

Registering Grants with Crossref: Next steps, workflows & the bigger picture





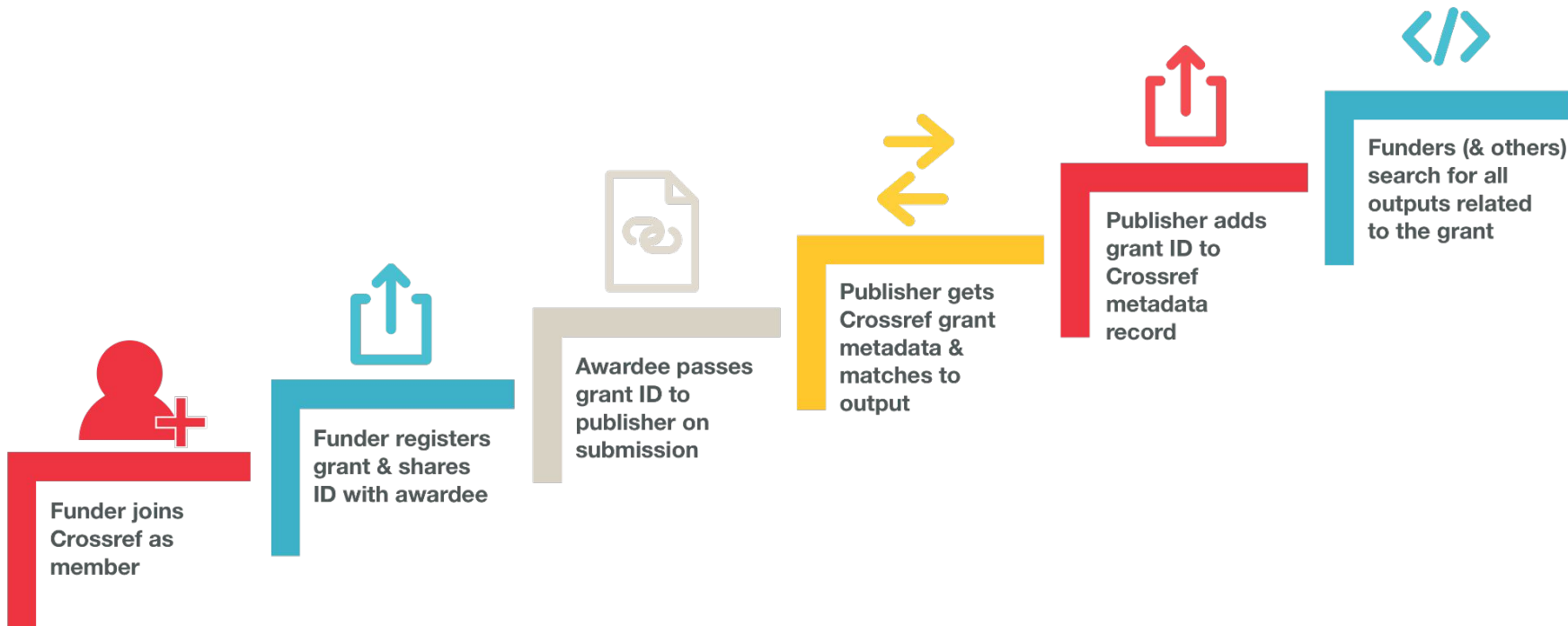
Participants include

- Wellcome (via EuropePMC)
- Chan Zuckerberg Initiative (CZI)
- James S. McDonnell Foundation
- Gordon and Betty Moore Foundation
- Australian Research Data Commons
- OSTI/DOE
- Simons Foundation
- Swiss National Science Foundation
- Wiener Wissenschafts-, Forschungs- und Technologiefonds (WWTF)/Vienna Science and Technology Fund
- Japan Science & Technology Agency
- European Research Council
- Science Foundation Ireland
- Human Frontier Science Program (HFSP)
- International Anesthesia Research Society
- Melanoma Research Alliance
- Children's Tumor Foundation
- Tuberous Sclerosis Alliance
- Danmarks Frie Forskningsfond
- The ALS Association
- The European Commission
- American Cancer Society
- FCT Portugal
- Cure PSP



Grants registered

PREFIX	PUBLISHER	COUNT
10.53041	CurePSP, Inc.	2
10.37717	James S. McDonnell Foundation	444
10.48050	Melanoma Research Alliance	392
10.37807	Gordon and Betty Moore Foundation	85
10.46936	US Department of Energy	25
10.51761	Tuberous Sclerosis Alliance	3
10.46714	Simons Foundation	6
10.52546	The ALS Association	414
10.48105	Children's Tumor Foundation	620
10.51718	International Anesthesia Research Society	34
10.47486	Australian Research Data Commons (ARDC)	57
10.35802	Wellcome	16411
10.53354	American Cancer Society	2



The full Grant ID enables external systems e.g. manuscript submission systems and grant tracking systems to pull accurate, funder-provided information on the grant from the Crossref metadata, reducing manual data entry.

Open Funder Registry would just prepend all of their grant identifiers with the short prefix provided (and use virtually any structure they wanted to after the prefix). Again, for example, the identifier might look like this **F8J23456**. This identifier would minimally allow tools to automatically determine who was responsible for issuing the grant identifier. It would not, however, have some of the other advantages of being a DOI.

But later, if the funder decided that they wanted to use DOIs, register grant metadata and provide information to which the DOI could resolve, they could convert their identifiers to DOIs by prepending them with a DOI prefix. Again, in the above example, the identifier would become **10.19747/F8J23456**. Both forms of identifiers would continue to work.

Try the following in the form below.

- **F8J23456**
- **10.19747/F8J23456**
- **KL420171211**
- **10.26680/KL420171211**
- **NJB2017LANL-34**
- **10.30503/NJB2017LANL-34**

Please enter your grant ID below

Grant ID:

Funder: **National Institutes of Health**

Grant info: *** looked up using DOI ***

Please enter your grant ID below

Grant ID:

Funder: **National Institutes of Health**

Grant info: *** looked up using DOI ***



The first registered grants

```

<?xml version="1.0" encoding="UTF-8" standalone="no" ?>
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    <depositor_name>Europe PMC</depositor_name>
    <email_address>helpdesk@europepmc.org</email_address>
  </depositor>
  <registrant>Wellcome</registrant>
</doi>
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  <grant>
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      <project-title>
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      </project-title>
      <investigator>
        <person role="lead_investigator">
          <givenName>James</givenName>
          <familyName>Kinyanjui</familyName>
        </person>
        <affiliation>
          <institution country="KE">Kenya Medical Research Institute (Kenri)</institution>
        </affiliation>
        </person>
        <person role="investigator">
          <givenName>Benjamin</givenName>
          <familyName>Tefera</familyName>
        </person>
        <affiliation>
          <institution country="KE">Kenri-Wellcome Trust Research Programme</institution>
        </affiliation>
        </person>
        <person role="investigator">
          <givenName>Phillip</givenName>
          <familyName>Bejon</familyName>
        </person>
        <affiliation>
          <institution country="KE">Kenri-Wellcome Trust Research Programme</institution>
        </affiliation>
        </person>
      </investigator>
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        Research is key in tackling the health challenges that Africa faces. In RWTRP we have been committed to developing laboratory science including molecular biology and bioinformatics. Our strategy is to build a critical mass of African researchers who are technically proficient, productive groups and provide high quality supervision and mentorship. Here we plan to consolidate RWTRP's aim to address capacity building for research through an initiative that employs a group of leaders (IDEAL) to build a critical mass of African researchers who are technically proficient, productive groups and provide high quality supervision and mentorship. Here we plan to consolidate RWTRP's aim to address capacity building for research through an initiative that employs a group of leaders (IDEAL) to build a critical mass of African researchers who are technically proficient, productive groups, and to act as supervisors and mentors for the next generation of researchers.
      </description>
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        </funder>
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<https://doi.org/10.35820/107769>

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</doi_data>
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  Can a system intervention employing team-based case review help improve quality and safety of paediatric hospital care in Kenya?
</project-title>
<investigator>
  <person role="lead_investigator">
    <givenName>Michael</givenName>
    <familyName>English</familyName>
  </person>
  <affiliation>
    <institution country="GB">University of Oxford</institution>
  </affiliation>
  </person>
  <ORCID>https://orcid.org/0000-0002-7427-0826</ORCID>
</investigator>
<description xml:lang="en">
  Many more children die in Kenyan hospitals than in richer countries, often from treatable illnesses. Preventing deaths in very sick children requires health-workers to act effectively as a team to initiate correct care rapidly and sustain good care over time. When teams do not or cannot act effectively mistakes can be made and children may not receive what they need. I aim to: - Develop an approach with Kenyans that helps healthcare teams reflect on events surrounding a child death in hospital and identify what and how work needs to be changed - Test the effect of the approach developed by comparing improvements in care in hospitals that use this approach and those that don't and see how it is actually delivered - Develop a model that helps us think through how generating and sharing the insights from reviewing deaths might change how teams, local and national managers and experts in child health act to improve care - Use the findings to understand what the major problems in providing care to sick children are and how these might vary across patients, time and place. Work aims to enable health systems to providing continuous, safe care in countries like Kenya.
</description>
<description xml:lang="en">
  In Kenya 6% of children admitted to hospital die, a figure many times higher than developed countries. Severe illness and co-morbidity underlie many deaths and require a coordinated response from health-worker teams to deliver multiple interventions safely across admission periods of several days. This can expose many team and system weaknesses that need to be addressed to improve outcomes. I will build on prior work in Kenya to: - Comprehensively describe quality and safety concerns, avoidable mortality, their relationship with case severity and case complexity and the changing epidemiology of care in multiple Kenyan county hospitals - Co-design the tools and procedures that enable multi-site, team-based case review (TCR) to diagnose and tackle inpatient quality and safety concerns locally and at scale - Test if intervention can reduce the frequency of modifiable factors that undermine quality and safety of hospital care and reduce potentially avoidable mortality - Undertake empirical work to refine a theory of change supporting a detailed process evaluation and critical exploration of mechanisms of intervention effect spanning individual providers, teams, organisations and institutions. This work will be a major contribution to the field of quality and safety in Africa and help develop scalable improvement interventions.
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  </funder>

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<https://doi.org/10.35820/207522>



Landing page for a grant ID

 **Europe PMC** [About](#) [Tools](#) [Developers](#) [Help](#) [Explore the beta version](#) [Europe PMC plus](#)

Search worldwide, life-sciences literature


[Search](#) [Advanced Search](#)

E.g. "breast cancer" HER2 Smith J

[Tools overview](#) [ORCID article claiming](#) [Journal list](#) [Grant finder](#) [External links service](#) [RSS feeds](#) [SciLite annotations](#)

[Annotations submission Service](#)

Can a system intervention employing team-based case review help improve quality and safety of paediatric hospital care in Kenya?


[Prof MC English, University Of Oxford](#)
[View author profile](#)  ORCID: [0000-0002-7427-0826](#)

Abstract

In Kenya 6% of children admitted to hospital die, a figure many times higher than developed countries. Severe illness and co-morbidity underlie many deaths and require a coordinated response from health-worker teams to deliver multiple interventions safely across admission periods of several days. This can expose many team and system weaknesses that need to be addressed to improve outcomes. I will build on prior work in Kenya to: 1. Comprehensively describe quality and safety concerns, avoidable mortality, their relationship with case severity and case complexity and the changing epidemiology of care in multiple Kenyan county hospitals 2. Co-design the tools and procedures that enable multi-site, team-based case review (TCR) to diagnose and tackle inpatient quality and safety concerns locally and at scale 3. Test if intervention can reduce the frequency of modifiable factors that undermine quality and safety of hospital care and reduce potentially avoidable mortality 4. Undertake empirical work to refine a theory of change supporting a detailed process evaluation and critical exploration of mechanisms of intervention effect spanning individual providers, teams, organisations and institutions This work will be a major contribution to the field of quality and safety in Africa and help develop scalable improvement interventions.

Lay abstract

Many more children die in Kenyan hospitals than in richer countries, often from treatable illnesses. Preventing deaths in very sick children requires health-workers to act effectively as a team to initiate correct care rapidly and sustain good care over time. When teams do not or cannot act effectively mistakes can be made and children may not receive what they need. I aim to: Develop an approach with Kenyans that helps healthcare teams reflect on



Funded by
[Wellcome Trust](#)

£ 2,553,243

Duration
01 Apr 2018 - 01 Apr 2023

Grant number
207522

Funding stream
Population and Public Health

Grant type
Senior Research Fellowship Clinical
Renewal

Publications
No publications available

The DOIs resolve to a landing page that contains information about the grant (Wellcome's are hosted by EuroPMC who also deposit the grant metadata with Crossref for them).



And in publications



PUBLISH ABOUT BROWSE

OPEN ACCESS PEER-REVIEWED

RESEARCH ARTICLE

Evaluating the foundations that help avert disease: Performance of essential water and hygiene functions in hospitals and residential areas in Kenya

Michuki Maina , Olga Tosas-Auguet, Jacob McKnight, Mathias Zosi, Grace Kimemia, Mike English

Published: October 9, 2019 • <https://doi.org/10.1371/journal.pone.0222922>

<https://doi.org/10.1371/journal.pone.0222922>

Funding: MM, GK, JM, MZ and OT were supported by funds through a grant from the Economic and Social Research Council ESRC (ES/P004938/1) awarded to ME. A Senior Research Fellowship awarded to ME by The Wellcome Trust (#207522, <https://doi.org/10.35802/207522>) supported PM. MM received additional support from a grant to the Initiative to Develop African Research Leaders (IDeAL) through the DELTAS Africa Initiative (DEL-15-003), an independent funding scheme of the African Academy of Sciences (AAS)'s Alliance for Accelerating Excellence in Science in Africa (AESA) and supported by the New Partnership for Africa's Development Planning and Coordinating Agency (NEPAD Agency) with funding from the Wellcome Trust (#107769, <https://doi.org/10.35802/107769>) and the UK government.

The Grant DOIs can also start to be tied to publications. This example from PLOS ONE cites the two Wellcome Grant IDs we just saw. PLOS collected this information from the authors upon submission, and it can then be passed to Crossref in the publisher metadata when the article DOI is registered.



Using the data

The screenshot shows a web browser displaying the search results for 'James S. McDonnell Foundation' on the Crossref website. The search bar at the top contains the text 'James S. McDonnell Foundation'. Below the search bar, there are options to sort by 'RELEVANCE' (selected) or 'PUBLICATION YEAR', and a 'DOWNLOAD AS CSV' button. The results are displayed in a list format, with three entries visible. Each entry includes the title, publication details, funding information, authors, and a DOI link.

Crossref

JAMES S. MCDONNELL FOUNDATION

TYPE

- Journal Article (1,793)
- Conference Paper (8)
- Posted Content (3)
- Chapter (2)

YEAR

- 2017 (267)
- 2020 (265)
- 2018 (248)
- 2019 (238)
- 2016 (209)
- 2021 (170)
- 2015 (145)
- 2014 (86)
- 2013 (46)
- 2011 (32)

PUBLICATION

- NeuroImage (79)
- Proceedings of the National Academy of Sciences (77)
- eLife (52)

SEARCH: James S. McDonnell Foundation

METADATA SEARCH | SIGN IN

SORT BY: RELEVANCE | PUBLICATION YEAR | DOWNLOAD AS CSV

PAGE 1 OF 1,806 RESULTS

Dimensionality estimation for optimal detection of functional networks in BOLD fMRI data
Journal Article published May 2011 in NeuroImage volume 56 issue 2 on pages 531 to 543
Research funded by CIHR | James S. McDonnell Foundation (MOP84483MOP14036) | Baycrest Centre and University of Toronto | NIH/NIMH (073204)
Authors: Grigori Yourganov, Xu Chen, Ana S. Lukic, Cheryl L. Grady, Steven L. Small, Miles N. Wernick, Stephen C. Strother
<https://doi.org/10.1016/j.neuroimage.2010.09.034> Actions

Growing networks of overlapping communities with internal structure
Journal Article published 25 Aug 2016 in Physical Review E volume 94 issue 2
Research funded by James S. McDonnell Foundation
Authors: Jean-Gabriel Young, Laurent Hébert-Dufresne, Antoine Allard, Louis J. Dubé
<https://doi.org/10.1103/physreve.94.022317> Actions

Microglia changes associated to Alzheimer's disease pathology in aged chimpanzees
Journal Article published 15 Dec 2018 in Journal of Comparative Neurology volume 526 issue 18 on pages 2921 to 2936
Research funded by National Science Foundation (BCS-1316829) | National Institutes of Health (NS073134NS042867) | James S. McDonnell Foundation (220020293) | Sigma Xia
Authors: Melissa K. Edler, Chet C. Sherwood, Richard S. Meindl, Emily L. Munger, William D. Hopkins, John J. Ely, Joseph M. Erwin, Daniel P. Perl, Elliott J. Mufson, Patrick R. Hof, Mary Ann Raghanti
<https://doi.org/10.1002/cne.24484> Actions

Finally, the information is made available by Crossref's APIs. This will allow funders (and anyone else) to search Crossref using the Grant ID and find all the published outputs that Crossref can see associated with that grant, or the funder overall. The results can then be faceted or filtered, or imported into funder systems.

Work in progress

- Availability via Crossref REST API
- Schema 5.0 work to accept grant identifiers in publication metadata (includes support for ROR)
- Helper tool(s) to simplify content registration
- Additions to grants schema
- Governance

Work in progress

- Growing corpus of registered grants
- Awareness across:
 - Funders
 - Metadata users
 - Research institutions
 - Publishers & service providers

Linking with ORCID & DataCite



The big picture...



...is bigger than this...

The big picture

- **Linking grants to *all* outputs** related to a grant e.g. data, software, preprints, policy papers, reports *without manual reporting* (and being able to see the license information related to that content)
 - In future, potential for compliance-checking on publication/data-sharing policies
- **Auto-update workflow to ORCID** can automatically populate ORCID records to give a more-comprehensive picture of their research without them having to do it
 - Auto-suggest for manuscript submission systems, data repositories etc. saves time and manual data-entry
- **Multiple ways of looking at research outputs** related to grants
- **Open, transparent grant information** across research support via one central source



Feedback

Feedback and questions welcome!

rlammey@crossref.org/jkemp@crossref.org