

CENTRE FOR ETHICS, LAW AND MENTAL HEALTH CELAM.GU.SE CENTRE FOR ANTIBIOTIC RESISTANCE RESEARCH CARE.GU.SE GOTHENBURG RESPONSIBILITY PROJECT GRP.GU.SE FORTE:



RATIONING ANTIBIOTICS IN THE FACE OF DRUG RESISTANCE

ETHICAL CHALLENGES, PATHWAYS AND PRINCIPLES

Practical medical ethics: Rationing responsibly in an age of austerity, University of Oxford, May 20, 2018.

CHRISTIAN MUNTHE, PROFESSOR OF PRACTICAL PHILOSOPHY. EMAIL: CHRISTIAN.MUNTHE@GU.SE



CENTRE FOR ETHICS, LAW AND MENTAL HEALTH CELAM.GU.SE CENTRE FOR ANTIBIOTIC RESISTANCE RESEARCH CARE.GU.SE GOTHENBURG RESPONSIBILITY PROJECT

GRP.GU.SE



Drug resistance: a formidable challenge for health systems

- Pathogens develop resistance to antibiotics and other antimicrobial drugs
- Current patterns of drug consumption, production and innovation cannot "win the race"
- Increased risks of epidemics and pandemics, threatening basic public health fundamentals
- Major threat to the effectiveness of healthcare, due to increased difficulties in preventing and managing infections
- Drastic challenges to many default positions in bioethics, also ethics of rationing. I will raise three interconnected ones.

WHO portal on antimicrobial resistance: http://www.wno.in/antimicrobial-resistance/eh/ Littmann, J. & Viens A.M. (2015). The Ethical Significance of Antimicrobial Resistance. *Public Health Ethics*. 8(3), 209–224 *Ethics and Value Challenges of Antibiotic Resistance Management, Policy and Research*. Symposium videos:

nttps://care.gu.se/all-ethics-and-value-symposium-talks



CENTRE FOR ETHICS, LAW AND MENTAL HEALTH CELAM.GU.SE

CENTRE FOR ANTIBIOTIC **RESISTANCE RESEARCH** CARE.GU.SE

GOTHENBURG **RESPONSIBILITY PROJECT**

GRP.GU.SE





- **Restriction of clinical use:** effective drugs need to • be reserved for the most pressing situations, leaving the less pressing ones with increased risks due to infections, or social responses to illness
- **Expedited drug innovation**, possibly leading to ٠ acceptance of less thoroughly tested drugs to be introduced clinically, leading to elevated risks for patients
- Gives reasons both for withholding drugs from patients, and for providing new drugs with less proof of effect (and lack of side-effect)

Clinical ethics		
	PAPER	
	Antimicrobial stewardship programmes: bedside rationing by another name?	
	Simon Oczkowski	
Correspondence to Dr Simo Occlosold, Modator Noom A3-20, 171 Corresion St, Hamilton, OK, Canada BW (15), cocknowl/manaster.ca Received 13 March 2015 Revealed 13 March 2015 Revealed 13 March 2017 Abduhed Chrite First 15 March 2017	ABSTRACT Antimicrobial therapy is a conrestone of therapy in crictaly iii platents, however, the vide use of ambibitics has resulted in increased antimicrobial resistance and hospitals have instituted antimicrobial sewardship programmes are a way to reduce the inappropriate use of antibiotics. However, uptaked antimicrobial astwardship programmes has been variable, as many clinicans fear that they may put individual patients at risk of treatment failure. In this paper, I angue that antimicrobial astwardship astwardship programmes are indeed a form of bedside rationing, and expose that antimicrobial astwardship and expose the totisk and benefits of such mut, and the critical iii population in general. Using Norman Daniels' Accountability for Reasonableness as a framework for evaluating resource allocation policies, I conduce that antimicrobial stewardship programmes are an etically south ofm of bedside antioning.	producing the fewest possible side effects and the lowest risk for subsequent resistance", clinicians often have concerns that ASPs ratio care, putting their patients at risk of worsening infection due to the patient of the second state of the second state variable, with recent surveys of American hoopitals finding that only half have a formal ASP ⁴ . In this paper, I will argue that despite the chims of proponents, ASPs are in fact a form of beddle rationing, which despite posing some risk to indi- vidual patients, can reduce the indicate of ASPs and lower healthcare costs. Characterising ASPs as argue that ASPs are consistent with Norman Daniels' model of "accountability for reasonable- ness' (AFR) and are thus a fair and ethically sound form of bedside rationing. ²
Linked	INTRODUCTION Infectious diseases are one of the leading causes of admission and death in the intensive care unit (CU). ³ The correstone of therapy for all such cases is the use of antimicrobial agents. The 'spec- trum' of antimicrobial agents refers to the number of different organisms against which the drug is howing efficacy against many inforcine organisms, and 'narrow-spectrum' antimicrobials only being effective against actualy inforcine organisms, and 'narrow-spectrum' antimicrobials only being effective against causing the infection is asso- ciated with up to a 7.6% absolute increase in mor- tality per hour? Hence, the early initiation of broad-spectrum antibiotis is considered the stand- ard of care, and received a 'srong' recommenda- tion in the 2012 Surviving Sepsis Guidelines. ¹ antibiotics is associated with the development of antibiotic-resistant organisms (AROa), which due to their resistance properties are associated with	ARE ASPS A FORM OF BEDSIDE RATIONNE? The first claim to be proved is that ASPs are in fac- ate form of bedside rationing. I adopt the definition of bedside rationing from Ubel and Goold, which includes three criteria. ¹⁰ 1. Clinicians muss withhold, withdraw or fail to recommend a service that, in their clinical judg- ment, is in the patient's best medical interests. 2. They must do so primarily to promote the taptient. 3. The clinicians muss have control over the use of the medically beneficial service. The first condition is required for an action to be considered an act of rationing an individual patient's immediate interests muss be compromised. The second and third criteria are required for such rationing to be considered of the 'bedside' variety, a opposed to afrom for atoning imposed on clini- cians by external forces. I address each of these throw and care that in the withholding or with- drawal of care that is in the patient's best medical
 http://dx.doi.org/10.1136/ medethics-2017-104572 	higher healthcare costs as well as increased morbid- ity and mortality compared with non-AROs. ⁴ In order to combat this growing problem, the Inferctious Diseases Society of America (IDSA)	interest. For critically all patients overs menuta- interest. For critically all patients, failure to initiate appropriate broad-spectrum antibiotics is associated with an increase in mortality. But even in the most severe infections, a nositive culture result indicating
CrossMark	released guidelines for developing antimicrobial stewardship programmes (ASPs), which aim to prevent the development of AROs by narrowing the spectrum, reducing the dose and shortening the	which organism is causing the infection occurs in less than two-thirds of cases. ¹¹ In the remainder, the use of antimicrobials remains 'empirical', that is, the 'best guess' of which organism is causing the

treatment or prevention of infection while theoretically put individual patients, czkowski S. J Med Ethics 2017;43:684-687. doi:10.1136/medethics-2015-102785



Violates standard individualist principle that risks of harm for a patient should be balanced by promise of benefit for the same patient

Thereby the "princple of need" included in most healthcare rationing schemes

Justification requires a new principle that must be allowed to counterbalance the principle of need



CENTRE FOR ETHICS, LAW AND MENTAL HEALTH CELAM.GU.SE CENTRE FOR ANTIBIOTIC RESISTANCE RESEARCH CARE.GU.SE GOTHENBURG RESPONSIBILITY PROJECT

GRP.GU.SE





• Major source of drug resistance is environmental emission, from users as well from producers

Larsson DGJ, Andremont A, Bengtsson-Palme J, Koefoed Brandt K, de Roda Husman AM, Fagerstedt P, Fick J, Flach CF, Gaze WH, Kuroda M, Kvint K, Laxminarayan R, Manaia CM, Nielsen KM, Plant L, Ploy MC, Segovia C, Simonet P, Smalla K, Snape J, Topp E, van Hengel A, Verner-Jeffreys DW, Virta

MPJ, Wellington EM, Wernersson AS. (2018). Critical knowledge gaps and research needs related to the environmental dimensions of antibiotic resistance. *Environ Int.* 117:132-138

- No mechanism in present systems for licensing, priority setting, procurement or clinical selection of drugs to account for this factor. This biases against important rationing of drugs that contribute to the drug resistance challenge
- Adding such mechanism removes the bias, but implies accepting that clinically effective drugs are not licensed, prioritised, procured or used, to the disbenefit of individual patients.
- AGAIN: Justification requires a new principle that must be allowed to counterbalance the principle of need.

≡

INDIAN EXPRESS

ALION WORLD STATES OTES RUSINESS SPORT INTERTAINMENT GALLERES WORLD SPECIALS OPINIONS Extrainers

Home > The Sunday Standard

New drug-resistant gene found in water polluted with pharma waste

Hyderabad is now home to a new resistance gene, named as 'blaRSA2', that can render useless even Carbapenems, the type of antibiotics which are used as last-resort medicines to treat patients

f 💅 G+ 📖

Published: 15th March 2018 10:00 AM | Last Updated: 15th March 2018 10:00 AM





CENTRE FOR ETHICS, LAW AND MENTAL HEALTH CELAM.GU.SE CENTRE FOR ANTIBIOTIC RESISTANCE RESEARCH CARE.GU.SE GOTHENBURG RESPONSIBILITY PROJECT

GRP.GU.SE



Challenge 3: Accepting therapy *only* for the sake of others and/or the common good

- Horisontal transfer: Resistant genes can spread to new bacteria in the human gut, and then be transported into environment via feces and urine.
- People carrying or infected by resistant strains are thus vectors of the drug resistance challenge
- Treatments (screening w. restrictions for positives or pharmaceuticals still on the drawing board) might block the spread, but provide risk and no benefit to the carrier/patient.
- Such (primary preventive) benefit is currently not recognised at all in standard systems of priority setting and clinical assessment of new therapies, and are not allowed to balance therapeutic risk in assessments.







CENTRE FOR ETHICS, LAW AND MENTAL HEALTH CELAM.GU.SE CENTRE FOR ANTIBIOTIC RESISTANCE RESEARCH CARE.GU.SE

GOTHENBURG RESPONSIBILITY PROJECT

GRP.GU.SE



Pathways & principles

- Assessment, priority setting and rationing of antimicrobial drugs and effectrive therapies should consider new types of measures
- Current standard operating principles of "patient first" (non-instrumentality), individual need (based on severity of condition and prognosis of treatment ratio) and opportunity cost balancing, fail to provide justification of such measures.
- Two possible additional principles:
 - Primary prevention: Recognise avoiding future health problems as a clinical benefit
 - Sustainability: constrain the application of other principles, should they undermine the future effectiveness
 of the health system
- Both may outweigh the "patient first" and individual need biases in current schemes.
- Critical pragmatic issue: may this kind of shift be made compatible with orthodox clinical medical ethos?

Munthe, C & Nijsingh. Cutting red tape to manage drastic public health threats: Should antimicrobial drug innovation be expedited? In review.

Nijsingh, N., Larsson, D.G. J., Persson de Fine-Licht, K., Munthe, C. (2018). Justifying Antibiotic Resistance Interventions: Uncertainty, Precaution and Ethics. In Jamrozik, E. & Selgelid, M. (Eds.). *Ethics and Antimicrobial Resistance*. Cham: Springer, *in press*



CENTRE FOR ETHICS, LAW AND MENTAL HEALTH CELAM.GU.SE

CENTRE FOR ANTIBIOTIC RESISTANCE RESEARCH CARE.GU.SE GOTHENBURG RESPONSIBILITY PROJECT

GRP.GU.SE

FORTE:

<u>V</u>

Thank You!

Visit CARe: http://care.gu.se

Watch videos on ethics and drug resistance: https://care.gu.se/all-ethics-and-value-symposium-talks

More info about the global fight against drug resistance: <u>http://www.who.int/antimicrobial-resistance/en/</u>

Latest report on the global surveillance of drug resistance: http://www.who.int/glass/resources/publications/early-implementation-report/en/

Readings:

Littmann, J., Viens, A.M. (2015). The Ethical Significance of Antimicrobial Resistance. *Public Health Ethics* 8(3): 209–224

Jamrozik E., Selgelid M.J. (eds) (2018). *Ethics and Drug-Resistant Infections: Collective Responsibility for Global Public Health*. Cham, Switzerland: Springer, in press.

More info about me: https://www.gu.se/english/about_the_university/staff/?userId=xmuntc