Developing an ethical framework for "One Health" policy analysis: suggested first steps

Joshua Freeman,

Clinical Microbiologist, Canterbury DHB

Professor John McMillan

Bioethics Centre, University of Otago

Outline

1. Brief overview and of biomedical ethical frameworks (for analysing clinical questions)

2. Brief overview of public health ethical frameworks (for analysing public health policy questions)

3. Why we need an ethical (values-based) framework for One Health

4. Suggested next steps toward developing a suitable framework for One Health

What is meant by "ethics"?

- The systematic application of a set of agreed moral principles to help us decide the "right" thing to do

- Ethical analysis is a valuable tool for examining and debating how to respond to complex clinical questions and dilemmas that arise in the delivery of healthcare
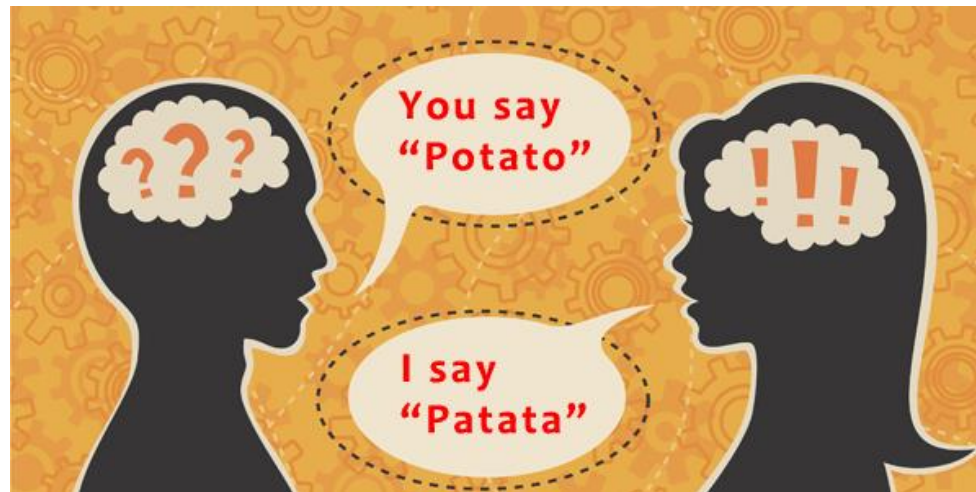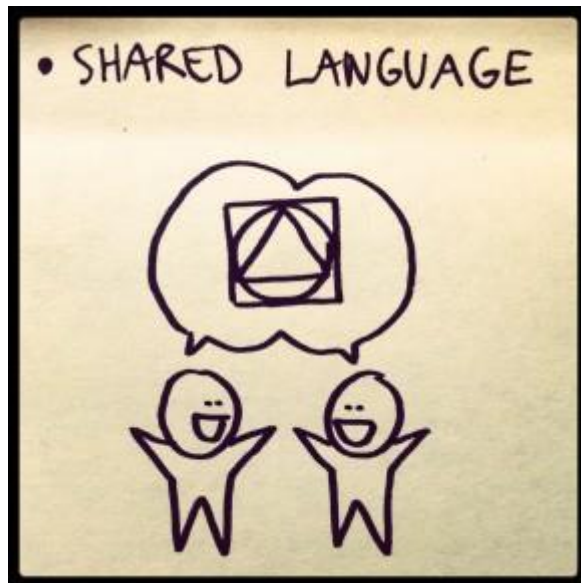
Principles of clinical ethics
Beauchamp and Childress 1979

- ## <u>Autonomy</u>
    - maximising a patient's ability to participate in their own healthcare decision making free from coercion or undue influence from healthcare workers.

- ## <u>Beneficence</u>
    - maximising a patient's health and well-being, usually measured in terms of health outcomes and minimising impact of disease.

- ## <u>Non-maleficence</u>
    - "Do no harm" – minimising the risk of harm

- ## <u>Justice</u>
    - maximising fairness in the deployment of healthcare resources and risks between patients

The purpose of the four principles

"The four principles … approach enables health care workers from totally disparate moral cultures to share a fairly basic, common moral commitment, common moral language, and common analytical framework for reflecting on problems in health care ethics."

R Gillon BMJ 1994

What ethical frameworks can and can't do

- Can't provide "the answer" to complex ethical dilemmas but rather provides a **shared framework and language** for considering and debating the best approach to addressing them

- Can facilitate **a more objective and self aware approach to decision making** by dissecting out the different ethical components and drawing a clear distinction between the roles of values and empiric evidence in the deliberative process

- Can enable conflicting ethical principles to be explicitly identified and evaluated so that informed **judgments can be made about appropriate trade offs** and balancing competing concerns

- Can provide a basis for ensuring decision making is **more transparent** to observers (as well as those involved in the decision making process themselves!!)

Principles and frameworks for public health ethics

An Ethics Framework for Public Health

| Nancy E. Kass, ScD   American Journal of Public Health | November 2001, Vol 91, No. 11

Review

Theoretical Models and Operational Frameworks in Public Health Ethics

Int. J. Environ. Res. Public Health 2010, 7, 189-202

Carlo Petrini

Public health: ethical issues

NUFFIELD COUNCIL ON BIOETHICS

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Putting public health ethics into practice: a systematic framework

Georg Marckmann¹*, Harald Schmidt², Neema Sofaer³ and Daniel Strech⁴

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- **Core principles of public health ethics**
  - **Utility** – will there be an overall health benefit or loss?
    - Measures of aggregate or average health outcomes / impacts

  - **Equity / fairness** – will avoidable inequalities in health be increased or diminished?
    - Measures of how health impacts (benefits and burdens) are distributed across the population

  - **Freedom / empowerment** – overall, will people be more or less capable, empowered and free to live the kind of lives they value?

  - **Efficiency** – How cost effective and what is the incremental cost-benefit ratio compared to alternatives?

Limitations of public health ethical frameworks for One Health

- But for analysing broader policy questions relating to One Health, public health ethical frameworks are inadequate
  - Don't account for <u>animal health</u> / welfare
  - Not very suitable for examining non-health measures of human well-being or impacts on the social determinants of health / via <u>socio-economic</u> pathways
  - Don't address questions of <u>sustainability / environmental impact</u>

One Health Ethical frameworks:

Evaluate ethics of measures to reduce the risk of emerging and re-emerging infectious disease risks to humans and animals.

Public health ethical frameworks:

Evaluate ethics of measures to prevent disease in human populations

Implementing a One Health approach to emerging infectious disease: reflections on the socio-political, ethical and legal dimensions

"One Health represents a call for both researchers and practitioners at the human, animal and environmental interfaces to work together to mitigate the risks of emerging and re-emerging infectious diseases"

"There are however, socio-political, ethical and legal challenges which must be met by such a One Health approach"

"The effective control and prevention of EIDs therefore requires... **a set of practical principles and values that integrate ethics into decision making procedures, against which policies and public health responses can be assessed**..."

"...**a solid framework based on shared values is needed to support decision-making surrounding EIDs**"

"Prioritisation and resource allocation require political processes based on **fundamental ethical questions about what is valuable, what is to be protected and, ultimately, what is dispensable**."

Why we need an ethical framework for One Health policy analysis

- Taking a "One Health" approach to addressing emerging infectious disease threats entails more than just interdisciplinary research, it requires (at some level) **engagement with policy makers.**
    - Engagement with policy makers can range from providing technical advice on request through to proactively advocating for a particular policy or course of action.

- However, actions and policies to control EIDs may have downstream consequences on livelihoods, personal freedoms, the health of animals and natural systems. **Action to mitigate EIDs can therefore have complex ethical dimensions.**

- ***How can One Health practitioners and researchers evaluate whether supporting a particular course of action or policy is ethically justified?***

Examples of policy questions relevant to One Health

- **Should the non-therapeutic use of antimicrobials in agriculture be phased out and banned?**

- **Should intensive confinement practices in agriculture be phased out and banned?**

- **Should dairy cow numbers be reduced in NZ?**

- **What rules are justified to govern access to freshwater?**

- **What measures are justified to preserve freshwater ecosystems?**

- **At what point is culling of livestock justified for the control of EIDs?**

- **At what point are restrictions on trade justified to prevent spread of foodborne EIDs?**

- **At what point are border control measures justified in response to pandemic threats?**

Why we need an ethical framework for One Health policy analysis

- All of these questions require us to not only consider complex causal pathways but also to **identify and evaluate complex trade offs between competing ethical principles and values**

- Just as we need analytical tools to navigate complex causal pathways and relationships, **we also need analytical tools to help us navigate ethical complexity**

What is the way forward?

1. Build on existing systematic frameworks for public health policy eg Marckmann et al

2. Expand the set of ethical criteria to caoture the broader range of considerations relevant to One Health policy.

3. Suggested new ethical criteria
   1. **Animal health**
   2. **Socio-economic impacts**
   3. **Environmental sustainability**.

Putting public health ethics into practice: a systematic framework

Georg Marckmann[1] *, Harald Schmidt[2], Neema Sofaer[3] and Daniel Strech[4]

- **Ethical criteria**
  1. **Health utility** – will there be an overall health benefit or loss?
     - Measures of aggregate or average health outcomes / impacts
  2. **Equity / fairness** – will avoidable inequalities in health be increased or diminished?
     - Measures of how health impacts (benefits and burdens) are distributed across the population
  3. **Freedom / empowerment** – overall, will people be more or less capable, empowered and free to live the kind of lives they value?
  4. **Efficiency** – How cost effective and what is the incremental cost-benefit ratio compared to alternatives?

New criterion # 1: Animal health

- Why should we include?
  - Animal health is central to the One Health ethos

  - Animal health and wellbeing are widely recognised as important ethical considerations in the arena of medical research ethics

A case for integrity: gains from including more than animal welfare in animal ethics committee deliberations

H Röcklinsberg[1], C Gamborg[2] and M Gjerris[2]

New criterion #2: Socio-economic impacts

- Why should we include?
  - Socio-economic impacts, while closely related to health impacts, are not synonymous with them and reflect a related but different perspective on human wellbeing
  - Economic arguments are central to most policy discussions.
- Scope of definition
  - Assessment should include consideration of how benefits and burdens would be *distributed* (equity considerations) and impact on local communities through job gain / loss / business closures etc

Socio-Economic Impact Analysis

Objective:
•To identify and evaluate the potential Socio-Economic cultural impacts of a proposed Development Activity on the Lives and Circumstances of the People, Households and Communities

New criterion # 3. Impacts on environmental sustainability

- Why should we include?
  - Natural systems may be seen to have intrinsic value independent of their value to humans
  - and / or the preservation of natural and human systems on which humans depend may be seen as an issue of inter-generational equity

  - "We need a new ... principle of planetism and wellbeing for every person on this Earth - a principle that asserts that we must conserve, sustain, and make resilient the planetary and human systems on which health depends..."

    Manifesto of Planetary Health

    Lancet. 2014; 383: 847

Assessing "Dangerous Climate Change": Required Reduction of Carbon Emissions to Protect Young People, Future Generations and Nature

Lancet and University College London Institute for Global Health Commission

Managing the health effects of climate change

SUSTAINABILITY

Planetary boundaries: Guiding human development on a changing planet *Science* **347**, 1259855

The planetary boundaries framework defines a safe operating space for humanity based on the intrinsic biophysical processes that regulate the stability of the Earth system.

| ETHICAL CRITERIA: The outcomes we value | "EVIDENCE INFORMED" IMPACT ANALYSIS: Based on the available evidence, is it reasonable to conclude...? | SYNTHESIS: How do the various objectives align? Are there any trade-offs and if so are these acceptable? How does the proposal compare to other options? |

NET IMPACT ON HUMAN HEALTH
- The intervention will result in a net population health gain or loss for humans?

IMPACT ON INDIVIDUAL FREEDOM / AUTONOMY / SELF DETERMINATION
- The intervention will diminish or increase the freedom of individuals and groups to pursue the life they choose?

IMPACT ON HEALTH EQUITY
- The intervention will reduce or exacerbate existing systematic inequalities in human health ?

EFFICIENCY
- How does the cost-effectiveness / incremental cost-benefit compare to alternatives?

NET IMPACT ON ANIMAL HEALTH
- The intervention will result in a net population health gain or loss for animals?

IMPACT ON ENVIRONMENTAL SUSTAINABILITY
- The intervention will help preserve or destroy natural and human systems in the short and longer term?

SOCIO-ECONOMIC IMPACTS
- The intervention will result in economic gains or losses?
- What is the likely distribution of benefits and burdens?

DISCUSSION/ DEBATE/ POLICY REFINEMENT/ CONSENSUS

Next steps

- Further develop and refine definitions and scope of various evaluative criteria / ethical principles

- Ensure conceptions of "health", self determination and other criteria are sufficiently broad to encompass and reflect different cultural values and conceptions (eg. Kaupapa Maori)
  - If necessary, the list of evaluative criteria should be expanded further

- For each ethical criterion, explore and identify the available causal impact assessment frameworks and investigate their suitability

- Test the acceptability and workability of the framework among different individuals and cultural groups active in the One Health arena.

- Modify and improve both the acceptability and workability of the framework through an iterative process.

Summary

- Engagement with One Health intervention or policy action inevitably involves value judgments and ethical judgments about the "right" thing to do. THIS IS UNAVOIDABLE. Ethical frameworks can help expose implicit (embedded) value judgments so we can examine them more consciously and objectively.

- A common ethical framework could provide a useful tool to help navigate complex ethical questions that surround actions and policies relevant to One Health

- One approach would be to build on and expand the scope of public health ethical frameworks by including additional evaluative criteria

- Further work is needed to trial the acceptability and workability of such a framework across different cultural backgrounds, the goal being to improve, refine and develop the framework further through an iterative process

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- Methodological process
  1. DESCRIPTION - Describe the goals, methods, target population of the proposal
  2. SPECIFICATION – Specify or supplement (if necessary) the 4 ethical criteria
  3. EVALUATION – Evaluate the intervention based on each of the 4 ethical criteria (EMPIRICAL EVIDENCE)
  4. SYNTHESIS – Balance and integrate the 4 single evaluations of step 3 to arrive at an overall evaluation of the PH intervention (NO hierarchy between the 4 ethical criteria. Weighting based on both empirical evidence and personal values)
  5. MONITORING – Monitor and re-evaluate the ethical implications as more information and data become available