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Rare Diseases & Justice – Our Ethical Responsibility

Mariana Kruger
M Med Paed (Pret) FCP Paed (SA) M Phil (Stell) PhD (Leuven)
Department of Paediatrics and Child Health
SARETI (South African Research Ethics Training Initiative)
Fogarty Center, National Institutes of Health
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No conflict to declare

- This presentation reflects my personal view and should not be construed to represent any third party's view or policy.

Introduction

- Definition of Rare diseases
- Are drugs for rare diseases essential?
- Distributive justice - Concept and theories
- Rare diseases and Essential drug list (EDL)
- LMICs context
- Way forward

Which diseases are rare?

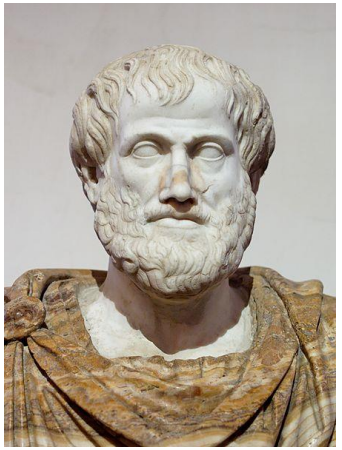
- Definition
  - USA: 7.5:10 000 (< 200 000 patients)
  - Europe: <5:10 000
- Often underlying genetic abnormality

Are drugs for rare diseases essential?

- Is it ethical to allow benefit to one patient and no benefit to another patient based on prevalence of disease?
- What are the underlying ethical arguments?

Principle of Justice

- Formal principle: Aristotle
  - “Equals must be treated equally & unequals must be treated unequally”
- Material principle
  - To each person an equal share
  - ***To each person according to need***
  - To each person according to effort
  - To each person according to contribution
  - To each person according to merit
  - To each person according to the free-market exchanges



Distributive justice definition

- “Fair,equitable and appropriate distribution by justified norms that structure the terms of social cooperation”

  Beauchamp and Childress

- Refers to the distribution of all rights and responsibilities in society

Theories of Justice (L Kopelman)

Utilitarian			
Maximize value			
Maximize social utility			
Public health			
Basic health care			
?Sickest/most vulnerable			
May favour children – most years of benefit			

Theories of Justice (L Kopelman)

Utilitarian	Libertarian		
Maximize value	Free market		
Maximize social utility	Liberty is a right		
Public health	Health care is not a right		
Basic health care	Entitlement theory - Nozick		
?Sickest/most vulnerable	Freedom of choice		
May favour children – most years of benefit	Adults are responsible for kids' health care		

Theories of Justice (L Kopelman)

Utilitarian	Libertarian	Egalitarian	
Maximize value	Free market	Equal access	
Maximize social utility	Liberty is a right	Outcomes important in distribution	
Public health	Health care is not a right	Age as determinant	
Basic health care	Entitlement theory - Nozick	Veatch: Limit on claims	
?Sickest/most vulnerable	Freedom of choice	What kind of equality?	
May favour children – most years of benefit	Adults are responsible for kids' health care	Potentially unfair to kids – not life-threatening	

Theories of Justice (L Kopelman)

Utilitarian	Libertarian	Egalitarian	Contractarians
Maximize value	Free market	Equal access	Fair distribution
Maximize social utility	Liberty is a right	Outcomes important in distribution	John Rawls/ Norman Daniels
Public health	Health care is not a right	Age as determinant	Fair opportunity
Basic health care	Entitlement theory - Nozick	Veatch: Limit on claims	Impartial assessment
?Sickest/most vulnerable	Freedom of choice	What kind of equality?	Promote equality of opportunity
May favour children – most years of benefit	Adults are responsible for kids' health care	Potentially unfair to kids – not life-threatening	Sick kids cannot compete

Resource allocation systems

- United Network for Organ Sharing
  - Sickest first
  - First come first served
  - Prognosis
  - *Disadvantage – No benefit maximizing or prognosis or youngest age*
- Quality adjusted life years (QALY)
  - Outcome measure – years
  - Maximizing assumption
  - *Disadvantage – Insufficient since person in wheelchair with impaired mobility may be very productive*
- Disability adjusted life years (DALY)
  - WHO: quality of life years
  - *Disadvantage: age as outcome measure*

Persad G et al. Lancet. 2009

Complete Lives System

- Five principles
  - Youngest first – not yet lived their lives
    - Can be modified – adolescents rather than infants
  - Prognosis
    - Poor prognosis – cannot live a complete life
  - Save the most lives
    - More persons to live a complete life
  - “Lottery”
    - Equal potential recipients
  - Instrumental value
    - Socio-economic active
  - *Disadvantages – Older age discrimination*

Persad G et al. Lancet 2009

RESOURCE ALLOCATION -THERAPEUTI

Two approaches

- Essential Drug List (EDL)
- Orphan Drug list

Essential Drug List (EDL)

- WHO Essential drug list (EDL) – 1977
- Normative guideline
  - Save lives and improve health
  - Available, affordable, good quality and appropriately used

EDL Approach

- All drugs that are essential for a particular disease is included in the EDL
  - This is the case for both common and rare diseases with proven effective therapy
  - **Cost-effective analysis** prove high priority for a rare disease – included in EDL

Orphan Medicines Model

- 1983 US Orphan Drugs Act & EU 2000
  - Prevalence
    - Rare disease
    - Chronic and debilitating
  - Effective treatment
  - Safety profile acceptable
  - Availability
  - Diagnosis feasible
  - Expertise infrastructure

Aspect	EDL	Orphan Drugs
Concrete policy	1977 Worldwide	1983 USA; 2000 EU
Primary focus	Public health	Individual patient
Developed by	WHO	USA, EU, Australia, Japan
Criteria	Drug driven: efficacious, safe, cost-effective, evidence-based	Disease driven – rare disease
Policies aim	Established medicines to patients	New medicines
Target populations	All countries especially low income countries	High income countries
Economics	Cost-effective, sustainable, affordable access	High price per individual patient

Adapted from Stolk P et al. *Bull World Health Org* 2006; 84: 745-751

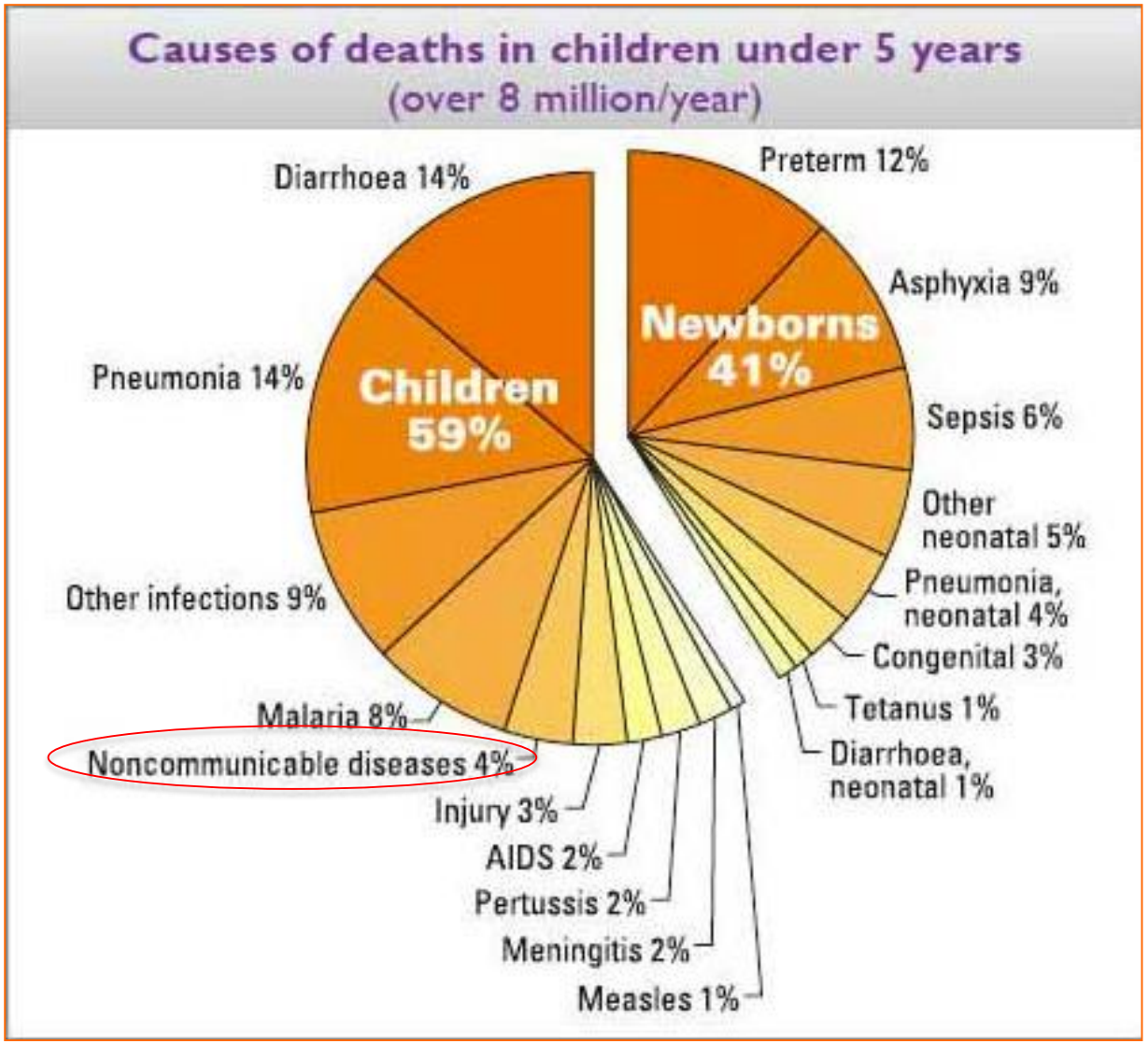
What is the current status in LMICs?

- Public Health
  - Utilitarian approach
  - WHO EDL
- Private Health
  - To a certain extent similar to public health
  - Allow egalitarian approach with equal opportunity in proven therapy for rare diseases

Convention on the rights of children

- Article 1
  - The best interest of the child shall be the primary consideration
- Article 3
  - Ensure the existence of institutions, services and facilities for adequate health care
- Article 6
  - Every child has the inherent right to life
  - To ensure to the maximum extent possible, the survival and development of the child

Causes of Death in children < 5 years



www.who.int/pmnch/media/press_materials/fs/fs_mdg4_childmortality/en/index.html

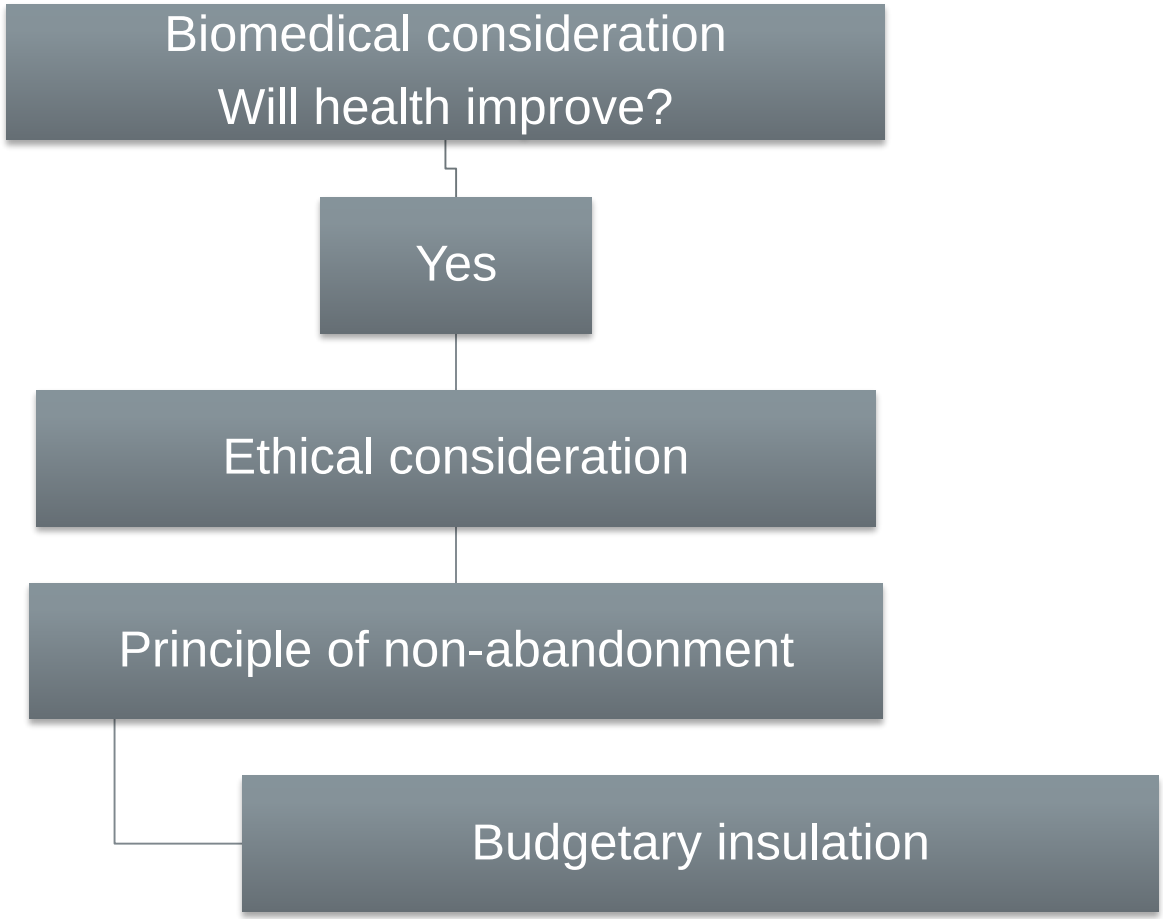
How do we decide?

- John Rawls: A theory of justice 1971
- Original position: “veil of ignorance
- General concept:
  - All social primary goods must be distributed equally unless an unequal distribution of any or all goods are to the advantage of the least favoured.
- Two principles: (Rawls, 1971)
  - *The Difference Principle:* addresses “social and economic inequalities”, which must be arranged in such a manner that they are to everyone’s advantage under all circumstances and must result in the **greatest benefit to the most disadvantaged**.

Tools

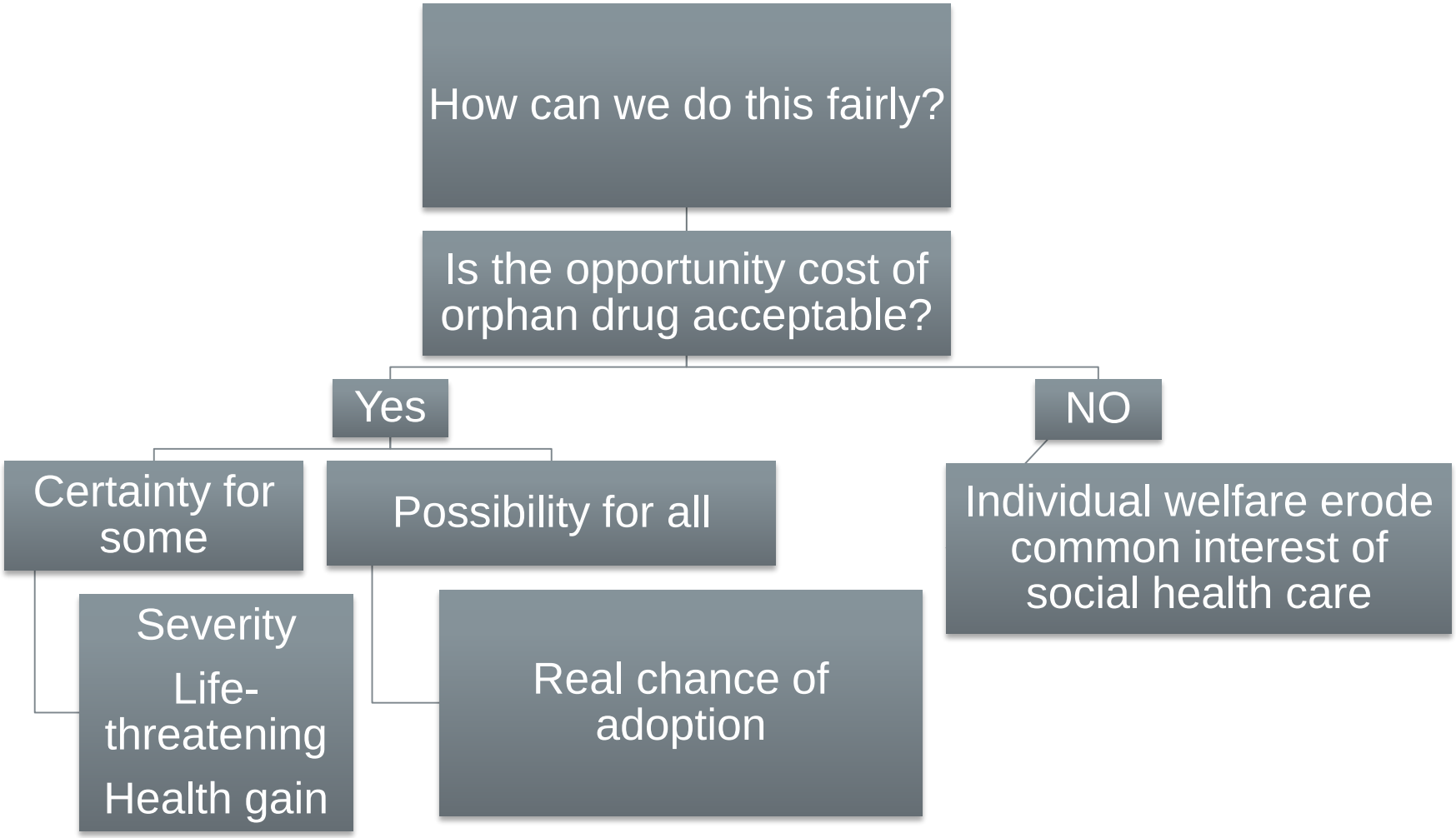
- Need
  - Acute
  - Aggressive
  - Technological advanced
  - *Negative impact on chronic and palliative care*
- Age
  - Younger population
  - *Negative impact on chronic and palliative care, as well as elderly*
- Opportunity
  - Private health care - *You can buy your health care according to your own contribution*
- Cost effective
  - Total cost compared to effectiveness – cost effective ratio

Proposal for rare diseases Step 1



W Pinxten et al. JME 2011

Proposal for rare diseases Step 2



W Pinxten et al. JME 2011

SIOP – PODC MODIFIED GUIDELINES

	Setting 1 Low Income	Setting 2 Moderate Income	Setting 3 High Income
Imaging	None or CT only	CT and/or MRI	MRI
Access to treatment	Minimal	Moderate access	Moderate to high access
Surgery	Minimal only conservative	Moderate surgical skills	Full spectrum
Pathology	Minimal	Limited risk assessment	Excellent
Genetic	None	None	Limited availability
Criteria for reclassification	Improved treatment, pathol,	Improved treatment, pathol,	
Advocacy for rare diseases	Probably none except	Initiate for some if drugs in EDL	Advocacy for all

Way forward

- Distributive justice argument – Aristotle, Rawls
  - Proper distribution of benefits and burdens
- Is it ethical to allow benefit to one patient and no benefit to another patient based on prevalence of disease?
  - Address question through cost-effective analysis – Cost-effective ratio
  - If proven cost-effective and safe – include in EDL as essential for the disease

Way forward

- Use Convention on the rights of children since this is “basic health care”
- Ensure budget insulation for rare diseases with guaranteed access for some and possible access for all (Pinxten et al. 2011)
- Ensure publishing all evidences of effective treatment even if only case reports to generate evidence
- Advocate for rare diseases in the face of an existing therapy is our ethical responsibility

Thank you for the invitation