The Impact of Interdisciplinary Teams on Translational Science

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Profiles
Research Networking Software

http://profiles.catalyst.harvard.edu

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Profiles Research Networking Software (RNS)

John David Halamka, M.D., is Chief Information Officer of the CareGroup Health System, Chief Information Officer and Dean for Technology at Harvard Medical School, Chairman of the New England Health Electronic Data Interchange Network (NEHEN), CEO of MA-SHARE (the Regional Health Information Organization), Chair of the US Healthcare Information Technology Standards Panel (HITSP), and a practicing Emergency Physician.

Narrative

John D. Halamka, MD, MS, is the Chief Information Officer of CareGroup Health System, Chief Information Officer and Dean for Technology at Harvard Medical School, Chairman of the New England Health Electronic Data Interchange Network (NEHEN), CEO of MA-SHARE (the Regional Health Information Organization), Chair of the US Healthcare Information Technology Standards Panel (HITSP), and a practicing Emergency Physician.

Publications

Keyword Cloud - Concept Network

In this concept "cloud", the sizes of the concepts are based not only on the number of corresponding publications, but also how relevant the concepts are to the overall topics of the publications, how long ago the publications were written, whether the person was the first or senior author, and how many other people have written about the same topic. The largest concepts are those that are most unique to this person.
Timeline - Concept Network

The timeline below shows the dates (blue tick marks) of publications associated with John Halamka's top concepts. The average publication date for each concept is shown as a red circle, illustrating changes in the primary topics that John Halamka has written about over time.
Google Map - CoAuthor Network

John David Halamka, M.D.

Co-authors (13)

Co-authors are people in Profiles who have published together.

Red markers indicate the co-authors of John David Halamka, M.D.
Blue lines connect all people who have published papers together.

Concepts:
- Medical Record Systems
- Computerized
- Medical Record Linkage
- Patient Identification Systems
- Computer Security
- Regional Medical Programs

See all (125) concepts

Co-Authors:
- Kohane, Isaac
- Mendl, Kenneth
- Rind, David
- Safran, Charles
- Stair, Thomas
- See all (13) people

Similar People:
- Middleton, Blackford
- Safran, Charles
- Kohane, Isaac
- Mendl, Kenneth
- Bergeron, Brian
- See all (650) people

Same Department:
- Burstein, Jonathan
- Corrigan, Kelly
- Eiflow, Jonathan
- McMillion, Daniel
- Salhanick, Steven
- Search for all (750) people

Physical Neighbors:
- Arex, H.
- Joon, Andrew
- Spelman, Mitchell
Radial Graph - CoAuthor Network

This radial graph shows the co-authors (inner ring) and top co-authors of co-authors (outer ring) of John Halamka. The size of the red circle around an author's name is proportional to the number of publications that he or she has. The thickness of a line connecting two authors' names is proportional to the number of publications that they share. Options for customizing this network view are listed below the graph.
Cluster Graph - CoAuthor Network

This cluster graph shows the co-authors (green circles) and top co-authors of co-authors (blue circles) of John David Halamka. The size of a circle is proportional to the number of publications that author has. The thickness of a line connecting two authors' names is proportional to the number of publications that they share. Options for customizing this network view are listed below the graph.
Open Source - Other Profiles RNS Sites

- Colorado Profiles
  [Website](https://profiles.ucdenver.edu)

- UCSF
  [Website](http://profiles.ucsf.edu)

- U. Rochester Med Center
  [Website](http://urmc.rochester.edu/profiles)

- UConn Health Center
  [Website](http://profiles.uconn.edu)

- University of Minnesota
  [Website](http://profiles.ahc.umn.edu)

- UMASS Medical School
  [Website](http://profiles.umassmed.edu)

- South Carolina
  [Website](http://profiles.healthsciencesc.org)

- Boston University
  [Website](http://profiles.bumc.bu.edu)

- Penn State
  [Website](http://profiles.psu.edu)

- Baylor College of Med
  [Website](http://profiles.viictr.org)

- RTRN (18 RCMI Institutions)
  [Website](http://rtrnprofiles.rtrn.net/profilesweb)
Federated Search - 80 Sites Worldwide

http://direct2experts.org

Connects Profiles RNS, VIVO, Elsevier Pure, and other faculty profiling sites
Network “Reach”

- Reach – A person’s co-authors plus the co-authors of those co-authors.
Reach by Department

Pathology
Medicine
Pediatrics
Surgery
Radiology
Genetics
Neurology
Obstetrics Gynecology
Cell Biology
Orthopedic Surgery
Anaesthesia
Biological Chemistry
Dermatology
Otolaryngology
Microbiology
Psychiatry
Dental Medicine
Ophthalmology
Neurobiology
Visualizing a Person’s Reach
# Recommended Collaborators

<table>
<thead>
<tr>
<th>Name</th>
<th>Institution</th>
<th>Change</th>
</tr>
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<tbody>
<tr>
<td>David Zukiwsky, PH.D.</td>
<td>Children's Hospital</td>
<td>205</td>
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<tr>
<td>Yuchiao Chang, PH.D.</td>
<td>Massachusetts General Hospital</td>
<td>130</td>
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<tr>
<td>Ralph Weissleder, M.D., PH.D.</td>
<td>Massachusetts General Hospital</td>
<td>122</td>
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<tr>
<td>Nancy J. Tarbell, M.D.</td>
<td>Harvard Medical School</td>
<td>115</td>
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<tr>
<td>Ferenc J. Jolesz, M.D.</td>
<td>Brigham and Women's Hospital</td>
<td>111</td>
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<tr>
<td>Joseph Biederman, M.D.</td>
<td>Massachusetts General Hospital</td>
<td>106</td>
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<tr>
<td>E. John Orav, PH.D.</td>
<td>Brigham and Women's Hospital</td>
<td>104</td>
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<tr>
<td>Ronak Kikinis, M.D.</td>
<td>Brigham and Women's Hospital</td>
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<tr>
<td>Thomas James Lynch, M.D.</td>
<td>Massachusetts General Hospital</td>
<td>102</td>
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<tr>
<td>Matthew Langer Meyerson, PH.D., M.D.</td>
<td>Dana Farber Cancer Institute</td>
<td>100</td>
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<tr>
<td>Antonio Rafael Perez-Atayde, M.D.</td>
<td>Children's Hospital</td>
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<tr>
<td>David N. Louis, M.D.</td>
<td>Massachusetts General Hospital</td>
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<tr>
<td>Peter Libby, M.D.</td>
<td>Brigham and Women's Hospital</td>
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<td>David Thomas Scadden, M.D.</td>
<td>Massachusetts General Hospital</td>
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<tr>
<td>Kenneth Carl Anderson, M.D.</td>
<td>Dana Farber Cancer Institute</td>
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<td>Bradley Theodore Hyman, M.D., PH.D.</td>
<td>Massachusetts General Hospital</td>
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<tr>
<td>John Charles Wain, M.D.</td>
<td>Massachusetts General Hospital</td>
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<tr>
<td>Gregory Y. Lauwers, M.D.</td>
<td>Massachusetts General Hospital</td>
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<tr>
<td>Massimo Loda, M.D.</td>
<td>Dana Farber Cancer Institute</td>
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<tr>
<td>Daniel Arie Haber, M.D., PH.D.</td>
<td>Massachusetts General Hospital</td>
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<td>Atul Kumar Bhan, M.D., M.B., B.S.</td>
<td>Massachusetts General Hospital</td>
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<td>Cynthia Casson Morton, PH.D.</td>
<td>Brigham and Women's Hospital</td>
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<td>Robert Vincent Mulkern, PH.D.</td>
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<tr>
<td>Jay Steven Loeffler, M.D.</td>
<td>Massachusetts General Hospital</td>
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</tr>
<tr>
<td>Andrew David Luster, M.D., PH.D.</td>
<td>Massachusetts General Hospital</td>
<td>81</td>
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</tbody>
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Diversity in the Workforce

Advancing Workforce Inclusion and Diversity, NIH/NIGMS DP4 GM096852
Number of Faculty by Gender

- Full Prof: Male - 1000, Female - 200
- Associate: Male - 1000, Female - 400
- Assistant: Male - 1500, Female - 900
- Instructor: Male - 3100, Female - 3000
Number of Faculty by Ethnicity

![Bar chart showing the number of faculty by ethnicity and rank. The chart includes bars for Full Prof, Associate, Assistant, and Instructor ranks, with data for White, Asian, and URM faculty.](image-url)
Coauthor Reach and Diversity

Reach by Age and Gender

- Male
- Female

Reach

Age

30 35 40 45 50 55 60 65
Coauthor Reach and Diversity

Reach by Age and Ethnicity

- White
- Asian
- URM

Reach by Age:
- Age range: 30 to 65
- Reach range: 0 to 700

Age:
- 30, 35, 40, 45, 50, 55, 60, 65

Reach:
- 0, 100, 200, 300, 400, 500, 600, 700
Identifying Translational Science

- T1-T4 is qualitative, no consensus on precise definition.
- Can a bibliometric technique quantitatively identify translation?

http://www.ncbi.nlm.nih.gov/pmc/articles/pmid/23705970
Triangle of Biomedicine:

Disciplines
Triangle of Biomedicine:

Changes over Time
Triangle of Biomedicine:

Harvard Faculty
Translation From Outside Biomedicine

Denis Agniel, Griffin Weber
Identifying Pathways to Translational Science, NSF/SciSIP SMA-1360042
Triangle of Biomedicine: Scopus Fields
Scopus Fields – Translational Index

Mostly Biomedical

Mostly Non-Biomed
Scopus Fields – Translational Years

- Fast Translation
  - Neuroscience
  - Immunology and Microbiology
  - Health Professions
  - Dentistry
  - Pharmacology, Toxicology and Pharmaceutics
  - Medicine
  - Chemical Engineering
  - Social Sciences
  - Business, Management and Accounting
  - Economics, Econometrics and Finance
  - Computer Science
  - Arts and Humanities

- Slow Translation
  - Biochemistry, Genetics and Molecular Biology
  - Psychology
  - Agricultural and Biological Sciences
  - Environmental Science
  - Veterinary
  - Earth and Planetary Sciences
  - Materials Science
  - Physics and Astronomy
  - Decision Sciences
  - Multidisciplinary
  - Mathematics
  - Energy
  - Engineering

Mostly Translates
Mostly Does Not Translate
Translation by Team/Pub Type

(For articles with 2+ authors published in 1994)
Citation Flow Across Team/Pub Type

**Team Type**
- Bio
- Inter
- Non-Bio

**Pub Type**
- Bio
- Non-Bio

**Citation Fraction**
- 37-52%
- 20-29%
- 10-18%
- 5-9%

**Never Cited**
- 23% of Articles

**Translated**
- Human

**Faster Translation More “Dead Ends”**
- TY = 3.7
- TF = 0.88

**Slower Translation Fewer “Dead Ends”**
- TY = 9.8
- TF = 0.66
Summary

• **Data**
  – Research networking sites (Profiles RNS)
  – Bibliometric/citation databases

• **Methods**
  – Social network analysis
  – Triangle of biomedicine

• **Questions**
  – The role of teams in the scientific workforce
  – How non-biomed research(ers) impact human health