

# reviews

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## NHS: The Musical!

Written and directed by Nick Stimson  
Composer/musical director: Jimmy Jewell  
Drum Theatre, Theatre Royal, Plymouth,  
until 27 May  
[www.theatreroyal.com/showpage.php?dd=1&theid=3678](http://www.theatreroyal.com/showpage.php?dd=1&theid=3678)

Rating: ★★★☆

Aneurin Bevan, the Welsh miner's son who created Britain's NHS in 1948, might have been surprised to find himself starring in a musical satire. But then he would have been surprised about the way things have turned out for the NHS.

Bevan championed the then-radical idea of universal health care, free at the point of use. He believed that this initiative would improve the nation's health so rapidly that eventually the costs of the service would fall. Today, after 58 years, healthcare costs are spiralling, the score card on the nation's health is mixed, and the NHS is a much-kicked political football whose seams sometimes appear to be bursting. Can Bevan's ideal survive?

This is the central question behind *NHS: The Musical!* Nick Stimson and Jimmy Jewell have pulled off the unlikely feat of making the United Kingdom's largest employer the subject of a genuinely entertaining evening. Their sometimes biting satire portrays the key NHS stakeholders—patients, politicians, clinicians, administrators, and industry—each fighting for their own agenda. Of course, there are jokes about Viagra, jokes about Herceptin, and jokes about doctors (“What's the difference between God and an NHS consultant? God doesn't think he's an NHS consultant”). But there is also a serious message, that most people value this service profoundly, captured in the songs “How we need you, NHS” and “How we love you, NHS”.

The story begins in 1948 with the birth of one Arthur White, to a hardworking couple who can ill afford doctors' bills. Just in time (and being a musical, it's only just in

time) for Arthur to be safely delivered, Bevan and the doctors thrash out a deal on the creation of the NHS. His parents, delighted to have their baby delivered for free, have high hopes for him and for a brave new world of better health ahead. They even make his middle name Aneurin. But fast forward to the present and, sadly, Arthur's adult lifestyle as a travelling salesman—in a car all day, chain smoking, eating transport café food, and drinking each evening—leads inevitably to hypertension and heart disease.

The plot sketches Arthur's descent from the cheery bloke who cracks terrible jokes in the bar to the genuinely frightened patient awaiting a bypass operation. Alongside Arthur, there are two other patients—a pensioner in need of a hip replacement and a young woman physical education teacher who at first appears nauseatingly perfect and healthy. As illness makes each of them increasingly vulnerable, the three patients seem to shrink to tiny figures whose frailty contrasts sharply with the loud characters stomping around in front of them: self-serving politicians, managers desperate to meet targets, and the pharmaceutical industry, represented by a sleazy character called Drug Supplier whose coat is lined with dubious looking pills. Drug Supplier offers to fund patients forming pressure groups to campaign for access to specific medicines (as long as they're his company's products, of course).

The three patients face numerous obstacles in their quest for help. Firstly, the Great Hospital Sweepstake (who'll get an appointment first?). Aging Robert Payne, the pensioner awaiting a hip replacement, is bottom of the list of course, although that position is spectacularly reversed when his waiting time breaches a target. Once they've got their appointments, the patients must find their way round the hospital; endure irrelevant administrators' questionnaires about their satisfaction with the service, even as they wait to get any service at all; and then go through another game of chance to overcome bed shortages, before finally getting to the point where they can be treated. The tension mounts steadily through these ordeals, so that



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when at last the clinicians can deliver their treatment, the tone of the musical changes sharply. The bitter parodies of politicians and drug manufacturers are suddenly replaced by a haunting and reflective number sung by the doctors and nurses. In “My Music,” they seem to be telling the audience of their passionate commitment to their work.

Anyone hoping to move beyond stereotypes of the NHS must look elsewhere: managers are predominantly bossy women in pinstripe suits, while the doctor is a suavely authoritative male who also seems to get the job of explaining everything. While this is a disappointment, the authors' decision is understandable: stereotypes can communicate messages simply and quickly, especially in the format of the musical.

At times, the show can feel a little didactic. Electronic tickers present health statistics above the stage (numbers of people needing hip replacements, for example) and projected anatomical diagrams show us how hip replacement operations work. While the information tickers run, the stage is filled by the tightly choreographed, energetic performance of the six actors who play all the parts between them. Never has a bed planning meeting looked so interesting.

The show ends with the cast reminding us that the NHS will always be there when we need it—and need it we will, however healthy we might feel today and however much health insurance we might have. Aneurin Bevan returns to the stage. The NHS will last, he says, as long as enough people care about its survival to secure it. The audience is left hoping that he's right.

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Items reviewed are rated on a 4 star scale  
(4=excellent)

PERSONAL VIEWS

# HIV is changing the face of tropical medicine

As part of my training as a specialist registrar in infectious diseases and tropical medicine, I have spent the past year in Malawi learning “real” tropical medicine. Of the many things I have learnt in this year, the most striking has been that tropical medicine is not quite what I thought it would be. I had expected to become familiar with the classic tropical diseases: malaria, schistosomiasis, and trypanosomiasis, to name a few.

But, in reality, I have seen little of these diseases. The reason is obvious: one disease has surpassed all others in terms of morbidity and mortality, pushing aside the other, more typical, tropical diseases. That disease is, of course, HIV. About 75% of the adult general medical inpatients are HIV positive at the hospital where I have been working. The huge economic and social impact of HIV on populations in Africa has been well described. Less well described has been the impact on the working practice of a tropical physician.

Tropical physicians are used to the idea of rationing resources, and it seems that in the pre-HIV days a way of practising had evolved to limit excessive spending of scarce resources by knowing the local epidemiology of diseases and relying strongly on clinical skills. For example, it is quite feasible to diagnose lobar pneumonia without chest radiography and the full array of “routine” blood tests that a pneumonia patient would have in Western countries. Effective treatment can then be started, given knowledge of the local epidemiology of respiratory pathogens and local antibiotic sensitivities. It’s a pragmatic approach that may not appeal to the more fastidious doctors but is necessary given the limited resources. After all, in Malawi the cost of one chest radiograph is roughly the same as the allocated government health budget per person per year.

With the advent of HIV, this pragmatic approach became much more difficult. The trouble is that to diagnose an infectious disease clinically you need a patient with a reasonably functioning immune system to give you clues as to the focus of the infection. For example, a patient with meningitis should have signs of meningism. But an HIV patient without neck stiffness could easily still have meningitis but a poor host response to the invading pathogen. The only way to be sure of the diagnosis with such feeble clues is to perform a diagnostic test, in this case examination of cerebrospinal fluid.

Professionals with experience of HIV patients will be familiar with the idea that

diseases may not present in classical ways—and that this often leads to adoption of a “low threshold” for performing diagnostic tests when signs and symptoms are vague. In the absence of an intact immune system the typical features of infectious diseases seem to merge so we tend to rely less on clinical acumen and more on expensive diagnostic tests.

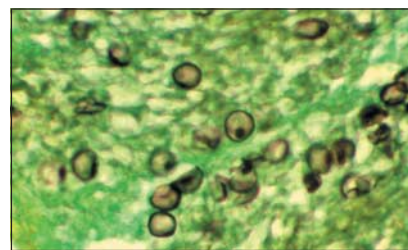
Diagnostic services in settings with poor resources are struggling to keep up with the HIV epidemic. Many centres rely on donations from outside agencies to bolster government services. Important as diagnostic capability is in this era of HIV, it is not a resource much loved by the donor community. What would the average person prefer to donate to when the choice is between, for example, 100 vials of a potentially life saving drug or 10 test kits to diagnose *Pneumocystis carinii* pneumonia (PCP)? Tropical physicians urgently need cheap diagnostics to effectively manage this new array of disease presentations.

As uncertainty over diagnosis grows, so does polypharmacy. If we really can’t be sure whether a patient in respiratory distress has bacterial pneumonia, PCP, tuberculosis, or pulmonary Kaposi’s sarcoma, then shouldn’t we treat for all? Furthermore, many patients with advanced HIV infection are frail and may well die before doctors can work through a series of treatments and watch their response to diagnose the problem.

HIV patients seem to break one of the unwritten laws of medicine: they often have more than one pathological process going on at any one time, and so polypharmacy is not unreasonable. However, the approach breeds lazy diagnostic thinking, and care becomes more akin to a set of syndromic management algorithms. And the resulting polypharmacy increases the risk of serious side effects. It may be that cost of treatments to cover each diagnostic possibility would be more than enough for a good range of diagnostic tests.

Tropical physicians have become so used to thinking in the HIV mindset that other conditions are now unfamiliar to them and are often managed poorly. This is not only because of their relative unfamiliarity with these conditions but also because of the stretch on resources caused by the HIV burden. Our hospital now admits an average of 40 patients every 24 hours, compared with around a dozen 10 years ago, with the increase mostly due to HIV.

The recent arrival of free antiretroviral drugs has also caused a shift in managing patients with advanced HIV disease. There is



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HIV related diseases such as *Pneumocystis carinii* have increased uncertainty over diagnosis

now more emphasis on “curing” patients of their intercurrent infection rather than focusing on control of symptoms and palliative care alone.

Nevertheless, mortality is still high and can be disheartening and demotivating. It is easy to feel overwhelmed by the scale of the problem.

I wonder whether this mindset crosses over to our dealings with HIV negative patients? Old hands say that they have not seen non-HIV related conditions such as diabetic ketoacidosis managed so badly as in the past few years. Why might this be? Too many dehydrated HIV patients using up the intravenous fluid available that day? Nurses spread too thinly across the patients? Demotivated staff half expecting a poor outcome, as they have seen in so many others that day and that week?

These changes in the nature of tropical medicine have been little recognised. My year of training has been fascinating but not really full of the tropical diseases I had expected to see. HIV is changing the whole way of practising medicine in the tropics and seems to be changing the notion of what tropical medicine is about. Fifty years ago, tropical medicine was nearly synonymous with exotic parasitic diseases. Thirty years ago, it changed to internal medicine in the tropics, incorporating the full spectrum of general medicine managed with limited resources. Now, it seems to be the medicine of immunosuppression. Even with the roll out of antiretroviral drugs this situation is likely to predominate for decades to come, a fact that needs greater recognition by health service planners and providers.

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Old hands say they have not seen non-HIV related conditions managed so badly as in the past few years

## Rugby union should ban contested scrums

For 30 years I have been an honorary medical officer to Nottingham Rugby Football Club. In this time I have attended about 25 games a season and on many occasions have been the “duty doctor,” either officially or unofficially. In that time four players have been removed from the field of play at Nottingham with serious neck injuries. Three of the injuries were associated with scrums, and one occurred in a tackle. All four players had initial sensory and motor impairment. Two recovered within minutes or hours; one recovered in days; and one became paraplegic. Three needed an operation for fracture. Another three Nottingham players injured their necks in scrums while playing away from home and needed to be removed from the pitch. One player needed an operation and is paraplegic. Therefore I have experience of seven serious spinal cord injuries, five of which have required an operation. Two of the players are wheelchair dependent. Six of the seven injuries were related to the scrum, and in all cases the scrums were of the contested type—in which each set of forwards tries to shove the opponents off the ball—and that is more dangerous than the uncontested scrum, in which the players are not allowed to push their opponents away from the spot where the scrum occurs.

A recent Australian study looked at acute spinal cord injuries among players of rugby union, rugby league, Australian rules football, and soccer from 1997 to 2002 (*Medical Journal of Australia* 2005;182:561-4). These data were compared with those from a 1986-1996 survey. Fifty two players (45 men and seven schoolboys) suffered acute spinal cord injuries over the study period. The average annual incidence of such injuries per 100 000 players was 3.2 for rugby union, 1.5 for rugby league, 0.5 for Australian rules, and 0.2 for soccer. Although the incidence had changed little since the earlier survey, there was a trend towards less severe injuries in rugby union and league but not in Australian rules. No scrum injuries have occurred in rugby league in Australia since 1996, when contested scrums stopped being allowed. Seven injuries occurred in rugby union scrums, six at the moment of engagement with the opposing team. Overall 39% of injured players became permanently dependent on a wheelchair. The Australian authors also noted that the cost of care of a quadriplegic young man over his lifetime is enormous. For a 19 year old with C5 quadriplegia resulting from a road traffic crash in 2002 the payout would be between \$A7m (£3m; €4.2m; \$5.4m) and \$A9m. They say that under the existing insurance cover for rugby union players, however, the maximum award for quadriplegia is

\$A300 000. The study concludes that the laws of scrum engagement in rugby union and the amount of insurance cover for injured players are grossly inadequate.

In Britain acute spinal cord injuries in rugby union continue to occur, typically associated with scrums at the moment of engagement. Wheelchair dependency among those injured is common, and insurance is inadequate. The rugby football union is known to be concerned about the high level of injury, severity, and insurance.

Rugby union became professional in 1995; players are paid to play and train. Professional rugby union is now often described as an industry. It may be subject to the Health and Safety at Work Act (1974), which requires working practices that are safe and do not put workers at risk. In the under 19 game contested scrums are not allowed.

The authors of the 2005 Australian paper noted: “In our opinion there has been a gradual return to a forceful scrum engagement. While this may allow a tactical advantage for a team, it increases the risk of engagement injury. In our present study six of the seven scrum injuries occurred at engagement. We recall the 1988 warning of Burry and Calcinai [*BMJ* 1988;296:149-50] of the need to make rugby safer—that “failing to alter the procedures of a game despite the knowledge that existing practices were hazardous and a safe alternative existed could well be held by a court to constitute culpable negligence.”

In Britain such a case went to court in 2002: that of Richard Vowles of the Llanharan second XV against the Welsh Rugby Union. Vowles had suffered a severe injury in a game in January 1998 that left him paralysed when the players in the scrum failed to engage properly. The court ordered the union to compensate Vowles.

The incidents involving the two young Nottingham players who are now wheelchair dependent have caused me to change my opinion on contested scrums. The consequences of injury are so great that the continuing risk of injury cannot be accepted.

Players now deserve uncontested scrums in rugby union. In rugby league in Australia no acute spinal cord injuries have occurred since the scrum stopped being contested. Rugby union should follow this example. Rugby union outlawed the “flying wedge” and the “cavalry charge” as they are potentially dangerous. It should now also outlaw the contested scrum.

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### SOUNDINGS

#### *Advice to science writers*

Make sure that you indicate in the introduction to your paper that the problem you are addressing is of the utmost importance to the survival of mankind. If the topic is a “disease,” quantify the proportion of the world population that might become its victims, calculate that proportion in absolute numbers, and proceed to address the annual expense that humanity incurs in consequence of that disease.

Never admit that your choice of research topic has been motivated by anything other than utilitarian concern for the common good. It would be a mistake to declare that you were driven by curiosity, that the matter you elected to scrutinise is esoteric, or that you stumbled upon your research topic by chance.

If animals make up your study sample, enumerate all the steps that you took to treat them humanely. Make it clear that they had excellent food, plenty of water, sunlight, space in which to run around, toys, swings, a pool, snow or hot sand, as appropriate, and that they were allowed to have sex while waiting to be decapitated or whatever else was the charitable means of their demise.

When you describe your methods, never omit a detail, however trivial. Always give the name of the producer of the syringe that you used and specify the basic material from which the tubes that you inserted were made.

When reporting on the results, calculate the percentages to at least two decimal places. The more numbers that the “Results” contain, the more scientific the paper is. Use at least two statistical methods in which p values are mandatory.

The “Discussion” is the literary part of every paper. It can take the shape of drama, it can be made to sound like a heroic epic or a sonnet, or it can consist of dry, crisp prose. It can be aggressive towards others who have examined the same problem previously, or it can be accommodating, laudatory. (These differences in style are generally not determined by the topic or even by the author's temperament, but by social position and career expectations.)

In the “Conclusions,” there is only one important sentence, of two parts—one stating that you made a breakthrough and the other that more research is needed.

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Proceedings, Kenya

The continuing risk of injury cannot be accepted