardship

Rasha Abdelsalam Elshenawy ^{1*} and Marvelle Brown¹

¹Public Health and Patient Safety Unit, Department of Medicine, Centre for Health Services and Clinical Research, School of Health, Medicine and Life Sciences, University of Hertfordshire, Hatfield, Hertfordshire AL10 9AB, UK

*Corresponding author. E-mail: r.elshenawy@herts.ac.uk

Antimicrobial resistance (AMR) is a defining global health threat, yet public understanding of why antibiotic stewardship matters remains limited and statistical communication alone is rarely sufficient. Arts-based interventions offer a complementary route to engagement that reaches the affective domain of learning. *Lifeline*, a musical staged at Southwark Playhouse Elephant in May 2026 by Charades Theatre Company, which evolved from the company's formally evaluated predecessor production *The Mould that Changed the World*, dramatizes Sir Alexander Fleming's discovery of penicillin alongside contemporary clinical narratives, including a patient who dies because no effective antibiotic remains, and another who survives through stewardship-supported care. Its rotating chorus of real-life clinicians, scientists and policy-makers models the One Health response that AMR demands. Drawing on the experience of taking postgraduate medicine, Master of Public Health students from the University of Hertfordshire to attend the production, this Viewpoint argues that arts-based public engagement merits a recognized, funded and evaluated place within antimicrobial stewardship education and public-health communication.

Why narrative?

Communicating the urgency of antimicrobial resistance (AMR) to learners, patients and the public remains one of the central challenges of antimicrobial stewardship. Statistical projections of millions of deaths attributable to drug-resistant infections¹ rarely move audiences in the way that a single patient story does. Those of us teaching antimicrobial stewardship to Master of Public Health (MPH) and other postgraduate students return repeatedly to narrative: the patient who deteriorated despite escalating therapy, the empty antibiogram, the conversation with relatives that no susceptibility report can prepare a clinician for. Narrative is how we make resistance real.

Lifeline: two patient journeys and a one health chorus

Lifeline, a new musical produced by Charades Theatre Company and staged at Southwark Playhouse Elephant in May 2026, demonstrates how that pedagogy can be scaled beyond the classroom. With music and lyrics by Robin Hiley, a book by Becky Hope-Palmer and direction by Alex Howarth, and supported by its patron Professor Dame Sally Davies, UK Special Envoy on AMR, the production interweaves the historical story of Sir Alexander Fleming's discovery of penicillin² with two contrasting

patient journeys. In the first, a young man dies of an infection that no available antibiotic can cure, and, in a deliberate dramatic choice, he is the partner of one of the hospital's own doctors. His death is not the result of negligence but of a therapeutic landscape stripped bare by resistance, and the storyline's force lies in watching a clinician confront the limits of her profession when she cannot save the person she loves most. In the second, a young patient recovers from a serious infection because effective antibiotics, preserved by stewardship, infection prevention, vaccination and a multidisciplinary team, remain available when she needs them.

The juxtaposition is not abstract; it is dramatized, sung and felt, setting in successive scenes the two outcomes that AMR delivers in real-world practice: the loss that follows when the lifeline of effective antimicrobials is broken, and the recovery that remains possible when it is preserved. The grief song that follows the bereavement, 'The Boys Are Home', is among the most affecting public-health writing seen on the British stage.

The Fleming storyline reinforces the argument with the original warning: in his 1945 Nobel Lecture, Fleming cautioned that subtherapeutic and inappropriate use of penicillin would not eradicate bacteria but would instead 'educate' them to resist, a prophecy that has proved devastatingly accurate.² For an MPH learner who has studied resistance epidemiologically, the same arc takes on a different texture when sung, grieved and celebrated on stage. Importantly, *Lifeline* does not portray antibiotics

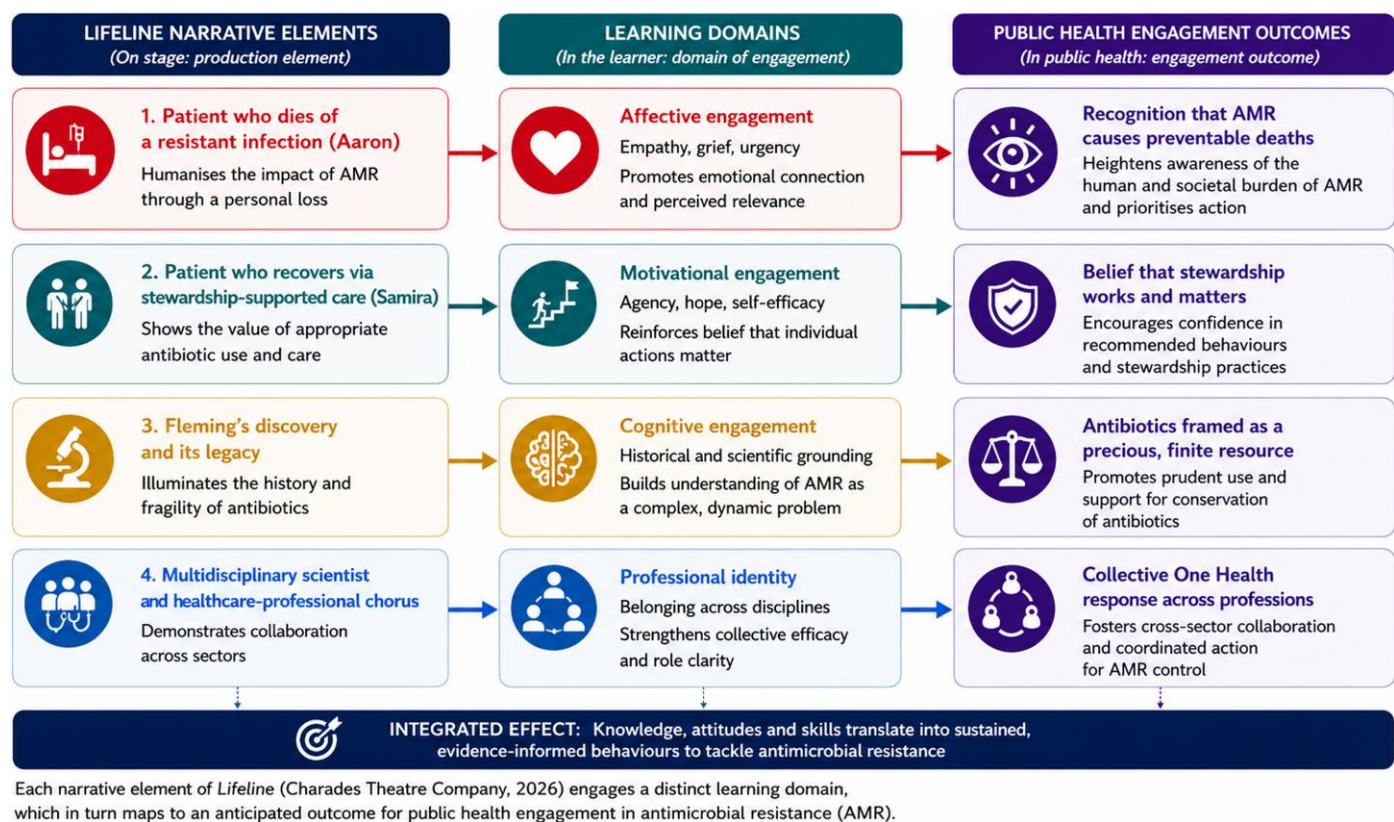


Figure 1. Conceptual framework linking *Lifeline* narrative elements to AMR learning and public health engagement outcomes. Conceptual framework showing how four narrative elements of *Lifeline* (Charades Theatre Company, 2026) map to learner engagement domains and anticipated public health engagement outcomes. Each narrative element engages a distinct learning domain, which in turn maps to an anticipated outcome for public health engagement in AMR.

as the enemy. It reaffirms them as one of the most precious tools of modern medicine, while making clear that their continued effectiveness depends on stewardship, judicious prescribing, surveillance, diagnostics and innovation, the integrated response advocated by the WHO Global Action Plan on AMR and the UK national action plan.^{3,4}

A second feature of *Lifeline* distinguishes it from earlier arts-based health interventions. Each performance is supported by a rotating *Lifeline* Scientist and Healthcare Professional Chorus of real clinicians, scientists and policy-makers: paediatric ENT surgeons, GPs, infectious diseases physicians, microbiologists, nurses, veterinary epidemiologists, climate-and-AMR researchers, science communicators and industry leaders working on antibiotic research, regulation and access. The chorus is more than spectacle; it is a working tableau of the One Health, multidisciplinary response that AMR demands.⁵ The reach of this multidisciplinary model extends beyond the theatre: *Lifeline* became the first musical to perform on the floor of the United Nations General Assembly, and its UK run has been accompanied by a coordinated programme of stewardship-themed panel discussions, school workshops and a parliamentary gala convened by the production's patron and the Chair of the All-Party Parliamentary Group on Antimicrobial Resistance. The visible inclusion of pharmacists and public-health professionals in this picture matters:

pharmacists steward antimicrobial use through prescribing review, intravenous-to-oral switch, allergy de-labelling and patient counselling, while public-health professionals contribute surveillance, outbreak response, vaccination programmes and behaviour change communication. A musical that puts these roles on stage offers something that conventional health communication seldom achieves, a positive, collective vision of professional identity in the face of a slow-moving crisis. Together, these four narrative elements engage distinct learning domains and map onto corresponding public-health engagement outcomes (Figure 1).

From the mould that changed the world to lifeline: an evaluated lineage

Lifeline did not emerge in a vacuum. It evolved from *The Mould that Changed the World*, an earlier musical by the same composer and theatre company, conceived with the infectious diseases physician Dr Meghan Perry and supported by the British Society for Antimicrobial Chemotherapy, which first told Fleming's story as a participatory primary-school production and later as a professional show performed with a chorus of NHS clinicians and scientists. Crucially for the present argument, that predecessor has been formally evaluated, with results reported in *The*

antimicrobial resistance. *Lancet* 2019; **394**: S47. [https://doi.org/10.1016/S0140-6736\(19\)32844-2](https://doi.org/10.1016/S0140-6736(19)32844-2)

7 Hall J, Jones L, Robertson G *et al*. 'The Mould that Changed the World': quantitative and qualitative evaluation of children's knowledge and motivation for behavioural change following participation in an antimicrobial resistance musical. *PLoS One* 2020; **15**: e0240471. <https://doi.org/10.1371/journal.pone.0240471>

8 Garcia-Iglesias J, Relph K, Hiley R *et al*. Lifeline: a musical about antimicrobial resistance that raises awareness and inspires action. *Nat Med* 2025; **31**: 1728–9. <https://doi.org/10.1038/s41591-025-03736-1>

9 Fancourt D, Finn S. *What is the Evidence on the Role of the Arts in Improving Health and Well-Being? A Scoping Review (Health Evidence Network Synthesis Report 67)*. WHO Regional Office for Europe, 2019.