Expanding the View of Research Impact: Altmetrics of the Georgia CTSA Pediatrics Program

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INTRODUCTION

Georgia CTSA Pediatrics Publications

EVALUATING IMPACT & TRANSLATION

How are Pediatrics publications making waves?

- Past research was limited in its ability to contextualize different types of **research impact** over time. *Altmetrics* offers new ways to **showcase attention and influence of research,** as a complement to traditional, citation-based metrics
- Since 2007 the Georgia CTSA Pediatrics Program has supported **93 investigators** in authoring **250 pediatric publications.** These articles have accrued almost **10,000 academic citations,** which is more than 3 times the expected rate
- These 250 articles have also accrued **more than 15,000 Altmetric citations** in media, community, and public documents

DATA COLLECTION

- Internal records of Georgia CTSA support (e.g. clinical/expert support, pilot/training grants) and acknowledgement of grant support identified a portfolio of pediatric articles published over the past 11 years
- To assess **short-term impact, or 'splash'** made by articles, we collected Altmetric Attention Scores from Dimensions:
  - **343** news stories
  - **3,441** tweets
- To assess **long-term impact, or 'ripple effects'** of articles, we collected citation data from iCite and Dimensions:
  - **8** patent applications
  - **25** policy documents
- Altmetric citations served as an indicator of research influence and gave examples of how each publication was referenced across various platforms
- We used overall Altmetric Attention scores and diversity of topics to select 4 example publications

RESULTS: PEDIATRIC PUBLICATION ALTMETRICS

Big Splashes
Research that Influences Public Discourse

Ripple Effects
Research with Lasting Societal Impact

These 250 pediatric publications have been referenced in...

343 Stories in the News

Publication Example:
Effect of a Low Free Sugar Diet vs Usual Diet on Nonalcoholic Fatty Liver Disease in Adolescent Boys: A Randomized Clinical Trial
Schwimmer, et al., JAMA. 2019

The New York Times "To Fight Fatty Liver, Avoid Sugary Foods and Drinks"

"Study Hows Low-Sugar Diet Effective in Boys with Nonalcoholic Fatty Liver Disease" NEWS WISE

3,441 Tweets Spreading the Word

Publication Example:
Tisagenlecleucel in Children and Young Adults with B-Cell Lymphoblastic Leukemia.
Maude, et al. N Engl J Med. 2018

@dr_mark_russell

Will be interested to see the impact of CAR-T cell therapy on **#PedsICU** haem/onc children - anyone seen many children who have received it? **@PICJournalWatch**

Non-alcoholic fatty liver disease is a growing problem even in children. A recent study found that a reduced **#sugar** diet over 8 weeks led to significant improvement in markers of liver **#health #liverdisease**

@DrKristieLeong

Publication Example:
Effect of a Low Free Sugar Diet vs Usual Diet on Nonalcoholic Fatty Liver Disease in Adolescent Boys: A Randomized Clinical Trial
Schwimmer, et al., JAMA. 2019

8 Patents Translating Science to Products

Publication Example:
Quality of life is improved and kidney function preserved in patients with nephropathic cystinosis treated for 2 years with delayed-release cysteamine bitartrate
Langman, et al., J Pediatr. 2014

"Methods for Storing Cysteamine Formulations and Related Methods of Treatment"

"Delayed Release Cysteamine Bead Formulation, and Methods of Making and Using Same"

25 Policy Documents Translating Science to Public Health

Publication Example:
Consumption of added sugars is decreasing in the United States.
Welsh, et al., Am J Clin Nutr. 2011

Centers for Disease Control and Prevention (CDC) Report:

"Consumption of Added Sugar Among U.S. Children and Adolescents, 2005-2008"

OUTCOMES

- **Altmetric Attention Scores** are a new, innovative way to provide a preliminary picture of how much interest is shown to a publication, an early indicator of the eventual utility and impact that research is expected to have
- **Cumulative Citations**, a more traditional-based metric, in academic and public forums provide a measure of the extent of downstream influence an article has had over time
  - Both reflect opportunities for a line of research to **move forward along the translational spectrum**
- This research allows us to show how two complimentary metrics can provide a more holistic understanding of **aggregate impact** of support provided, and identifies the types of research that will have the **most eventual impact**

CONTACT

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