Your funding infrastructure wishes Grant-ID

Vanessa Fairhurst
Community Outreach Manager
vfairhurst@crossref.org
@NessaFairhurst
The problem
“ROI” and impact

Funders cannot reliably monitor the impact of shared research facilities. It’s hard to track which researchers have used those facilities, and see what publications, projects and future collaborations have emerged as a result of their investment.
Career tracking

Funders support studentships, and provide training and career development grants, but they struggle to understand the career patterns and pathways of funded researchers as they move onwards through academia and industry.
Understanding openness

We need to simplify the process of opening up access to research. It’s surprisingly difficult for researchers to show that they have complied with funder policies for outputs.
A recent survey by ORCID found that “the primary challenge reported by funders is connecting grants to subsequent research activities and outputs”

https://doi.org/10.23640/07243.9149240.v1
“Currently, researchers are typically asked to manually disclose what outputs have arisen from their funding. In the future, such disclosures would be fully automated. If a global ID system for grants was developed, publishers and repositories could require these to be disclosed on submission, and this data could then programmatically be passed to researcher assessment platforms.”

- Robert Kiley and Nina Frentrop, Wellcome
Open Funder Registry

- Launched 2012
- Taxonomy of funding bodies, each with its own DOI
- Grown from 4000 to 21,000 funders
- Donated and updated by Elsevier, CC-0
- github.com/CrossRef/open-funder-registry
Search 21,494 funders connected to 4,372,033 published works with funding data

https://search.crossref.org/funding
One Hundred Million
records and counting...
But...

- 4.1m content items have some funder info
- 2.6m have a funder DOI associated with them
- Take up is surprisingly low
- The data contains inaccuracies and mistakes
- The onus is on authors and publishers to fill in the gaps
The solution
We revived our Funder Group

Conversations with funders about infrastructure needs, DOIs to identify grants uniquely across funders.

- Working groups:
  - **Technical** - gathering grant metadata schema elements
  - **Membership** - information about budgets, needs, and funding activity
- Individual discussions with funders & ‘sponsors’ like Europe PMC
The benefits
Benefits of a global grant identifier

Grant IDs paint a richer picture of research support.

- Understand connections between projects and collaborators
- Identify pockets of expertise and emerging areas of activity
- Fill in gaps in the map of the research landscape with new data points and better quality information
Benefits of a global grant identifier

Help to maintain a healthier research environment.

- Less duplication of effort in overlapping grants or repeated projects
- Ask “who paid?” and check for any possible conflicts of interest in review and reading
- Understand the impact of funding on career development and activities
Benefits of a global grant identifier

Grant IDs offer easier, more accurate analysis

• Search for grants, or for people, projects or organizations associated with grants
• Track the impact of funding shared infrastructures and facilities
• Simplify the process of research reporting with automatic matching of outputs to grants
The launch
The first grant IDs!

https://doi.org/10.35802/107769

https://doi.org/10.35802/207522
Can a system intervention employing team-based case review help improve quality and safety of paediatric hospital care in Kenya?

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 teams 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. 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 potential 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 the care they need. I aim to develop an approach with Kenyan health care teams that helps healthcare teams reflect on...
And in publications

Evaluating the foundations that help avert antimicrobial resistance: Performance of essential water sanitation and hygiene functions in hospitals and requirements for action in Kenya

Michuki Maina, Olga Tosas-Auguet, Jacob McKnight, Mathias Zosi, Grace Kimemia, Paul Mwaniki, Constance Schultzsz, Mike English

Published: October 9, 2019 • 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.
Grant ID schema: input welcome

Grant metadata

Each grant ID can be assigned to multiple projects. The metadata within each project includes basics like titles, descriptions, and investigator information (including affiliations) as well as funding information. Funders will supply funder information (including funder identifiers from the Crossref Funder Registry) as well as information about funding types and amounts.

Multiple grants may be included in a single XML file. Project metadata is included for each grant and multiple projects may be applied to a single grant.

Project description

<table>
<thead>
<tr>
<th>Element / attribute</th>
<th>Description</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>project</td>
<td>Container for project information. Multiple projects may be assigned to a single Grant ID</td>
<td>required; multiple allowed</td>
</tr>
<tr>
<td>project-title</td>
<td>title of the project a grant is supplied for</td>
<td>required; multiple allowed</td>
</tr>
<tr>
<td>description</td>
<td>Used to capture an abstract or description of project, provide multiple descriptions in different languages</td>
<td>optional; multiple allowed</td>
</tr>
<tr>
<td>@xml:lang</td>
<td>use @xml:lang to identify language for each project-title or description. This allows you to provide multiple titles in different languages.</td>
<td>optional</td>
</tr>
</tbody>
</table>

Funding types

Types of funding are limited to the following values:

- award: a prize, award, or other type of general funding
- contract: agreement involving payment
- crowdfunding: funding raised via multiple sources, typically small amounts raised online
- endowment: gift of money that will provide an income
- equipment: use of or gift of equipment
- facilities: use of location, equipment, or other resources
- fellowship: grant given for research or study
- grant: a monetary award
- loan: money or other resource given in anticipation of repayment
- other: award of undefined type
- prize: an award given for achievement
- salary-award: an award given as salary, includes intramural research funding
- secondment: detachment of a person or resource for temporary assignment elsewhere
- seed-funding: an investor invests capital in exchange for equity
- training-grant: grant given for training

Schema information at: [https://github.com/CrossRef/grantID-schema/](https://github.com/CrossRef/grantID-schema/)
The vision:
Grants tied to the articles tied to the data/software (DataCite) tied to researchers (ORCID) tied to the institutions (ROR).
The ask: Get ready to implement grant IDs in your system - and to expose grant IDs in metadata.
Tusen takk!

Vanessa Fairhurst
Community Outreach Manager
vfairhurst@crossref.org
@NessaFairhurst