Social returns from health research: the role of research priority setting

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Structure of presentation

- HERG 'payback' framework for assessing wider impacts:
  - multidimensional categorisation of research impacts or returns
  - logic model for assessing research impacts or returns

- 2 types of priority setting
  - researcher-led (curiosity-driven, internally-driven) research
  - user-led (social needs-driven, externally-driven) research

- Using the payback framework to assess the impact of examples from each type of priority setting

- Conclusions about role of prioritisation and opinions about assessing returns

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HERG's payback framework

- Payback framework has 2 main elements (Buxton & Hanney, 1996, 2008)

- Multidimensional categorisation of benefits or impacts:
  - *knowledge production*
  - *targeting future research, capacity building, & absorption*
  - *informing policies & product development*
  - *health and health sector benefits, eg better health*
  - *broader economic benefits*

- Logic model of how to assess the benefits:
  - *7 stages*
  - *2 interfaces*

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Payback logic model & priority setting

Inputs
Processes
Primary outputs

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Payback logic model & priority setting

Research needs assessment or

topic/issue identification

Inputs
Processes
Primary outputs

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Payback logic model & priority setting

Research needs assessment

Inputs
Processes
Primary outputs

Secondary outputs
Applications
Impacts or final outcomes

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Payback logic model & priority setting

Research needs assessment

Interface (a)

Inputs
Processes
Primary outputs

Interface (b)

Secondary outputs
Applications
Impacts or final outcomes

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Political and social environment

Stock of knowledge

Systematic reviews
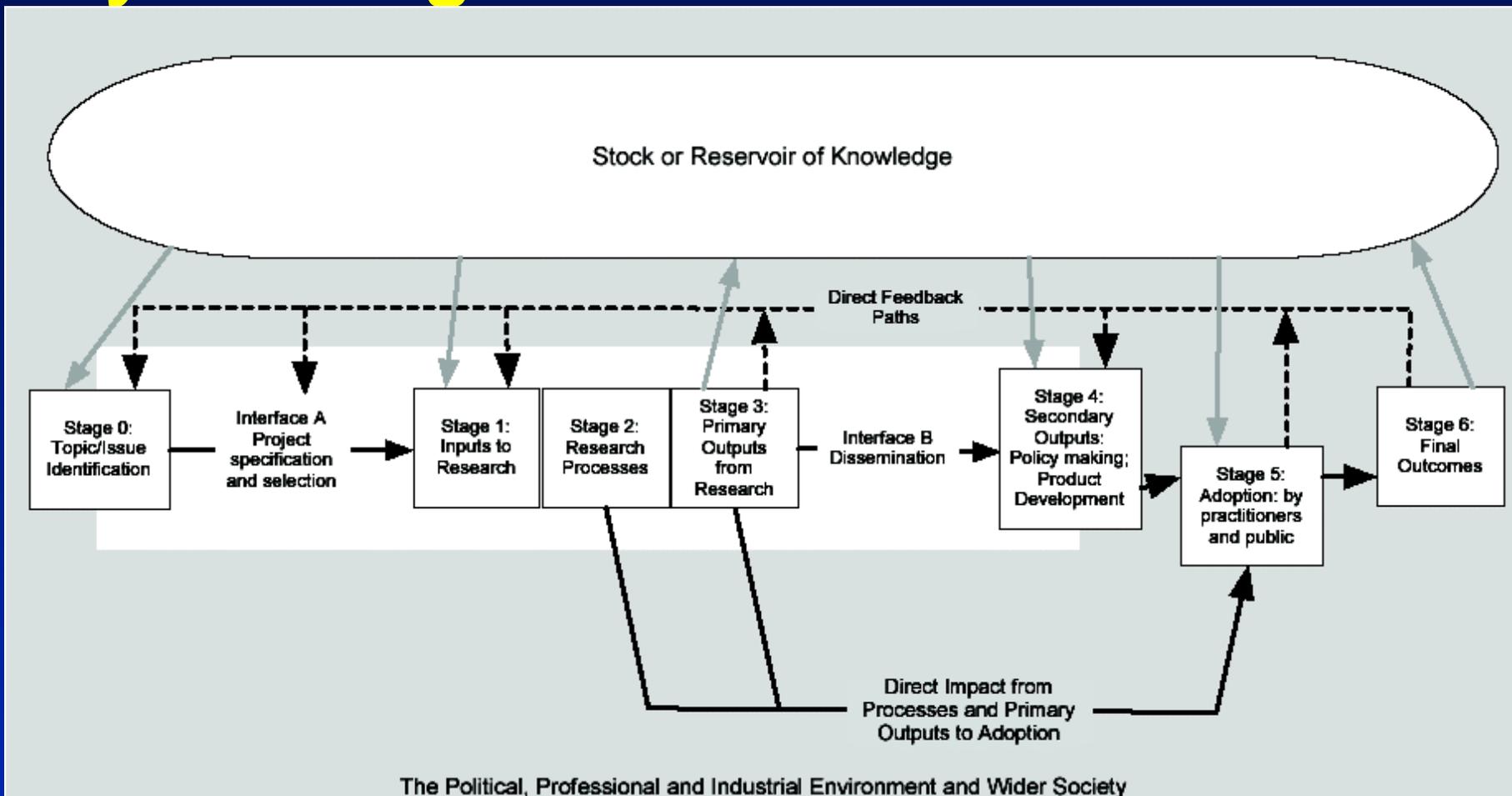
Research needs assessment

Interface (a)

Inputs
Processes
Primary outputs

Interface (b)

Secondary outputs
Applications
Impacts or final outcomes

Professional practice

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Payback logic model

Stock or Reservoir of Knowledge

Direct Feedback Paths

Stage 0: Topic/Issue Identification

Interface A Project specification and selection

Stage 1: Inputs to Research

Stage 2: Research Processes

Stage 3: Primary Outputs from Research

Interface B Dissemination

Stage 4: Secondary Outputs: Policy making; Product Development

Stage 5: Adoption: by practitioners and public

Stage 6: Final Outcomes

Direct Impact from Processes and Primary Outputs to Adoption

The Political, Professional and Industrial Environment and Wider Society

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Two types of priority setting

- Curiosity-driven or researcher-led research
  - *many researchers believe they make most progress when they are free to set own priorities*
  - *these priorities come from within science or own clinical practice*
  - *often this approach used in basic science & leads to small advances*
  - *sometimes leads to dramatic breakthroughs & big impacts eg RDS*

- Needs-driven or user-led research
  - *long history of science serving needs of society (Bacon, 1627)*
  - *now increased emphasis on groups in society setting priorities*
  - *often associated with applied research*
  - *can be difficult to engage potential users in setting priorities but a collaborative approach between users & researchers best (Kogan et al)*
  - *often user-led approach linked with 'receptor bodies' to receive findings*
  - *in some user-led research programmes many projects can make impacts, but the approach can be unpopular with researchers*

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Assessing the impacts from curiosity-driven research: corticosteroids for prevention of RDS

- Used payback framework to organise data to show benefits from the curiosity-driven work of Liggins on ante-natal use of corticosteroids for prevention of Respiratory Distress Syndrome

- Researcher moved from animals to humans: randomised the first patients to receive the treatment

- Considerable impact in most categories (Hanney et al, 2005)
  - *major, widely cited publications*
  - *targeted much research from others (these studies inspired Cochrane logo)*
  - *influenced clinical policies in many countries*
  - *thousands of babies survived, plus reduced morbidity*
  - *possible cost savings*

- Raises nationality issues in impacts assessment

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Cochrane logo:
Liggins' RCT and subsequent trials

Assessing the impacts from needs-driven research: the UK Health Technology Assessment Programme

- UK's HTA programme has several streams including:

- Primary and secondary research:
  - complicated process of priority setting involving many groups (clinicians, policymakers, managers, public, researchers)
  - aim is to prioritise topics that meet the needs of the NHS
  - there is an open tender for the selected topics & often many research teams make diverse proposals

- Technology Assessment Reports (TARs) for NICE
  - each one is specifically commissioned by NICE to inform a priority coverage decision NICE is going to make for interventions in the NHS
  - for each TAR one research team is asked to undertake a precisely specified review
  - the completed review is always sent to the NICE committee

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Assessing the impacts from needs-driven research: the UK Health Technology Assessment Programme

- Impact assessment of HTA Programme used payback framework to inform all the methods & write-up (Hanney et al, 2007)

- Questionnaire to all PIs in programme (133/204); 16 case studies involving documentary review and PI interview

- Average of 2.93 peer-reviewed publications per project often in quite high impact journals which reflects scientific quality

- Many projects made wider impacts on health policy and practice; especially the TARs for NICE

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Assessing the impacts from needs-driven research: the UK Health Technology Assessment Programme

	% of projects claiming an impact on policy	% of projects claiming an impact on practice
Primary research	66%	45%
Secondary research	57%	21%
Technology Assessment Reports	96%	58%
Totals	73%	53%

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Assessing the impacts from needs-driven research: the UK Health Technology Assessment Programme

- Many of the projects commissioned to meet the needs of NHS make an impact even when no specific customer identified.

- There are now many bodies in the UK that make policies on clinical matters & act as 'receptor' bodies for needs-driven research even when they did not directly commission it.

- Nearly ALL the review projects directly commissioned to inform policy of a 'receptor' body such as NICE make some impact even if it is not very large: the review does inform discussions

- Sometimes the attempt to set priorities to meet the needs of potential users goes too far & results in researchers being pushed to do things that are not practical

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Assessing the impacts from needs-driven research: a review of studies of the returns from research

- Along with our study of the UK HTA program we also conducted a review of studies of impact or returns from research programs

- These health research programs varied in many ways, including types of research prioritisation used; but in each case the impact study started with the research program & worked forwards

- All types of program produced impacts, but the % of projects making an impact was generally high for needs-led research

- This included several HTA programs, especially the one from Quebec: 'The best insurance for impact is a request by a decider that an evaluation be made' (Jacob & McGregor)

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Conclusions about the role of priority setting

- The chances of health research making some impact are likely to be increased where there are need-driven priority setting processes directly linked to decision-making process

- This is type of research is most likley to be clinical or applied research

- There is a major role for curiosity-driven research that is often basic & makes small advances, but can make big impacts

- The health research system in any country should fund a portfolio of research including curiosity-driven & needs-driven research, but different programs (such as HTA) could concentrate on needs-driven research.

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Opinions about assessing research returns

- Impacts on health or society are rarely attributable to just one specific research project & might take many years to achieve

- Some progress on payback assessment is feasible but often requires careful analysis of the contribution made by projects

- A multidimensional perspective on payback or returns is valuable and appeals to multiple stakeholders

- A logic model helps focus thinking about the role of specific research and provides consistency over a series of cases

- *Formal analysis of payback can begin to provide an evidence-base for research policy*

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