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### Assessing the impact of biomedical research

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# Assessing the Impact of Biomedical Research

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Washington University in St. Louis SCHOOL OF MEDICINE

"It is no longer enough to measure what we can – we need to measure what matters."

-- Wells & Whitworth

The Becker Medical Library Model for Assessment of Research Impact represents a practical, do-it-yourself tool for tracking the impact of biomedical research. The Model includes guidance for quantifying and documenting research impact as well as resources for locating evidence of research impact.

**Research Outputs** are the products created or generated from basic or clinical research (research data) and products disseminated by the research study investigators that discuss or interpret the findings of the research study.

Knowledge Transfer represents awareness and/or use of research outputs. Subsequent use of the research output can be by the same study investigators or by another group.

Clinical implementation is the application or adoption of research outputs in clinical practice.

Community Benefit is the enhancement of community health outcomes as a result of research outputs.

Legislation and Policy Enactment represents codification of research outputs into public law, guidelines, standards or policy.

The Model provides a reporting template and

gorithm resulting from the research stu

property generated by the research study.

Medical device or prototype developed by the Not applicable

Ocular Hypertension

nvestigator Name: Kass and Gordon

Treatment Study

Glaucoma Five Year Risk Estimator is based on results from the Ocular

Dryden, Jim. Model can predict risk of glaucoma in patients with elevated

(See PowerPoint Presentations section. Includes OHTS Presentations)

Outreach visits conducted but not documented.

slides, etc., that supplement a publication Abstracts and Papers, and Lectures and Presentations)

an example of a completed report

Investigator Name:

Research Study:

ological material or application identified

Algorithm resulting from the research stud

property generated by the research study Measurement instrument developed by

License agreement executed for intellectu

News releases issued by the research :

Outreach visits by research investigato

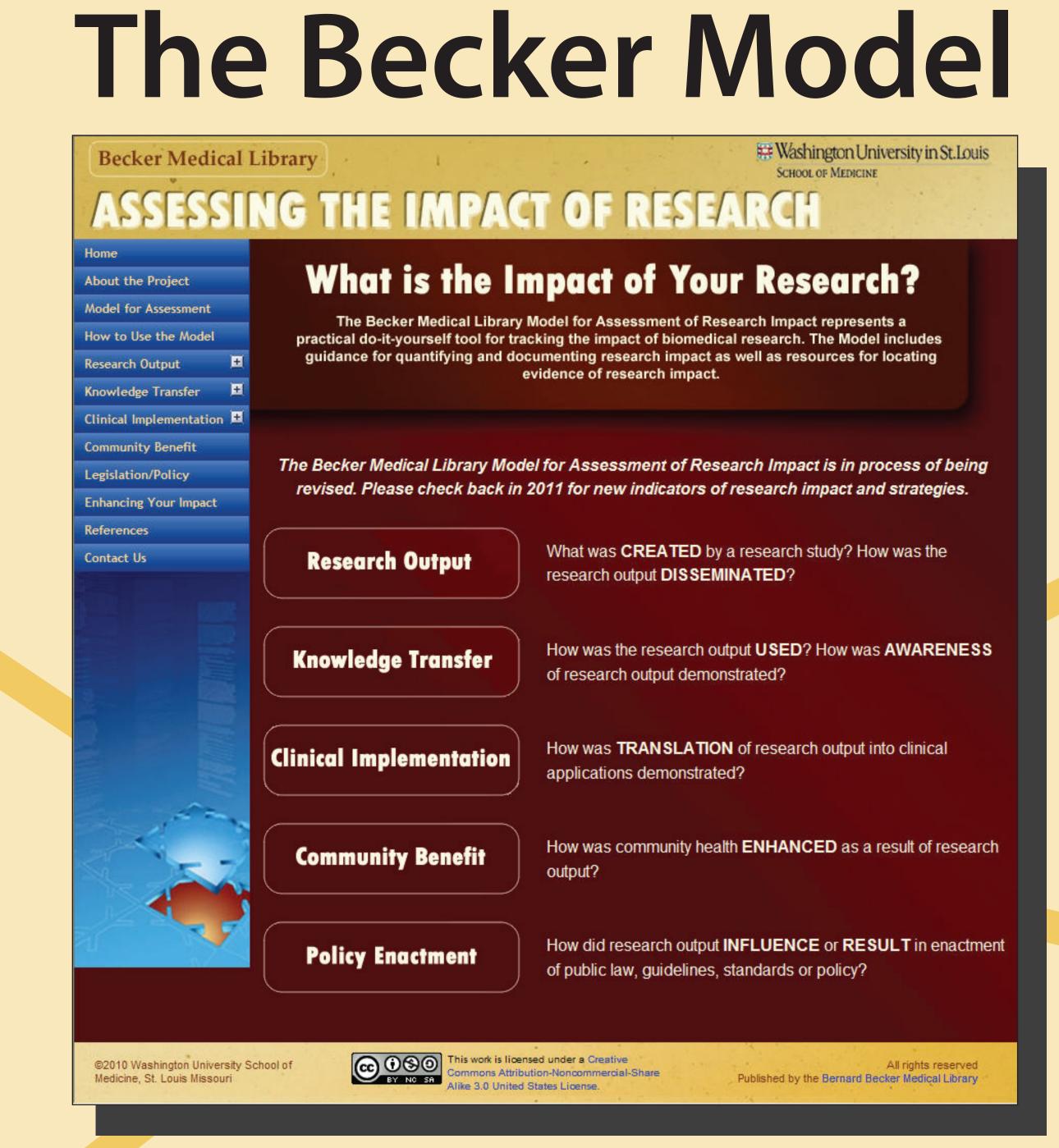
Medical device or prototype developed by

slides, etc., that supplement a publication

ublished or unpublished).

Research Data (public or restricted) Research data generated by the research study Website of Research Study Website developed for the research study.

Databases/Software/Algorithms Database resulting from the research:



http://becker.wustl.edu/impact/assessment/

## Benefits of Assessment of Research Impact

- Quantify and document research impact
- Justify future requests for funding
- Quantify return on research investment
- Discover how research findings are being used
- Identify similar research projects
- Identify possible collaborators
- Determine if research findings are duplicated, confirmed, corrected, improved or repudiated
- Determine if research findings were extended (different human populations, different animal models/species, etc.)
- Confirm that research findings were properly attributed/credited
- Demonstrate that research findings are resulting in meaningful health outcomes
- Discover community benefit as a result of research findings

The Becker Model can assist with the discovery process by providing a framework to document research outputs and activities, identify collaborative efforts, and assess the diffusion of knowledge and resulting research impact for an individual author or research group.

> Improving access and retrieval of your research study is the surest way to enhance its impact. Repetition, consistency, and an awareness of the intended audience form the basis for the recommended strategies.



The Becker Medical Library Model for Assessment of Research

Impact is in process of being revised. Please contact us with suggestions for additions or improvements.

**RESEARCH PROCESS & OUTPUTS** 

PATHWAYS TO RESEARCH IMPACT

Clinical Implementation

In order to see the all the leaves on the tree, i.e., research impact,

one must go beyond traditional citation analysis and metrics.

To understand the true impact of

the research study process in the

clinical and biomedical research

environment to identify tangible

are not readily discernible using

citation analysis.

indicators of research impact that

research, it is necessary to analyze Conference Abstracts

Economic Benefit

Advancement of Knowledge

Diffusion represents knowledge

transfer of research outputs into

meaningful outcomes. Diffusion is

manifested in various pathways.

 Progress Reports Tenure and Promotion dossiers Becker Medical Library Model for Assessment of Research Impact http://becker.wustl.edu/impact/assessment/index.html

Sarli CC, Dubinsky EK, and Holmes KL. 2010. Beyond citation analysis: A model for assessment of research impact. J Med Libr Assoc. January; 98(1): 17-23. http://www.pubmedcentral.nih.gov/2801963 Wells R, Whitworth A. 2007. Assessing outcomes of health and medical research: do we measure? Australia and New Zealand Health Policy, 4:14. http://www.anzhealthpolicy.com/content/4/1/14