

الله أكبر
٢

Increasing value, reducing waste

Abtin Heidarzadeh MD.MPH

Professor of Community and preventive medicine

School of medicine, Guilan university of medical sciences and health services

تجربیات

- طرح های ملی نظام سلامت
- طرح های JPRM
- طرح های مرکز ملی تحقیقات سلامت
- طرحهای فراخوان های نیماد
- طرح های فراخوان های نصر
- طرح های فراخوان های سایر وزارت خانه ها

How to increase value and reduce waste when research priorities are set



Research: increasing value, reducing waste 1

How to increase value and reduce waste when research priorities are set

Iain Chalmers, Michael B Bracken, Ben Djulbegovic, Silvio Garattini, Jonathan Grant, A Metin Gülmezoglu, David W Howells, John P A Ioannidis, Sandy Oliver

Iain Chalmers, Michael B Bracken, Ben Djulbegovic, Silvio Garattini, Jonathan Grant, A Metin Gülmezoglu, David W Howells, John P A Ioannidis, Sandy Oliver, How to increase value and reduce waste when research priorities are set, *The Lancet*, Volume 383, Issue 9912, 2014, Pages 156-165, ISSN 0140-6736, [https://doi.org/10.1016/S0140-6736\(13\)62229-1](https://doi.org/10.1016/S0140-6736(13)62229-1). (<https://www.sciencedirect.com/science/article/pii/S0140673613622291>)

To increase value and reduce waste in setting research priorities, consider the following strategies:

- 1.Stakeholder Engagement**
- 2.Clear Criteria**
- 3.Alignment with Goals**
- 4.Data-Driven Decisions**
- 5.Capacity and Resources Assessment**
- 6.Iterative Review**
- 7.Collaboration and Coordination**
- 8.Monitoring and Evaluation**

Increasing value and reducing waste in research design, conduct, and analysis



Research: increasing value, reducing waste 2

Increasing value and reducing waste in research design, conduct, and analysis

John P A Ioannidis, Sander Greenland, Mark A Hlatky, Muin J Khoury, Malcolm R Macleod, David Moher, Kenneth F Schulz, Robert Tibshirani

John P A Ioannidis, Sander Greenland, Mark A Hlatky, Muin J Khoury, Malcolm R Macleod, David Moher, Kenneth F Schulz, Robert Tibshirani, Increasing value and reducing waste in research design, conduct, and analysis, *The Lancet*, Volume 383, Issue 9912, 2014, Pages 166-175, ISSN 0140-6736, [https://doi.org/10.1016/S0140-6736\(13\)62227-8](https://doi.org/10.1016/S0140-6736(13)62227-8). (<https://www.sciencedirect.com/science/article/pii/S0140673613622278>)

increase value and reduce waste in research design, conduct, and analysis:

RESEARCH DESIGN

1. **Define clear, Specific Objectives:** Focus on questions with high societal or clinical impact.
2. **Use Appropriate Study Designs:** Choose the most efficient, rigorous design for the research question.
3. **Power and Sample Size Calculations:** Ensure sufficient sample size to produce reliable results without excess.
4. **Pre-registration and Protocol Transparency:** Register protocols upfront to prevent selective reporting.
5. **Incorporate Stakeholder Input:** Align design with end-user needs to enhance applicability.

RESEARCH CONDUCT

1. **Adhere to Protocols:** Follow approved procedures strictly to maintain validity.
2. **Quality Control:** Implement rigorous data collection, management, and monitoring systems.
3. **Minimize Bias:** Use blinding, randomization, and controls appropriately.
4. **Efficient Data Collection:** Use digital tools and standardized measures to reduce errors and redundancies.
5. **Plan for Data Sharing:** Facilitate data sharing to maximize reuse and avoid duplication.

DATA ANALYSIS

1. **Predefine Analysis Plans:** Specify analyses beforehand to prevent data dredging.
2. **Use Appropriate Statistical Methods:** Match methods to data types and study design.
3. **Avoid P-hacking and Selective Reporting:** Stick to pre-specified outcomes and analyses.
4. **Conduct Sensitivity and Subgroup Analyses:** Explore robustness and heterogeneity without overinterpreting.
5. **Report Transparently:** Share results, including negative findings, to inform future research.

Increasing value and reducing waste in biomedical research regulation and management



Research: increasing value, reducing waste 3

Increasing value and reducing waste in biomedical research regulation and management

Rustam Al-Shahi Salman, Elaine Beller, Jonathan Kagan, Elina Hemminki, Robert S Phillips, Julian Savulescu, Malcolm Macleod, Janet Wisely, Iain Chalmers

Al-Shahi Salman R, Beller E, Kagan J, Hemminki E, Phillips RS, Savulescu J, Macleod M, Wisely J, Chalmers I. Increasing value and reducing waste in biomedical research regulation and management. *Lancet*. 2014 Jan 11;383(9912):176-85. doi: 10.1016/S0140-6736(13)62297-7 . Epub 2014 Jan 8. PMID: 24411646; PMCID: PMC3952153.

To increase value and reduce waste in biomedical research regulation and management, focus on the following strategies:

REGULATION

1. **Streamline Approval Processes:** Simplify and harmonize regulatory procedures .
2. **Adopt Risk-Based Approaches:** Tailor regulatory requirements based on the potential risk.
3. **Encourage Adaptive Regulation:** Use flexible, real-time review processes.
4. **Promote Transparency:** Make regulatory decisions, guidelines, and rationale openly available.
5. **Standardization of Protocols:** Develop clear guidelines to reduce variability and misunderstanding.

MANAGEMENT

1. **Centralize Oversight:** Create integrated governance structures to coordinate research activities and reduce duplication.
2. **Implement Efficient Oversight:** Use electronic systems for submission, review, and monitoring.
3. **Foster Collaboration:** Encourage communication between agencies, institutions, and researchers.
4. **Monitor Compliance and Outcomes:** Regularly review regulatory processes and research quality.
5. **Capacity Building:** Invest in regulatory science and management personnel to enhance efficiency and expertise.

Increasing value and reducing waste: addressing inaccessible research

Research: increasing value, reducing waste 4



Increasing value and reducing waste: addressing inaccessible research

An-Wen Chan, Fujian Song, Andrew Vickers, Tom Jefferson, Kay Dickersin, Peter C Gøtzsche, Harlan M Krumholz, Davina Ghera,
H Bart van der Worp

Chan AW, Song F, Vickers A, Jefferson T, Dickersin K, Gøtzsche PC, Krumholz HM, Ghera D, van der Worp HB. Increasing value and reducing waste: addressing inaccessible research. *Lancet*. 2014 Jan 18;383(9913):257-66. doi: 10.1016/S0140-6736(13)62296-5. Epub 2014 Jan 8. PMID: 24411650; PMCID: PMC4533904.

Addressing inaccessible research to increase value and reduce waste involves several key actions:

- 1.Open Access Publishing:** Promote and support open access journals and repositories to make research findings freely available to everyone.
- 2.Data Sharing and Transparency:** Encourage researchers to share raw data, protocols, and analytical code to enable validation and reuse.
- 3.Registering Studies and Protocols:** Mandate registration of all studies in publicly accessible databases to prevent duplication and improve accountability.
- 4.Developing Repositories:** Create centralized, well-maintained databases for research outputs, including negative or null results.
- 5.Incentivize Accessibility:** Recognize and reward researchers who share their findings and data openly.
- 6.Policy Alignment:** Implement mandates and policies from funders, institutions, and journals that require or favor accessible research dissemination.
- 7.Address Barriers:** Tackle legal, technical, and financial barriers that hinder access, such as copyright restrictions or paywalls.

Reducing waste from incomplete or unusable reports of biomedical research

Research: increasing value, reducing waste 5



Reducing waste from incomplete or unusable reports of biomedical research

Paul Glasziou, Douglas G Altman, Patrick Bossuyt, Isabelle Boutron, Mike Clarke, Steven Julious, Susan Michie, David Moher, Elizabeth Wager

Glasziou P, Altman DG, Bossuyt P, Boutron I, Clarke M, Julious S, Michie S, Moher D, Wager E. Reducing waste from incomplete or unusable reports of biomedical research. *Lancet*. 2014 Jan 18;383(9913):267-76. doi: 10.1016/S0140-6736(13)62228-X. Epub 2014 Jan 8. PMID: 24411647.

Reducing waste from incomplete or unusable reports in biomedical research can be achieved through these strategies:

- 1.Pre-Register and Publish Protocols:** Encourage or require registration of study protocols and planned analyses to ensure transparency and completeness.
- 2.Adopt Reporting Guidelines:** Use standardized reporting frameworks like CONSORT, STROBE, or PRISMA to enhance clarity, completeness, and usability of reports.
- 3.Enforce Mandatory Reporting:** Journals, funders, and institutions should mandate full reporting of all results, including negative or null findings.
- 4.Promote Publication of Negative Results:** Foster a culture that values and publishes null or negative findings to avoid biased literature and redundant research.
- 5.Implement Data Sharing Policies:** Share datasets and detailed analysis methods to facilitate reproducibility and secondary analyses.
- 6.Provide Training:** Educate researchers in proper reporting practices and importance of complete, usable reports.
- 7.Develop Repositories for Unpublished Data:** Create platforms to archive incomplete or negative results, reducing waste and enabling others to learn from all data collected.

A hand holding a stethoscope against a blue background. The background features a faint globe on the left, a white heart rate line across the middle, and a white medical cross on the right. The stethoscope has purple earpieces and a silver chest piece.

از توجه شما سپاسگزارم