



## US Report Card Methodology (2020)

### General Information

This is a comprehensive methodology of Universities Allied for Essential Medicines' (UAEM's) 2020 U.S Report Card. In addition to previous sections (Access, Innovation, and Empowerment), we have added new Transparency and COVID-19 access sections. Data quality control and reliability have been updated to ensure a fair scoring.

Download Forms (Please note that the question numbers may not correspond to those in the online surveys):

[Access Form](#)

[Innovation Form](#)

[Empowerment Form](#)

[Transparency Form](#)

[COVID-19 Form](#)

\*Note: The COVID-19 access section was shared separately in December 2020.

### Goal

By using publicly available and self-reported surveys, this iteration of UAEM's U.S. Report Card project evaluates the top 60 universities in the United States on four key questions:

1. **Access:** When universities license their medical breakthroughs for commercial development, are they doing so in ways that ensure equitable access for people in low and middle income countries? What steps are they taking to ensure innovative treatments at affordable prices?

2. **Innovation:** To what extent are universities investing in innovative biomedical research that addresses the neglected health needs of low and middle income countries?
3. **Empowerment:** What efforts are universities making to educate the next generation of global health leaders about the crucial impact that academic institutions can have on global health through their biomedical research and licensing activities?
4. **Transparency:** How are universities promoting transparency in clinical trial results? Are universities being transparent in how much public funding goes towards their clinical trials research?
5. **COVID-19 Access:** Have universities publicly committed to sharing intellectual property and/or made relevant intellectual property, knowledge and data related to COVID-19 research and development freely available for the purpose of minimizing the impact of COVID-19?

## Purpose

The University Report Card serves as an advocacy tool for universities to determine their progress in investing in innovative biomedical research that addresses neglected global health needs. Students and faculty members can use the University Report Card to hold their universities accountable for their public commitments to various neglected areas of global health.

## Background Information

Universities are major drivers of medical innovation. Between 1/4 and 1/3 of new medicines originate in academic labs,<sup>1</sup> and universities have contributed to the development of one out of every four HIV/AIDS treatments.<sup>2</sup>

There is huge potential for universities to leverage their investment in biomedical research to advance global health. The size and scope of this impact, however, depends on decisions about where to focus research, how to share new discoveries, and what to teach a rising generation of young global health leaders.

More than 1 billion people worldwide suffer from ‘neglected diseases’ – illnesses rarely researched by the private sector because most of those affected are too poor to provide a market for new drugs.<sup>3</sup> Furthermore, 10 million people die each year simply because they

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<sup>1</sup> Kneller, Robert The importance of new companies for drug discovery: origins of a decade of new drug, Nature Review Drug Discovery, 2010

<sup>2</sup> Sampat, Bhaven Academic Patents & Access to Medicines in Developing Countries, American Journal of Public Health, 2009

<sup>3</sup> Hotez PJ, Molyneux DH, Fenwick A, Kumaresan J, Sachs SE, Sachs JD, et al. Control of neglected tropical diseases. N Engl J Med. 2007; **357**(10): 1018-27.

can't get life-saving medicines that already exist – often because those treatments are just too expensive.<sup>4</sup>

Universities can use their unique positions as largely publicly funded research institutions to address both of these challenges. By prioritizing research on global diseases neglected by for-profit R&D, they can pioneer new treatments that will benefit millions in the developing world. And by sharing their medical breakthroughs under open, non-exclusive licenses or licenses that promote lower prices in low- and middle-income countries, universities can help poor patients worldwide access new, life-saving treatments. Universities also play a critical role in educating their students about these issues.

Some universities are already taking these steps – along with teaching students about the challenges of neglected disease innovation and treatment access. However, few have tried to systematically measure universities' contributions in this vital area. UAEM's University Report Card fills that gap. The first iteration of the Report Card was released in 2013 and its last iteration, in 2015. Understanding that it takes time for students and universities to implement change on campuses, notwithstanding the amount of work involved in the project, we chose a 6 year interim between the release of reports. In this 2020 version, the methodology questions were adjusted to reflect the changing landscape and the methodology was tweaked in light of the lessons learned from the last iteration and the need to be updated regularly to maintain relevance.

After receiving feedback from the second methodology, we revised questions to be more clear and added in a new transparency section to evaluate to what extent universities are publishing their clinical trial results. In addition to adding a new section, there is also an incentive to share best policy practices for certain Category 2 questions. If the disclosing university permits, some of the best responses and policies that meet UAEM's goals and missions will be publicly announced in the report (see last bullet point for Category 2 details).

Lastly, given the ongoing COVID-19 pandemic and the challenges with access to vital diagnostics, therapeutics and vaccines, we have added a relevant section aimed at assessing measures taken to promote equitable and global access to relevant health solutions.

For detailed information on the adjustments to the grading methodology and grading metrics please contact the Report Card Team at [reportcard@essentialmedicine.org](mailto:reportcard@essentialmedicine.org).

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<sup>4</sup> World Health Organization. Equitable access to medicines: a framework for collective action. Policy Perspectives on Medicines, 8: 1-6. WHO, Geneva, Switzerland.

## **Selection of Universities: (Based on total NSF and NIH funding from 2014-2016)**

We still limited our evaluation to a subset of universities from the United States that attracted the highest levels of funding from public biomedical research funding agencies. This enabled us to focus on institutions that were likely to be major drivers of academic medical innovation, were more likely to be analogous and therefore yield meaningful comparison on key metrics.

In 2013 and 2015, UAEM used publically available figures from the US National Institutes of Health (NIH) ([RePORTER](#)) and the National Science Foundation (NSF) ([NCSES Data](#)) to select the top U.S. institutions that received the highest total grant funding dollar amount from the NIH and the NSF during FY 2010-2012. In order to select the final list of universities for evaluation for this iteration, the total NIH funding received by universities between 2014-2016 was added to the total NSF funding received by universities within that same time period. At the time data was collected, funding totals for 2017 forward were unavailable. Schools for which NSF funding data for 2014-2016 was unavailable were excluded from evaluation.

In an effort to track changes in schools over time, we decided to keep the same list and added an additional school to round the total number of universities to 60. The new school is Oregon Health and Science University.

### **List of Universities: (In Alphabetical Order)**

1. Baylor College of Medicine
2. Boston University
3. Case Western Reserve University
4. Columbia University in the City of NY
5. Cornell University
6. Dartmouth College
7. Duke University
8. Emory University
9. Georgetown University
10. Harvard University
11. Icahn School of Medicine at Mt. Sinai
12. Indiana University, Purdue University, Indianapolis
13. Johns Hopkins University
14. Medical College of Wisconsin
15. Northwestern University
16. NYU
17. Ohio State University
18. Oregon Health and Science University
19. Pennsylvania State University
20. Stanford University
21. SUNY, University Buffalo
22. UC Davis

23. UC Irvine
24. UC San Diego
25. UC San Francisco
26. UCLA
27. Uniformed Services University of the Health Sciences
28. University of Alabama, Birmingham
29. University of Arizona
30. University of Chicago
31. University of Cincinnati
32. University of Colorado, Denver and Anschutz
33. University of Florida
34. University of Illinois, Chicago
35. University of Iowa
36. University of Kentucky
37. University of Maryland, Baltimore
38. University of Massachusetts, Medical School
39. University of Miami
40. University of Michigan, Ann Arbor
41. University of Minnesota, Twin Cities
42. University of North Carolina, Chapel Hill
43. University of Pennsylvania
44. University of Pittsburgh, Pittsburgh
45. University of Rochester
46. University of South Florida, Tampa
47. University of Southern California
48. University of Texas, Health Science Center, San Antonio
49. University of Texas, M.D. Anderson Cancer Center
50. University of Texas, Southwestern Medical Center
51. University of Utah
52. University of Virginia, Charlottesville
53. University of Washington, Seattle
54. University of Wisconsin, Madison
55. Vanderbilt University
56. Wake Forest University
57. Washington University, St. Louis
58. Wayne State University
59. Yale University
60. Yeshiva University

### **Selection of Evaluation Metrics and Comparability of Data Across Institutions**

While there are variations across the universities selected for evaluation (e.g. in levels of research funding, student body size, public vs. private institutions), we have selected evaluation criteria intended to minimize the impact of such variations.

All metrics that analyze continuous variables account for variation in school size and funding by normalizing the absolute number to the overall level of combined NIH and Gates funding. For example, when evaluating a university's investment in neglected disease research, our metric is calculated by dividing a given institution's overall medical research funding devoted to ND research projects (from the >100 funding sources included in the G-Finder report) by the total NIH plus Gates funding to generate an "ND Innovation Index". This enabled us to adjust for confounding by institutional size and allowed for a meaningful comparison of performance across institutions.

For categorical metrics, we developed pre-defined sets of discrete categories by which all universities can be uniformly evaluated, and for which performance was likely to be independent of variation in university size, funding, capacity or resources.

### **Overall Data Quality and Reliability Considerations**

A critical aspect of the Report Card methodology is the collection and analysis of data using two broad categories of data extraction:

1. Data obtained by accessing publicly available sources, such as university websites, online grant databases, and search engines; these data were collected by UAEM members, staff, and interns.
2. Data obtained by self-report of university officials in response to survey instruments designed and provided by UAEM.

We attempted to maintain rigor and minimize biases by systematically collecting and analyzing data according to detailed, predetermined standardized operating procedures (SOPs).

#### **For CATEGORY 1 (PUBLIC DATA), we address data quality and consistency as follows:**

- We prospectively developed SOPs and standardized data entry forms, including uniform search terms to which all investigators were required to adhere.
- We performed quality control tests to ensure that investigators were obtaining the same results from the collection procedures.
- Where possible, multiple individual investigators independently and concurrently performed the same data collection and search processes to ensure consistency of data.

#### **For CATEGORY 2 (SELF-REPORTED DATA), we address data quality and consistency, including concerns about questionnaire non-response, as follows:**

- Compared to the first iteration of the Report Card, we chose to reduce the number of questions we asked of administrators if answers could be easily verified via public sources by our team of investigators.
- We provided the same questionnaires to all institutions.

- We developed a standardized process for identifying and verifying contacts to receive questionnaires at each institution.
- We identified between 5 and 10 specific administrators in leadership positions at each university whom we felt were most likely to recognize the value of the surveys and would encourage a response from within their teams. The individual contact details were searched publically via the website and if not via the internal site via students at those institutions. Finally phone calls were made if the contact details could not be ascertained by these means. The list included but was not limited to directors of technology licensing offices, deans of individual schools (law, public health, medicine), and vice presidents for research.
- We used standardized communication strategies to deliver the survey instruments to all institutions and conduct consistent follow up via email; institutions were given at least 12 months to respond to all survey instruments, and each administrator was contacted a minimum of three times to encourage response.
- Where possible, we asked questions in a manner such that the variable under question was either dichotomous or categorical, rather than continuous; this was in an effort to maximize the likelihood of response from institutions.
- We applied standardized scoring of responses across all institutions.
- We measured and reported response rates both for the entire questionnaire and for individual questions.
- If more than one person per institution replied, and there was discrepancy in the responses, first we aimed to verify the correct answer via verified public sources. If this was not possible, we elected to use the answer that favored the university.
- **Updated for New 2020 Version:** For those questions where we may ask for example policy language, licensing clauses, or any redacted language, universities were asked to provide us with as accurate language as possible. We seek to publicly share such language and examples in the Report Card to highlight policies that the assessment team finds to meet UAEM's goals and should be a model for other institutions, especially if it exemplifies increasing access, meaningful innovation, powerful empowerment, or clear transparency. By publicly sharing this information in tandem with our grades, we hope that other leading institutions may recognize best practices of their peers and may consider following in suit.
  - For these questions, universities were asked to disclose if their institution would prefer or require the information provided to us not be made public--we can still include your response in our assessment, but will avoid publicizing exact language.

## **SCORING OVERVIEW**

As in 2013/2015 and given the purpose of the Report Card, greater weight was allocated to the Innovation and Access sections, with each section accounting for 25% of the total grade. The Empowerment section is worth 10% of the total grade due to the increased challenges in evaluating these specific metrics and the lack of a measurable correlation between these metrics and their impact on increasing access to medicines and addressing neglected diseases in low- and middle-income countries. Finally, the Transparency and COVID-19

access sections are each worth 20% of the total grade since these new sections are essential to ensuring access and innovation for all.

For each question, the institution was assigned a *raw score*, based on the data that was gathered. Each question was also associated with a *weighting multiplier* from 0.25 to 2.5, based on the relative importance of each question as determined by UAEM's report card team. The *weighted score* for a given question was the product of the *raw score* and the *weighting multiplier*. **In an effort to minimize bias due to non-response to CATEGORY 2 (self-reported) questions, we have designed the Report Card such that each section is a mix of CATEGORY 1 (public data) and CATEGORY 2 (self-reported) questions.**

## **STUDY LIMITATIONS**

**Although a great deal of effort was made to address concerns and take into account feedback in response to the first two versions of the report card where appropriate, a few limitations, delineated below, were still identified for the 2020 project.**

Our goal was to evaluate university actions and initiatives based on what these institutions could potentially achieve given their underlying resources and capacity rather than focusing on measuring actual attainment by virtue of a university's efforts. This is exemplified in repeated use of adjusted and/or normalized values in place of absolute figures. However, the methods used for adjustment and/or normalization may not completely remove variations due to university size or other potentially significant factors. For example, use of NIH plus Gates Funding as the denominator for IQ2 may lead to higher scores for smaller universities who receive less total funding but devote the same amount of funding to neglected diseases as compared to larger institutions.

## **DETAILED METHODOLOGY – BY SPECIFIC SECTION AND QUESTION**

*NOTE: Please let us know if you would like to be provided links to or copies of any of the forms, documents, SOPs, or other materials referenced below. For further information please contact: [reportcard@essentialmedicine.org](mailto:reportcard@essentialmedicine.org).*

## **CURRENT AMENDMENTS MADE TO US REPORT CARD 2020 SURVEYS DURING THE PROJECT:**

1. As of April 18, 2019, the phrase "in the past year" in Access Survey Questions 5-10 of the online survey was clarified to indicate the start to end of FY 2018.
2. As of April 18, 2019, the dates specified in Access Survey Questions 7, 9, and 10 of the online survey that regard template language or redacted language used in licenses were removed.
3. As of April 18, 2019, Innovation Survey Question 5 of the online survey was clarified to indicate its specificity for FY 2014-FY 2016. This information was present in the methodology, however, was not specified in the external survey question.



4. As of April 26, 2019, Access Survey Question 5 of the online survey was clarified to indicate that the definition of health technologies for this particular question excludes unpatented research tools that may include, but are not limited to, instruments, procedures, systems, software, diagnostics, and hybridomas in an effort to prevent artificial inflation of a university's score.

# Access

A-Q1:

**Part A: Has the university officially and publicly committed to licensing its medical discoveries in ways that promote access and affordability in low and lower-middle income countries as [defined by the World Bank](#)?**

**CATEGORICAL**

**Weighting Multiplier: 1.0**

**Possible choices (raw score):**

- The university has taken no official action and has no plans to do so (0 points)
- The university has publicly committed to the general principle of global access licensing, but has not endorsed or disclosed specific strategies for promoting access through licensing (2 points); Example: [Stanford Nine Points](#)
- The university has publicly committed to a detailed, specific access licensing strategy, but that strategy does NOT emphasize enabling generic production of university-researched medicines for developing countries (3 points); Example: [Statement of Principles for the Equitable Dissemination of Medical Technologies](#)
- The university has publicly committed to multiple detailed, specific access licensing strategies, but those strategies DO NOT emphasize enabling generic production of university-researched medicines for developing countries (4 points); Example: [Statement of Principles for the Equitable Dissemination of Medical Technologies & Stanford Nine Points](#)
- The university has publicly committed to detailed, specific access licensing strategies that DO prioritize generic production of university-researched medicines for developing countries (5 points); Example: [University of California Licensing Guidelines](#)
- Other (open-ended), The university has taken other actions not listed above that increase access and affordability of medical discoveries to developing countries.

**Data Collection: CATEGORY 1.** Multiple investigators, working independently and in parallel, initially reviewed publicly available information. First, investigators obtained information from lists of university signatories to collective global access statements such as the “[Statement of Principles and Strategies for the Equitable Dissemination of Medical Technologies](#)” or the “[Stanford Nine Points](#)”. Next, investigators used a standardized online survey instrument to systematically collect data specific to each university.

**Quality Assurance Strategy:** Only written statements that were publicly available were accepted as commitments or enumerations of strategy. For each institution, two evaluators conducted independent reviews of public data using the same standardized search locations and terms. Their findings were aggregated, compared, and reviewed for accuracy using the recorded links.

**Part B: Does the website of the university's technology transfer office (TTO) make an effort to disclose, explain and promote access licensing commitments and practices?**

**CATEGORICAL**

**Weighting Multiplier: 1.0**

**Possible choices (raw score):**

- The website makes no reference to promoting global access through socially responsible licensing (0 point)
- The website offers brief, limited, and non-specific statements on access licensing (1 points)
- The website references the university's endorsement, adoption or use of a specific, detailed access licensing policy, but does not post or link to the policy (3 points)
- The website provides or links to the full text of a detailed, specific access licensing document for the university OR offers in-depth explanations, case studies, license examples, press releases or other content focused on access licensing, but NOT both (4 points)
- The website provides or links to BOTH the text of a specific, detailed access licensing document AND additional in-depth content related to access licensing (5 points)

**Data Collection: CATEGORY 1.** Multiple investigators using a standardized online survey instrument in order to review the Website of each university TTO.

**Quality Assurance Strategy:** For each institution, multiple evaluators conducted independent reviews of public data using the same standardized process. Their findings were aggregated, compared, and reviewed for accuracy using the links they recorded. If there was not consensus between results, a third or fourth investigator reviewed the links and results for accuracy.

**A-Q2: What percentage of the university's total medical sciences publication output is published in open-access publications?**

Definition: Open Access is defined as publications published in either Open Access journals or put in a repository. Point of clarification is that "Free Access" is not "Open Access." Free access means the journal still owns the copyright despite making a few articles free or all articles free a few months after publication.

Open access publication enables equal sharing of scholarly knowledge across geographical and financial barriers. If everyone has access to the latest biomedical findings, there is increased opportunity for individuals to innovate, further they can be empowered to make important health care decisions for themselves and their loved ones based on access to this information.

**CATEGORICAL (Percent Range)**  
**Weighting Multiplier: 0.5**

**Possible choices (raw score):**

- 0% (0 points)
- 1-10% (1 point)
- 11-30% (2 points)
- 31-50% (3 points)
- 51-70% (4 points)
- 71% or above (5 points)

**Data Collection: CATEGORY 1.** To determine the total medical sciences publications output (denominator) for a given university in the time period January 2014 - August 2016, a search of the PubMed database (<http://www.ncbi.nlm.nih.gov/pubmed/>) was performed using search terms encompassing all the institutes conducting biomedical research affiliated with the university (including hospitals and independent research institutes, as well as the main campus).

To estimate the total medical sciences output published with open access provisions (numerator) from the period between January 2014 and August 2016, a search of PubMedCentral (a free full-text archive of biomedical and life sciences journal literature at the U.S. National Institutes of Health's National Library of Medicine; <http://www.ncbi.nlm.nih.gov/pmc/>) was performed as above.

The number of open-access publications for each university was then divided by the number of total publications to determine a percentage for each institution.

**Quality Assurance Strategy:** A comprehensive list of all institutions conducting biomedical research affiliated with a university was generated for all universities surveyed. For each institution, two evaluators conducted independent reviews of public data using the same standardized search terms.

**A-Q3: In the past year, what percentage of the university's health technology licenses was non-exclusive?**

Definition: Health technology [defined by the WHO](#) in terms of medicine, medical devices, and vaccines; however, we are excluding unpatented research tools such as procedures and systems to prevent artificial inflation of a university's score.

**CATEGORICAL (Percent Range)**  
**Weighting Multiplier: 1.0**

**Possible choices (raw score):**

- No response (0 points)

- 0-10% or no data (1 point)
- 11-30% (2 points)
- 31-50% (3 points)
- 51-70% (4 points)
- 71% or above (5 points)

**Data Collection: CATEGORY 2:** An online survey instrument was emailed to TTOs at institutions of interest. For non-responding institutions, at least two follow-up requests were sent via email.

**Quality Assurance Strategy:** As licensing data are typically not publicly disclosed, it was necessary to rely on the good faith reporting of TTOs. However, this question evaluates percentages rather than absolute numbers to compensate for variations in institutional size and licensing volume. Percentage values have been further categorized into decile ranges, so that all institutions within a given range receive an equal score.

**A-Q4:**

**Part A: In the past year, for what percentage of all health technologies - as [defined by the WHO](#) - did the university seek patents in upper-middle-income countries as [defined by the World Bank](#)?**

**CATEGORICAL (Percent Range)**  
**Weighting Multiplier: 1.0**

**Possible choices (raw score):**

- No response (0 points)
- 81-100% (1 point)
- 61-80% (2 points)
- 41-60% (3 points)
- 21-40% (4 points)
- 0-20% or no data (5 points)

**Part B: In the past year, for what percentage of all health technologies - as [defined by the WHO](#) - did the university seek patents in low- and lower-middle-income countries as [defined by the World Bank](#)?**

**CATEGORICAL (Percent Range)**  
**Weighting Multiplier: 1.0**

**Possible choices (raw score):**

- No response (0 points)
- 81-100% (1 point)
- 61-80% (2 points)

- 41-60% (3 points)
- 21-40% (4 points)
- 0-20% or no data (5 points)

**Data Collection: CATEGORY 2:** An online survey instrument was emailed to TTOs at institutions of interest. For non-responding institutions, at least two follow-up requests were sent via email.

**Quality Assurance Strategy:** As licensing data are typically not publicly disclosed, it was necessary to rely on the good faith reporting of TTOs. However, this question evaluates percentages rather than absolute numbers to compensate for variations in institutional size and licensing volume. Percentage values have been further categorized into decile ranges, so that all institutions within a given range receive an equal score.

**A-Q5:**

**Part A: In the past year, what percentage of the university's exclusive licenses of health technologies from the TTO included provisions to promote access to those technologies in low- and lower-middle-income countries as [defined by the World Bank](#)? Please provide examples of either template language or redacted language used in these licenses.**

**TTO definition:** TTO broadly defined as the Technology and Transfer Office that assist with the transfer and implementation of technologies discovered at the university. This includes the Office of Licensing and Ventures (OLV).

**CATEGORICAL (Percent Range)**

**Weighting Multiplier: 1.0**

**Survey:** Please enter the percentage in the box.

**Possible choices (raw score/hidden):**

- No response or no data (0 points)
- 0-20% (1 point)
- 21-40% (2 points)
- 41-60% (3 points)
- 61-80% (4 points)
- 81-100% (5 points)

**Survey:** Please provide examples of either template language or redacted language used in these licenses. **Check box (y/n) if language can be publicized.**

**Part B: In the past year, what percentage of the university's exclusive licenses of health technologies from the TTO included provisions to promote access to those**

technologies in upper-middle-income countries as [defined by the World Bank](#)? Please provide examples of either template language or redacted language used in these licenses.

**CATEGORICAL (Percent Range)**  
**Weighting Multiplier: 1.0**

**Survey:** Please enter the percentage in the box.

**Possible choices (raw score/hidden):**

- No response or no data (0 points)
- 0-20% (1 point)
- 21-40% (2 points)
- 41-60% (3 points)
- 61-80% (4 points)
- 81-100% (5 points)

**Survey:** Please provide examples of either template language or redacted language used in these licenses. **Check box (y/n) if language can be publicized.**

**Part C: In the past year, what percentage of the university's exclusive licenses of health technologies from the TTO included provisions to promote access to those technologies in high-income countries as [defined by the World Bank](#)? Please provide examples of either template language or redacted language used in these licenses.**

**CATEGORICAL (Percent Range)**  
**Weighting Multiplier: 0.5**

**Survey:** Please enter the percentage in the box.

**Possible choices (raw score/hidden):**

- No response or no data (0 points)
- 0-20% (1 point)
- 21-40% (2 points)
- 41-60% (3 points)
- 61-80% (4 points)
- 81-100% (5 points)

**Survey:** Please provide examples of either template language or redacted language used in these licenses. **Check box (y/n) if language can be publicized.**

**Data Collection: CATEGORY 2:** An online survey instrument was emailed to TTOs at institutions of interest. For non-responding institutions, at least two follow-up requests were sent via e-mail.

**Quality Assurance Strategy:** As licensing data are typically not publicly disclosed, it was necessary to rely on the good-faith reporting of TTOs. However, this question evaluates percentages rather than absolute numbers to compensate for variations in institutional size and licensing volume. Percentage values have been further categorized into decile ranges, so that all institutions within a given range receive an equal score.

**A-Q6:**

**Part A: Has the university shared its best practices for promoting access to medicines through licensing from 2014-2016? Includes publications by TTO, professors, administrators, and graduate students**

- **Contributed sample clauses to the AUTM Global Health Toolkit**
  - **Survey:** Please explain what sample clauses you have contributed to the AUTM Global Health Toolkit.
- **Published an article on access licensing practices**
- **Formally presented on access licensing practices at an academic or professional event, or at another university**
- **Informally shared or discussed access licensing practices with administrators at other universities**
- **Other: If other, please provide other practices or publications for promoting access to medicines through licensing from 2014-2016.**

**CATEGORICAL (Percent Range)**

**Weighting Multiplier: 1.0**

**Possible choices (raw score):**

- No response (0 points)
- Responded but no sharing options provided (1 point)
- 1 sharing option checked (2 points)
- 2 sharing options checked (3 points)
- 3 sharing options checked (4 points)
- 4+ sharing options checked (5 points)

**Data Collection: CATEGORY 2:** An online survey instrument was emailed to TTOs at institutions of interest. For non-responding institutions, at least two follow-up requests were sent via email.

**Quality Assurance Strategy:** As this data is typically not publicly disclosed, it was necessary to rely on the good faith reporting of TTOs. However, this question evaluates



percentages rather than absolute numbers to compensate for variations in institutional size and licensing volume. Percentage values have been further categorized into decile ranges, so that all institutions within a given range receive an equal score.

**Part B: What actions has the technology transfer office (TTO) undertaken between 2014 and 2016 to improve access to the technologies they license in resource poor settings?**

**Weighting Multiplier: 0, not graded**

**Data collection: CATEGORY 2:** Online survey, open-ended question that is not graded.

**A-Q7: Has the university submitted a patent(s) recently (after 2010) to the MEDICINES PATENT POOL (MPP) or WORLD INTELLECTUAL PROPERTY ORGANIZATION Re:SEARCH (WIPO Re:SEARCH) for protected intellectual property status for medicines treating HIV, hepatitis C, malaria, tuberculosis, neglected tropical diseases, or other patented essential medicines in low- and middle-income countries?**

**DICHOTOMOUS**

**Weighting Multiplier: 1.0**

Possible Choices:

- Yes (2 pts.)
  - **Survey:** Please List Patent Information for Identification:
- No (0 pts.)

**Data Collection: CATEGORY 2:** An online survey instrument was emailed to TTOs at institutions of interest. For non-responding institutions, at least two follow-up requests were sent via email.

**Quality Assurance Strategy:** Patents identified to be submitted to the MPP were confirmed by two evaluators conducting independent reviews of public data found on the [“Products Licensed” section of the MPP website](#). Since, data on patents held by academic patent holders within the WIPO Re:SEARCH consortium is not readily available, it was necessary to rely on the good faith reporting of TTOs.

# Innovation

## I-Q1:

**Part A: What percentage of the university's total funding received is dedicated to global health research, training and collaborations?**

Definition: Possible funding sources include federal funding, internal funding, and industry funding. These funds are the total amount received by the institution including direct and indirect dollar amounts, not just research expenditures.

**CONTINUOUS**

**Weighting Multiplier: 1**

**Possible choices (raw score):**

- 0% (0 points)
- 1-5% (1 points)
- 6-10% (2 points)
- 11-20% (3 points)
- 21-40% (4 points)
- 41-100% (5 points)

**Data Collection: CATEGORY 1 AND 2.** Public Datasets were collected from the NIH RePorter database. We searched by university for total funding received in FY 2014 to 2016 from the NIH Fogarty International Center (FIC) and from Gates specifically for global health. For Gates this included global health grants listed under global development or global policy, advocacy, and country programs as well as the global health program. Data was aggregated by university.

**Quality Maximization Strategy:** Publicly available and standardized data sources were used for evaluation, drawing directly from reputable U.S. government databases and foundation websites. To ensure accuracy of data compilation, where possible multiple investigators independently performed the same collection and analysis process, with results compared for deviations/errors. The use of the total NIH plus Gates funding as the denominator in this calculation served to normalize the data for this metric so that universities with large research budgets were not unfairly advantaged in this evaluation.

**Part B. What percentage of this funding comes from Fogarty International Center grants or Gates Foundation grants?**

**Weighting Multiplier: 0, not graded**

**Data Collection: CATEGORY 1 AND 2.** Public Datasets were collected from the NIH RePorter database (narrowed to Fogarty International Center grants), and Gates Foundation online grant data (narrowed to global health focused grants). We searched by university for total funding received in FY 2014 to 2016 from the NIH Fogarty International

Center (FIC) and from Gates specifically for global health. For Gates this included global health grants listed under global development or global policy, advocacy, and country programs as well as the global health program. Data was aggregated by university.

**Quality Maximization Strategy:** Publicly available and standardized data sources were used for evaluation, drawing directly from reputable U.S. government databases and foundation websites. To ensure accuracy of data compilation, where possible multiple investigators independently performed the same collection and analysis process, with results compared for deviations/errors. The use of the total NIH plus Gates funding as the denominator in this calculation served to normalize the data for this metric so that universities with large research budgets were not unfairly advantaged in this evaluation.

### **Part C: Where else has the university received funding from?**

**Weighting Multiplier: 0, not graded**

**Data Collection: CATEGORY 2.** Open ended question to see what funding sources we do not know about.

### **I-Q2: What percentage of the university's total medical research funding is devoted to projects focused on neglected diseases?**

**CATEGORICAL (Percent Range)**

**Weighting Multiplier: 1.5**

#### **Possible choices (raw score):**

- 0% (0 points)
- 0.01-0.5% (1 points)
- 0.51-1.0% (2 points)
- 1.01-1.50% (3 points)
- 1.51-2.0% (4 points)
- >2.0% (5 points)

**Data Collection: CATEGORY 1.** For each institution, we calculated an index score based on total grant funding received for research on neglected diseases in FY 2014-2016 as reported in G-FINDER reports for this year (numerator), and the total combined funding reported by the NIH and Gates Foundation for this year (denominator). The G-FINDER report is considered the most comprehensive and authoritative database of neglected disease grants, and includes funding for NDs from >100 sources, including government, industry, and philanthropic foundations.

**Quality Maximization Strategy:** The G-FINDER report is recognized as an authoritative study that draws on expertise from investigators with a variety of backgrounds, including

academia, industry, and the nonprofit sector. In order to effectively compare investment in ND research across institutions with varying total research funding, we calculated ND investment as an index variable, rather than comparing absolute dollar amounts. The use of the total NIH plus Gates funding as the denominator in this calculation serves as a normalization standard that prevents larger institutions from having exaggeratedly high levels of funding and smaller institutions from having exaggeratedly low levels of funding for the purposes of this evaluation.

**Part B. What percentage of this funding comes from Fogarty International Center grants or Gates Foundation grants?**

**Weighting Multiplier: 0, not graded**

**Data Collection: CATEGORY 2.** Open ended question to see what funding sources we do not know about.

**Part C: Where else does the University's medical research projects that focus on neglected diseases receive funding from?**

**Weighting Multiplier: 0, not graded**

**Data Collection: CATEGORY 2.** Open ended question to see what funding sources we do not know about.

**I-Q3: What percentage of the university's total medical PubMed publications are focused on global health?**

**CATEGORICAL (Percent Range)**

**Weighting Multiplier: 1.0**

**Possible choices (raw score):**

- 0% (0 points)
- 1-10% (1 point)
- 11-30% (2 points)
- 31-50% (3 points)
- 51-70% (4 points)
- 71% or above (5 points)

**Data Collection: CATEGORY 1.** For each institution, the total number of citations specific to global health and/or affiliated with a university's department of global health was tabulated as reported through PubMed with a standardized, comprehensive search query created to acquire a broad perspective on scientific and non-scientific research pertaining to global health within a university from the period between January, 2014 and August 2016. The number of publications associated with each university was delineated using PubMed's filter option, and an aggregate number of global health research publications was

obtained for each university. To normalize across universities, this number was divided by the total number of publications for each institution within this same time period.

**Quality Maximization Strategy:** Key terms associated with global health were utilized in the search – including “global health” and “international health.” The search query was constructed to encompass as many publications associated with global health as possible in order to capture a university’s broad research efforts in this arena. The total number of publications was obtained solely from PubMed as it contains citations for both scientific and non-scientific research. PubMed is a widely used and holistic source for research publications, and a single search engine is used to avoid repeats of publications and thus an over-reporting of the number of publications for universities. Multiple investigators independently collected and compiled the same data to ensure accuracy. In order to create a larger range of values across universities for analysis we divided all percentages by the highest percentage found and assessed these values using the above grading scale. If the standardized value of ND publications (as defined in IQ4) was higher than this value of global health publications, we substituted this value for the ND value.

**I-Q4: What percentage of the university’s total medical PubMed publications are focused on neglected diseases; diseases with recorded outbreaks, epidemics, or pandemics; and/or neglected aspects of HIV, TB, malaria, or AMR (Total) in low and lower-middle income countries as [defined by the World Bank](#)? Diseases from either NTD or outbreaks/epidemic/pandemic [listed here](#) count.**

**CATEGORICAL (Percent Range)**  
**Weighting Multiplier: 1.0**

**Possible choices (raw score):**

- 0% (0 points)
- 1-10% (1 point)
- 11-30% (2 points)
- 31-50% (3 points)
- 51-70% (4 points)
- 71% or above (5 points)

**Survey:** Please list from the options that fit the [given definition](#) here:

**Data Collection:** For each institution, the total number of citations specific to neglected diseases was tabulated as reported through PubMed.

A comprehensive search query was created to encompass these diseases and their associated areas of research from the period between January, 2014 and August 2016. The number of publications associated with each university was delineated through PubMed’s filter option, and an aggregate number of neglected disease specific research publications was obtained for each university. To normalize across universities, this number was divided by a total number of publications for each institution within this same time period.

For a complete list of included search terms, please see [this list](#) of included diseases.

**Quality Maximization Strategy: CATEGORY 1.** Our list of diseases includes those from the criteria set by the [G-FINDER 2018](#) and the [World Health Organization](#)'s list of neglected diseases. The G-FINDER report is recognized as an authoritative study that draws on expertise from investigators with a variety of backgrounds, including academia, industry, and the non-profit sector. The search query was constructed to encompass as many publications associated with the listed diseases by 1) including all permutations of common and scientific names for the diseases and 2) additionally pairing each disease identifier with an associated area of research (e.g. vaccines, diagnostics, etc.). Total number of publications was obtained solely from PubMed as it contains more than 23 million citations for biomedical and life science literature. PubMed is a widely used and holistic source for scientific research publications, and a single search engine was used to avoid repeats of publications and thus an over-reporting of the number of publications for universities. Multiple investigators independently collected and compiled the same data to ensure accuracy. In order to create a larger range of values across universities for analysis we divided all percentages by the highest percentage found and assessed these values using the above grading scale.

**I-Q5: Does the university have a research center or institute dedicated specifically to neglected diseases and or HIV/AIDS, TB, Malaria, or AMR?**

**DICHOTOMOUS**

**Weighting Multiplier: 2.5**

**Possible choices (raw score):**

- Responded 0 or failed verification for existing center(s) (0 points)
- Responded with plans to open at least one center/institute (HIV/AIDS, TB, Malaria, AMR or ND) in the next five years (1 point)
- Has a (verified) HIV/AIDS, Tuberculosis, Malaria, or AMR Center (2 points)
- Has more than one (verified) HIV/AIDS, Tuberculosis, Malaria, or AMR Center OR one ND (verified) center (3 points)
- Has an HIV/AIDS, Tuberculosis, Malaria, or AMR Center (verified) and has (verified) plans to open a neglected disease (as defined by WHO) center within the next five years (4 points)
- Has a (verified) neglected disease center and one or more HIV/AIDS, TB, malaria, or AMR (verified) centers (5 points)

**Data Collection: CATEGORY 1 AND 2.** Multiple research administrators at each institution were systematically contacted requesting response to an online survey instrument. For institutions that failed to respond to our requests, multiple investigators performed a manual web search with a standardized, comprehensive search query incorporating "<UNIVERSITY NAME> + neglected tropical disease." The top 10 returned results were

screened for evidence of possible research centers focusing primarily on neglected diseases at these institutions. Additionally, a verification process was applied for all institutions that reported the presence of a specific neglected disease-focused research center. **In order to be verified as “Yes” for this question, the research center had to have a specific focus on at least one of the neglected diseases included in the G-FINDER definition.** After following the links provided by the respondent, if it was ascertained that the center mentioned was not in fact specifically focused on at least one neglected disease (e.g. a general infectious diseases or global health department), then the university received zero points as it was not considered to meet the criteria listed.

**Quality Maximization Strategy:** Respondents were given at least 3 opportunities to respond to the survey. For institutions that failed to respond, multiple investigators conducted a systematic review of university websites in order to identify any centers associated with the university and primarily focused on neglected diseases. These measures were taken to avoid false negatives. Additionally, verification was performed to rectify erroneous reporting on the part of universities (to avoid false positives).

# Empowerment

**E-Q1: Does the university offer its students access to global health engagement and/or education?**

If so, please check all those that apply

- Undergraduate
- Medical school/residency program
- Public health school
- Law school

**PART A: As indicated by the existence of a university center/institute, department, and/or non-degree program in global health.**

**CATEGORICAL**

**Weighting Multiplier: 2.0**

**Possible choices (raw score):**

- No center/institute/non-degree program/initiative (0 points)
- A global health non-degree program or initiative (1 point)
- A global health department or office (2 points)
- A global health center/institute (3 points)
- A global health center/institute & at least one global health initiative or non-degree program (4 points)
- A global health center & at least one global health department or office (5 points)

**PART B: As indicated by the existence of a university graduate degree, major/concentration, focus/specialization, certificate, or undergraduate degree in global health.**

**CATEGORICAL**

**Weighting Multiplier: 2.0**

**Possible choices (raw score):**

- No global health degree, academic track or certificate (0 points)
- A global health undergraduate major (1 point)
- At least one global health graduate certificate (2 points)



- At least one global health graduate focus/specialization (3 points)
- At least one global health graduate major/concentration (4 points)
- At least one global health graduate degree (5 points)

**Data Collection: CATEGORY 1.** Multiple investigators, working independently and in parallel, performed a review of university global health centers/institutes, departments, and programs using standardized web search protocol to identify qualifying institutions and determined whether or not they should earn a point for accessibility.

**Quality Maximization Strategy:** Investigators reviewed the data from the Consortium of Universities for Global Health (CUGH), a >100-member organization of research universities, specifically their Global Health Programs Database. Additionally, multiple investigators performed a standardized web search to identify relevant global health engagement and education opportunities available at each university.

**E-Q2: Does the university’s (a) medical school/residency program, (b) public health school, and/or (c) law school offer graduate courses that address the policy and legal context of biomedical R&D, and more specifically the impact of intellectual property policies, on research priorities and global access to medical innovations?**

**CATEGORICAL**

**Weighting Multiplier: 1.0**

**Possible choices (raw score):**

- No courses offered (0 points)
- 1-5 courses (1 points)
- More than 5 courses (2 points)
- 1-5 courses with at least one course focused specifically on IP and access to medicines (3 points)
- 6-10 courses with at least one course focused specifically on IP and access to medicines (4 points)
- More than 10 courses with at least one course focused specifically on IP and access to medicines (5 points)

**Data Collection: CATEGORY 1 AND 2.** Initial data was collected through a survey questionnaire that was emailed to appropriate deans or other administrators within the schools of medicine, public health, and/or law. Following the initial email, we made two additional email attempts to follow up with universities that do not respond. After this initial round of data collection, 2 to 3 investigators, working independently and in parallel, performed a web search of university course catalogues using a standardized online survey

instrument, in order to verify the self-reported university responses, as well as to identify relevant course offerings at non-responding institutions.

**Quality Maximization Strategy:** Initial data was collected directly from universities using a standardized questionnaire. Additionally, this data was both verified and supplemented by a review of the data from a standardized web search performed by multiple investigators.

**E-Q3: Does the university's (a) undergraduate program, (b) medical school/residency program, (c) public health school, and/or (d) law school offer graduate courses that address the prevalence of and/or lack of research on neglected diseases, including neglected aspects of HIV, TB, AMR, and/or malaria?**

**CATEGORICAL**

**Weighting Multiplier: 1.0**

**Possible choices (raw score):**

- No courses offered (0 points)
- 1-5 courses (1 points)
- More than 5 courses (2 points)
- 1-5 courses with at least one course focused specifically on recognized NDs (3 points)
- 6-10 courses with at least one course focused specifically on recognized NDs (4 points)
- More than 10 courses with at least one course focused specifically on recognized NDs (5 points)

**Data Collection: CATEGORY 1 AND 2.** Same as for E-Q2.

**Quality Maximization Strategy:** Same as for E-Q2.

**Data Collection: CATEGORY 1 AND 2.** Initial data was collected through a survey questionnaire that was emailed to appropriate deans or other administrators within the schools of medicine, public health, and/or law. Each contact received at least two follow-up emails. After this initial round of data collection, multiple investigators, working independently and in parallel, performed a web search of university course catalogues using a standardized online survey instrument, in order to verify the self-reported university responses, as well as to identify relevant course offerings at non-responding institutions.

**Quality Maximization Strategy:** Initial data was collected directly from universities using a standardized questionnaire. Additionally, these data were both verified and supplemented by a review of the data from a standardized web search performed by

multiple investigators.

**E-Q4: Has the university hosted a major conference, symposium or campus-wide event from 2014-2016 (Annual events should be counted once):**

- A. The policy and legal context of biomedical R&D, specifically the impact of intellectual property rights on research priorities and global access to medical innovations?**
- B. Neglected diseases, including neglected aspects of HIV, TB, AMR, malaria, and/or Zika and health needs of low- and middle-income countries?**

**CATEGORICAL**

**Weighting Multiplier: 1.0**

**Possible choices (raw score):**

- No - no events (0 points)
- Yes - has hosted one event on either A or B (1 points)
- Yes - has hosted two events both on A or both on B (2 points)
- Yes - has hosted two events, one on A and both and one on B or both (3 points)
- Yes - has hosted more than two events, all on A or all on B (4 points)
- Yes - has hosted more than two events, with events on both A and B (5 points)

**Data Collection: CATEGORY 1.** 2 to 3 investigators, working independently and in parallel, performed a review of university-hosted events using a standardized web search protocol to identify events related to topic A and/or B.

**Quality Maximization Strategy:** To ensure comparability of included events by multiple investigators, investigators were informed to include only those events that met the following criteria:

1. Must be partially or fully funded by the university/school/faculty or hosted on the facility of the school/faculty
2. Must discuss neglected diseases, access to medicines, and/or IP
3. Must discuss perspectives from low- and/or middle-income countries
4. Must have more than 30 people in attendance

**E-Q5: Does the university offer any of its students accessible opportunities to study, work, or complete research abroad in global health?**

**CATEGORICAL**

**Weighting Multiplier: 0.5**

**Possible choices (raw score):**

- 0.5 points for having each of the following global health funding opportunities: grant, scholarship, award, and/or fellowship (maximum of 2 points given)
- 0.5 points for having each of the following global health study abroad opportunities: scholarship and/or fellowship (maximum of 1 point given)
- 1 point for offering a global health practicum and/or partnership abroad
- 1 point for offering engagement in a global health clinic abroad

**Data Collection: CATEGORY 1.** 2 to 3 investigators, working independently and in parallel, performed a review of university global health opportunities abroad using a standardized web search protocol to identify opportunities.

**Quality Maximization Strategy: Data was collected** using a standardized web search performed by multiple investigators to ensure consistency of results.

# Transparency

## Questions

**T-Q1: Does the university disclose the amount of public funding received for clinical trials? Check all that apply.**

- **Discloses funding to public registries.**
- **Disclosure of private funding?**
  - **Disclosure of sources of private funding.**
- **Disclosure of all public and philanthropic funding, as defined [here](#).**
  - **Note: Philanthropic funding is categorized with public funding because the outcome of funding is similar.**
- **Maintains a public database of funding sources for individual grants**
- **Does the university respond to public records requests disclosing information on corporate sponsored research (Freedom of Information Act requests?)**
  - **If yes, what is a university's protocol to respond?**
- **Does the university report funds that are received through a foundation housed in the academic institution and/or headed by a principal investigator at the university?**

Source: <https://www.nejm.org/doi/full/10.1056/NEJMe0802618>

**CATEGORICAL (Percent Range)**

**Weighting Multiplier: 1.5**

**Possible choices (raw score):**

- No response (0 points)
- Responded but no sharing options provided (1 point)
- 1 sharing option checked (2 points)
- 2 sharing options checked (3 points)
- 3 sharing options checked (4 points)
- 4+ sharing options checked (5 points)

**Data Collection: CATEGORY 1 AND 2.** Initial data was collected through a survey questionnaire that was emailed to appropriate deans or other administrators within the schools of medicine, public health, and/or law, and the office of technology transfer. Following the initial email, we made two additional email attempts to follow up with universities that do not respond. After this initial round of data collection, 2 to 3 investigators, working independently and in parallel, performed a web search of university course catalogues using a standardized online survey instrument, in order to verify the

self-reported university responses, and complete a supplementary standardized review of university's website (including the TTO, Office for Clinical Research, and University Departments and medical centers) to search for disclosure of public funds for clinical trials.

**Quality Assurance Strategy:** Two evaluators performed a standardized review of each university's website for the disclosure of public funding. The information collected from them will be compared for consistency before grading the question. If there is inconsistency, a third or four evaluator will help to ensure accuracy.

For a complete list of included search terms, please see the Annex (page 36)

**T-Q2:**

**Part A:** What percent of all clinical trial data was published between 2006-2015 (Based on online sources)?

**Part B:** What percent of all clinical trial data was published 2006-2015? (University self report, open-ended to check for discrepancies)

**Part C:** What percent of all clinical trial data was published 2014-2015 (Based on online sources)?

**Part D:** What percent of all clinical trial data was published 2014-2015? (University self report, open-ended to check for discrepancies)?

**CATEGORICAL**

**Weighting Multiplier: 2.5**

**Possible choices (raw score):**

- 0% (0 points)
- 1-20% (1 point)
- 21-40% (2 points)
- 41-60% (3 points)
- 61-80% (4 points)
- 80% or above (5 points)

**Data Collection: CATEGORY 1 AND 2.** For each institution, the percentage of trials completed without published results was determined by two or more independent investigators using a standardized search query of the reported clinical trial registry on ClinicalTrials.gov (Category 1). Percentage was determined from <https://trialstracker.ebmdatalab.net/#/>. The comprehensive search query was created using aggregated data Evidence-Based Medicine Data Lab, University of Oxford. An online survey instrument was emailed to the university's TTO, faculty, and administrators (Category 2). For non-responding institutions, at least two follow-up requests were sent via email.

**Quality Assurance Strategy:** The data collected from two or more independent evaluators will be compared for consistency and accuracy before data is finalized and question is graded. This data that is collected will be cross-checked with the information reported on

the survey as a way to cross-check our question (Part A compared with Part C, and Part B compared with Part D).

**T-Q3: Does your university have policies that mandate that all university researchers publish all results of all clinical trials? Y/N**

- a. Does a university have an internal review process to prevent duplication of failed research, research with findings that are false or research that does not satisfy features that make clinical research useful (problem base, context placement, information gain, practicality, patient centeredness, value for money, and transparency)? Y/N
- b. Do you have policies to help facilitate researchers in accessing and publishing all clinical trial data in registries? Y/N. A listing of recognized clinical trial registries can be found [here](#).
- c. What policies has the university made to move toward publishing all clinical trial research results? (Open-ended)

**CATEGORICAL**

**Weighting Multiplier: 1.0**

**Data Collection: CATEGORY 2.** An online survey instrument was emailed to the university's TTO, faculty, and administrators (Category 2). For non-responding institutions, at least two follow-up requests were sent via email.

**Quality Assurance Strategy:** This question relies on the good faith of the university reporting the responses. There will be evaluators to check whether these policies are disclosed online or whether the university's TTO can provide examples of such policies.

**T-Q4: Does the university publicly acknowledge the need to be transparent in clinical trial results? If yes, check all that applies**

**CATEGORICAL**

**Weighting Multiplier: 1.0**

**Possible choices (raw score):**

- Supports the WHO Joint statement on public disclosure of clinical trial results, but have not signed on. (1 pt)
- Signatory on [WHO Joint statement](#) on public disclosure of clinical trial results (2 pts)
- Public endorsement of the Institute of Medicine's [Sharing Clinical Trial Data: Maximizing Benefits, Minimizing Risk](#) Report If so, please provide link: (1 pts)

- ❑ Public endorsement of UAEM global campaign on University Norms on Transparency. If so, please provide link: (2pts)
- ❑ Publicly support clinical trial data transparency and the need to publish all clinical trial results on University or TTO website? If so, please provide link: (2 pts)

**Data Collection: CATEGORY 1 AND 2.** Publicly available data on signatories was collected directly from the appropriate reputable U.S. government databases and foundation websites. Universities who acknowledged public support of clinical trial data transparency, all links provided by the university were checked and verified, and where possible, by multiple independent investigators.

**Quality Assurance Strategy:** Initial data was collected directly from universities using a standardized questionnaire. Additionally, this data was both verified and supplemented by a review of the data from a standardized web search performed by multiple investigators.

**T-Q5: Do you recommend or require your researchers to prospectively register all clinical trials with an appropriate registry before any subject is enrolled?**

**CATEGORICAL**

**Weighting Multiplier: 1.0**

- a. If no, do you ensure all trials are registered before data is submitted to an academic journal for publication? (if yes, 1 pt; if no, 0 pt)
- b. If yes, in addition to trials being prospectively registered, do you require protocols and planned outcomes for your university trials public before the trial begins? (if yes, 2 pt;)
  - If no, do you provide credit to investigators who choose to share protocols for their planned, ongoing, or completed trials? (if yes, 1 pt; if no, 0 pt)

**Citation:** ICMJE recommendation:

[http://www.icmje.org/news-and-editorials/clin\\_trial\\_sep2004.pdf](http://www.icmje.org/news-and-editorials/clin_trial_sep2004.pdf)

**Data Collection: CATEGORY 1 AND 2.** Initial data was collected through a survey questionnaire emailed to appropriate administrators. If 'yes' is selected as answer to either section a or section b, a text box appears asking the institution to provide web links or sample language or redacted language. Any links will be assessed by multiple investigators to verify the self-reported university responses.

**Quality Assurance Strategy:** Initial data is collected directly from universities using a standardized questionnaire. Additionally, this data is both verified and supplemented by a review of the data from a standardized web search performed by multiple investigators.



**T-Q6: Do you engage in commissioned research from private companies? Y/N (if yes, then next part; if no, 1 pt)**

**a. Do these companies have the ability to insert clauses affecting or prevent data publication? Y/N (if yes, 0 pts; if no, 1pt)**

Citations:

(1)[https://www.cjr.org/united\\_states\\_project/how\\_university\\_foundations\\_try\\_to\\_avoid\\_public\\_scrutiny\\_and\\_what\\_reporters\\_can\\_do.php](https://www.cjr.org/united_states_project/how_university_foundations_try_to_avoid_public_scrutiny_and_what_reporters_can_do.php)

(2)<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1123945/>

**CATEGORICAL Weighting Multiplier: 1.0**

**Data Collection: CATEGORY 1 AND 2.** Initial data is collected through a survey questionnaire that is emailed to appropriate administrators. If 'yes' is selected as answer to Part A, a text box appears asking the institution to provide web links or sample language or redacted language. Any links will be assessed by multiple investigators to verify the self-reported university responses.

**Quality Assurance Strategy:** This question relies on the good faith of the university reporting the responses. There will be evaluators to check whether these policies are disclosed online or whether the university's TTO can provide examples of such policies.

**T-Q7a: For questions relying on public data (CATEGORY 1) in the Access section, was sufficient information available online?**

**CATEGORICAL**

**Weighting Multiplier: 0.5**

**Possible choices (raw score):**

- No data found for any questions (0 Points)
- Data found for less than half of total questions (1 Point)
- Data found for half of total questions (2 Points)
- Data found for more than half of total questions (3 Points)
- Data found for all of total questions (4 Points)

**T-Q7B: For questions relying on public data (CATEGORY 1) in the Innovation section, was sufficient information available online?**

**CATEGORICAL**

**Weighting Multiplier: 0.5**

**Possible choices (raw score):**

- No data found for any questions (0 Points)

- Data found for less than half of total questions (1 Point)
- Data found for half of total questions (2 Points)
- Data found for more than half of total questions (3 Points)
- Data found for all of total questions (4 Points)

**T-Q7C: For questions relying on public data (CATEGORY 1) in the Empowerment section, was sufficient information available online?**

**CATEGORICAL**

**Weighting Multiplier: 0.5**

**Possible choices (raw score):**

- No data found for any questions (0 Points)
- Data found for less than half of total questions (1 Point)
- Data found for half of total questions (2 Points)
- Data found for more than half of total questions (3 Points)
- Data found for all of total questions (4 Points)

**Data Collection: CATEGORY 1.** Internal investigators re-examine data collected and response forms.

**Quality Assurance Strategy:** Cross-referencing with other internal investigators occurs with those who have evaluated the same section for the same university independently.

**T-Q7D: For questions relying on public data (CATEGORY 1) in the Transparency section, was sufficient information available online?**

**CATEGORICAL**

**Weighting Multiplier: 0.5**

**Possible choices (raw score):**

- No data found for any questions (0 Points)
- Data found for less than half of total questions (1 Point)
- Data found for half of total questions (2 Points)
- Data found for more than half of total questions (3 Points)
- Data found for all of total questions (4 Points)

**Data Collection: CATEGORY 1.** Internal investigators re-examine data collected and response forms.

**Quality Assurance Strategy:** Cross-referencing with other internal investigators occurs with those who have evaluated the same section for the same university independently.

**T-Q8: How much discrepancy exists between university responses in the submitted forms and what is being internally collected using publicly available data for Category 1 and 2 questions?**

**CATEGORICAL**

**Weighting Multiplier: 1.0**

**Possible choices (raw score):**

- University did not submit forms (0 Points)
- More than 50% of questions contain discrepancies (1 Point)
- More than 30% but less than 50% of questions contain discrepancies (2 Points)
- More than 10% but less than 30% of questions contain discrepancies (3 Points)
- Less than 10% of questions contain discrepancies (4 Points)

**Data Collection: CATEGORY 1.** Internal investigators go through all response forms after the submission deadline, and internal communication is evaluated for any discrepancies in all Category 1 and 2 labelled questions.

**Quality Assurance Strategy:** Data is collected using a single database of response forms analyzed by multiple investigators to ensure consistency of results.

# COVID-19 Access

**C-Q1: Has the university publicly committed to any of the following open science frameworks that increase access to COVID-19 related health technologies?**

## **CATEGORICAL**

**Weighting Multiplier: 1.0**

- **Part A)**
  - **University has signed no public pledges (0 points) OR**
  - **University has signed the [AUTM COVID-19 Licensing Guidelines](#) (2 points) OR**
  - **University has signed the [COVID-19 Technology Access Framework](#) (5 points) OR**
  - **University has committed, or pledged to commit, COVID-19 related IP to the [World Health Organization's COVID-19 Technology Access Pool](#) (10 points) OR**
  - **University has committed, or pledged to commit, COVID-19 related IP to the [Open Covid Pledge](#) (10 points)**
- **Part B)**
  - **The University has reported another method of expanding access to COVID-19 related technology (1 point).**

**Data Collection: CATEGORY 1.** Information of signatories or commitments of IP are publicly available and were collected and confirmed by at least two independent investigators. Universities were provided with four weeks of time, upon private release of each university's current standing in the report, to identify and communicate any additional mechanisms implemented aimed at expanding access to COVID-19 related health technologies. For this question, the maximum score a school could achieve is a total of 11 points between Parts A and B.

**Quality Assurance Strategy:** Cross-referencing with other internal investigators occurs with those who have evaluated the same section for the same university independently. Additionally, any self-reported mechanisms of expanding access communicated relies on the good faith of the university. There will be evaluators to check whether these policies are disclosed online or whether the university's TTO can provide examples of such policies.

# Annex

## Disease Search Query:

("Middle East respiratory syndrome coronavirus" OR "MERS-CoV") OR ("Human infection with avian influenza A virus" OR "H7N9 virus") OR ("Poliovirus" OR "WPV1") OR ("Ebola virus disease" OR "EVD") OR "Yellow fever" OR "Cholera" OR "Enterovirus" OR "D68" OR "Legionnaires' Disease" OR "Plague" OR "Measles" OR "Chikungunya" OR "Zika virus infection" OR "Dengue Fever" OR "Guillain-Barré syndrome" OR "GBS" OR "Lassa Fever" OR "Elizabethkingia" OR "Haemorrhagic fever syndrome" OR "Oropouche virus disease" OR "Enterohaemorrhagic Shiga toxin-producing Escherichia coli" OR "Rift Valley fever" OR "Monkeypox" OR

"Buruli ulcer" OR "Chagas' disease" OR "Dengue" OR "Chikungunya" OR ("Dracunculiasis" OR "guinea-worm disease") OR "Echinococcosis" OR "Foodborne trematodiasis" OR ("Human African trypanosomiasis" OR "sleeping sickness") OR "Leishmaniasis" OR ("Leprosy" OR "Hansen's disease") OR "Lymphatic filariasis" OR ("Mycetoma" OR "chromoblastomycosis" OR "deep mycoses") OR "Onchocerciasis" OR "river blindness" OR "Rabies" OR ("Scabies" OR "ectoparasites") OR "Schistosomiasis" OR "Soil-transmitted helminthiasis" OR "Snakebite envenoming" OR ("Taeniasis" OR "Cysticercosis") OR "Trachoma" OR "Yaws" OR "Endemic treponematoses" OR "Chikungunya" OR "Severe fever with thrombocytopenia syndrome" OR "Zika virus" OR

"Crimean Congo haemorrhagic fever" OR "Filovirus diseases" OR "EVD" OR "Marburg" OR "Coronaviruses relevant to humans" OR "MERS Co-V" OR "SARS" OR "Lassa Fever" OR "Nipah virus" OR "Rift Valley Fever" OR "R&D preparedness for a new disease" OR

"Arenaviral hemorrhagic fevers" OR "Lassa Fever" OR "Crimean Congo Haemorrhagic Fever" OR "CCHF" OR "Filoviral diseases" OR "Ebola" OR "Marburg" OR "Middle East Respiratory Syndrome Coronavirus" OR "MERS-CoV" OR ("pathogenic coronaviral diseases" OR "Severe Acute Respiratory Syndrome" OR "SARS" OR "Nipah" OR "henipaviral diseases" OR "Rift Valley Fever" OR "RVF" OR ("Severe Fever with Thrombocytopenia Syndrome" OR "SFTS") OR "Zika virus" OR "Chikungunya" OR

"Malaria" OR "Tuberculosis" OR "Rotavirus" OR "Shigellosis" OR "Cholera" OR "Cryptosporidiosis" OR "Enterotoxigenic *E. coli*" OR "Enterococcal *E. coli*" OR "Giardiasis" OR "Multiple diarrhoeal diseases" OR "Leishmaniasis" OR ("Sleeping sickness" OR "HAT") OR "Chagas' disease" OR "Multiple kinetoplastid diseases" OR "Dengue" OR "Bacterial pneumonia" OR "meningitis" OR "*S. pneumoniae*" OR "*N. meningitidis*" OR "Salmonellosis" OR ("Schistosomiasis" OR "bilharziasis") OR ("Lymphatic filariasis" OR "elephantiasis") OR ("Onchocerciasis" OR "river blindness") OR ("Hookworm" OR "ancylostomiasis" OR "necatoriasis") OR ("Tapeworm" OR "taeniasis" OR "cysticercosis") OR ("Whipworm" OR "trichuriasis") OR ("Strongyloidiasis" OR "intestinal roundworms") OR "Roundworm" OR "ascariasis" OR "Multiple helminth infections" OR "Hepatitis C" OR "Leprosy" OR "Cryptococcal meningitis" OR "Buruli ulcer" OR "Leptospirosis" OR "Trachoma" OR "Rheumatic fever" OR "HIV" OR "Antimicrobial resistance" OR "AMR" OR ("tuberculosis" OR "TB" OR "T.B." OR "mycobacterium tuberculosis" OR "M tuberculosis" OR "M. tuberculosis" OR "MTB")

## **Consortium of Global Health Members**

Of the 60 universities we evaluated for the University Report Card, 51 are members of the Consortium of Universities for Global Health (CUGH), which is designed to facilitate knowledge sharing to address global health challenges. Disappointingly, only 12 of those 51 universities responded to our survey. For full list of CUGH Members, those included in this evaluation and those who responded, see [here](#)

## **Disease Search Query for HIV, TB, AMR, and malaria**

(("Buruli ulcer" OR "mycobacterium ulcerans" OR "buruli" OR "M ulcerans" OR "M. ulcerans") OR ("Chagas" OR "Chagas Disease" OR "Trypanosoma" OR ("Trypanosoma cruzi") OR ("T cruzi") OR ("T. cruzi") or "Chagas") OR ("Schistosomiasis" OR "cercariae" OR "Schistosoma guineensis" OR "S guineensis" OR "S. guineensis" OR "Schistosoma intercalatum" OR "S intercalatum" OR "S. intercalatum" OR "Schistosoma mansoni" OR "S mansoni" OR "S. mansoni" OR "Schistosoma japonicum" OR "S japonicum" OR "S. japonicum" OR "Schistosoma mekongi" OR "S mekongi" OR "S. mekongi") OR ("Leishmaniasis" OR "Leishmania" OR "Phlebotominae" OR "Leishmania major" OR "L major" OR "L. major" OR "Leishmania infantum" OR "L infantum" OR "L. infantum" OR "Leishmania braziliensis" OR "L braziliensis" OR "L. braziliensis" OR "kala-azar" OR "kala azar") OR("Yaws" OR "Treponema" OR "Endemic Treponematoses" OR "Treponematoses" OR "framboesia" OR "pian" OR "Treponema pallidum" OR "T pallidum" OR "T. pallidum" OR "Pertenuae" OR "endemic syphilis" OR "bejel" OR "Endemicum" OR "Pinta" OR "Treponema carateum" OR T carateum" OR "T. carateum") OR ("Trachoma" OR "chlamydia trachomatis" OR "c trachomatis" OR "C. trachomatis" OR "trachomatis" OR (chlamydia AND blindness) OR (chlamydia AND keratoconjunctivitis)) OR ("African trypanosomiasis" OR "Human African Trypanosomiasis" OR "Sleeping Sickness" OR "African Sleeping Sickness" OR "African lethargy" OR "Congo trypanosomiasis" OR "trypanosoma" OR "trypanosoma brucei" OR "trypanosoma brucei rhodesiense" OR "trypanosoma brucei gambiense" OR "t b rhodesiense" or "t b gambiense" OR "t.b. rhodesiense" OR "t.b. gambiense" OR "T brucei" OR "T. brucei") OR ("Dengue" OR "Severe Dengue" OR "Dengue Fever" OR "Dengue virus" OR "DENV" OR "DEN-1" OR "DEN-2" OR "DEN-3" OR "DEN-4" OR "antibody-dependent enhancement") OR ("foodborne trematodiasis" OR "trematodiasis" OR "chlonorchiasis" OR "chinese liver fluke disease" OR "chinese liver fluke" OR "chlonorchis sinensis" OR "C sinensis" OR "C. sinensis" OR "fascioliasis" OR "Fasciola hepatica" OR "F hepatica" OR "F. hepatica" OR "Fasciola gigantica" OR "F gigantica" OR "F. gigantica" OR "Fasciola" OR "Opisthorchiasis" OR "Opisthorchis viverrini" OR "O viverrini" OR "O. viverrini" OR "Opisthorchis felinus" OR "O felinus" OR "O. felinus" OR "Paragonimiasis" OR "liver fluke" OR "lung fluke" OR "liver flukes" OR "lung flukes") OR ("taeniasis" OR "cysticercosis" OR "Taenia solium" OR "T solium" OR "T. solium" OR "Taenia saginata" OR "T. saginata" OR "Taenia asiatica" OR "T Asiatica" OR "T. asiatica" OR "beef tapeworm" OR "Asian tapeworm" OR "pork tapeworm" OR "tapeworm") OR ("soil transmitted helminthiasis" OR "soil-transmitted helminths" OR "soil transmitted helminths" OR "ascaris lumbricoides" OR "ascaris" OR "ascariasis" OR "a lumbricoides" OR "a. lumbricoides" OR "Trichuris trichiura" OR "T trichiura" OR "T. trichiura" OR "Necator americanus" OR "N americanus" OR "N. americanus" OR "Ancylostoma duodenale" OR "A duodenale" OR "A. duodenale" OR

“Helminthiasis”) OR (“onchocerciasis” OR “onchocerca” OR “onchocerca volvulus” OR “o  
volvulus” OR “o. volvulus” OR “river blindness” OR “robles disease” OR “robles” OR  
“wolbachia pipientis” OR “w pipientis” OR “w. pipientis”) OR (“echinococcosis” OR “cystic  
echinococcosis” OR “polycystic echinococcosis” OR “hyatid disease” OR “echinococcus  
granulosus” OR “E granulosus” OR “echinococcus multilocularis” OR “E multilocularis” OR  
“E. multilocularis” OR “echinococcus” OR “echinococcal disease” OR “alveolar  
echinococcosis”) OR (“lymphatic filariasis” OR “elephantiasis” OR “wuchereria bancrofti” OR  
“w bancrofti” OR “w. bancrofti” OR “brugia malayi” OR “b malayi” OR “b. malayi” OR “brugia  
timori” OR “br timori” OR “b. timori”) OR (“dracunculiasis” OR “guinea worm disease” OR  
“guinea-worm disease” OR “dracunculus medinensis” OR “d medinensis” OR “d.  
medinensis” OR “dracunculus”) OR (“leprosy” OR “Hansen’s Disease” OR “Hansens Disease”  
OR “mycobacterium leprae” OR “m leprae” OR “m. leprae” OR “mycobacterium  
lepromatosis” OR “m lepromatosis” OR “m. lepromatosis” OR “lepra”) OR (“rotavirus” AND  
“vaccine”) OR (“HIV” AND “pediatric”) OR (“HIV” AND “fixed dose combination”) OR (“HIV”  
AND “fixed-dose combination”) OR (“HIV” AND “fdc”) OR (“HIV” AND “microbicide”) OR  
 (“HIV” AND “diagnostic”) OR (“HIV” and “vaccine”)) OR (“tuberculosis” OR “TB” OR “T.B.”  
OR “mycobacterium tuberculosis” OR “M tuberculosis” OR “M. tuberculosis” OR “MTB”) OR  
 (“malaria” OR “plasmodium vivax”))