Human Capital and Economic Opportunity:
A Global Working Group

Working Paper Series

Working Paper No. 2011-041

A Registry of International Early Childhood Development Research: Essential Infrastructure Supports for Knowledge Management, Collaboration, and Efficient Translation of Science to Practice

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December, 2011

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A REGISTRY OF INTERNATIONAL EARLY CHILDHOOD DEVELOPMENT RESEARCH: ESSENTIAL INFRASTRUCTURE SUPPORTS FOR KNOWLEDGE MANAGEMENT, COLLABORATION, AND EFFICIENT TRANSLATION OF SCIENCE TO PRACTICE

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Mathematica Policy Research, Inc.
July 2009

To design studies that fill gaps in existing knowledge and build on innovations in research and practice, international early childhood researchers studying interventions and policies targeting early childhood development (ECD) need to sort quickly through the existing evidence. Researchers have no systematic resources or tools to manage the vast amount of existing knowledge, document which interventions have been tried in a given country/region, and support collaboration among groups of researchers with similar interests. Duplication of effort within and across countries and regions is a drain on the limited research funds available and slows down the translation of intervention science to practice. The publication bias toward studies that find significant results also impedes knowledge development and transfer. There is no way to learn about what has been tried in international ECD intervention programs and failed to affect targeted outcomes. Inefficiencies based on lack of systems that document scientific progress impede the provision of effective interventions to children in need. An international registry of early childhood development (ECD) intervention research and evaluation projects can serve as an important first step in filling this resource gap.

Two clinical trial registries provide strong models for an ECD research registry. First, the National Institutes of Health registry of clinical trials (ClinicalTrials.gov) provides current information on clinical trials of "experimental treatments for serious or life-threatening diseases or conditions." Started in 1997 with the goal of making the public aware of the types of trials that might be available to them, today ClinicalTrials.gov has over 75,000 registered trials from the United States and 167 countries. Following the completion of a basic electronic form about the research and assignment of an account with NIH, investigators submit, maintain, and update information about their clinical trial. In March 2009, requirements for including a "basic results" section were published by NIH. The medical field provides a key incentive for participation—the major journals require participation in such a registry for publication.

Second, in 2004, following the World Health Organization's (WHO) Ministerial Summit of Health Research, participants charged the WHO to create the International Clinical Trials Registry Platform (ICTRP) to maintain "*a network of international clinical trials registers to ensure a single point of access and the unambiguous identification of trials*." Researchers are asked to register their clinical trials prospectively and submit the 20 required data elements. The 20 data elements conform to recommendations by the International Committee of Medical Journal Editors (ICMJE, updated October 2008). The WHO identifies nine primary registries that meet all of the WHO and ICMJE requirements (eight are national registries and one is an international registry). In addition to randomized control trials (RCTs), the international registry (International Standard Randomised Controlled Trial Number, or ISRCTN) allows for

registration of other types of research designs designed to "assess the efficacy of health-care initiatives." [1]

The aim of establishing an international ECD registry is to encourage broad participation and use by ECD researchers for knowledge management and collaboration. By branding it as a specialized tool that includes a range of research methods beyond RCTs, studies of all types related to the implementation and evaluation of specific program models/curricula can be searched for and tracked by interested stakeholders, including policy makers, funders, and the public. Another selling point is the potential for collaboration among researchers studying similar interventions. The registry would also provide contact information for investigators using similar methods, including measures of outcomes and mediators/moderators. This function would encourage development of learning communities with interests in similar interventions or research methods. Development of such a registry requires a group of research leaders or professional agencies to come to consensus about its focus and scope and raise the required funds to develop and maintain it. By building upon any existing efforts to consolidate information in this way, a group of committed scientists and research supporting entities could develop a comprehensive yet simple set of requirements for such a registry. Planning for the registry would also have to address governance and sustainability as well as flexibility to account for any adjustments that may have to be made in response to changes in technology or information sharing needs.

Although there are a range of potential challenges inherent in such an effort, lessons and solutions could be built into its development and key features. Challenges include (1) coming to consensus over the required data elements and obtaining research community buy-in and participation, (2) the potential for the registry to become out of date, and (3) the potential that broad inclusion of a range of research methods leads to the registry becoming unwieldy. Possible solutions include advertising the development of the registry widely and making it a participatory, inclusive, and transparent process; collaborating closely with professional organizations, journal editors, and academic and science advocacy organizations to develop the registry and create incentives for participating; building in an update request function for projects that do not include a completion date; and clearly defining and tagging interventions and research methods for easy searching.

An ECD research registry would benefit a range of stakeholders, including newcomers to international research and seasoned veterans, policy makers considering the evidence base for a given intervention, potential funders looking for the best investment for their resources, and the public. By reducing redundancy of efforts and supporting cross-cultural and peer-to-peer learning as well as the development of learning communities, such a registry could ultimately serve to manage the vast array of existing knowledge and provide a strong foundation for developing, testing, and improving ECD services for families and children.

[1] In addition to these models, the Consolidated Standards of Reporting Trials (CONSORT) consists of a widely used 22-item checklist and flow diagram to document critical features of clinical trials. Researchers implementing trials could be asked to upload their CONSORT diagram to the registry. Similar tools could be developed to document characteristics of studies with other research designs.