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## "Paid" Medical Research For Students: Time For Minimum-Wage Medical Research Internships

**Peer review status:**

No

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**Article ID:** WMC005183

**Article Type:** My opinion

**Submitted on:** 13-Sep-2016, 03:09:21 PM GMT **Published on:** 14-Sep-2016, 11:44:01 AM GMT

**Article URL:** [http://www.webmedcentral.com/article\\_view/5183](http://www.webmedcentral.com/article_view/5183)

**Subject Categories:** ECONOMICS OF MEDICINE

**Keywords:** Medical Students, Accreditation Council for Graduate Medical Education, Graduate Medical Education, Centers for Medicare & Medicaid Services, American Osteopathic Association, Minimum-Wage Medical Research Internships

**How to cite the article:** Gupta D. "Paid" Medical Research For Students: Time For Minimum-Wage Medical Research Internships. WebmedCentral ECONOMICS OF MEDICINE 2016;7(9):WMC005183

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**Source(s) of Funding:**

None

**Competing Interests:**

None

# "Paid" Medical Research For Students: Time For Minimum-Wage Medical Research Internships

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## Abstract

As a researcher myself, I have always wondered about what drives the pursuit of research. There is data to suggest the positive impact of medical student research for future evolution as academic physicians or physician-scientists. The data from undergraduate student research, however, suggests that pre-medical students prefer to focus more on clinical care than on research pursuits when compared with non-pre-medical students. The reasons for students showing non-primary interests in medical research can be that (a) the undergraduate research achieves more fulfillment for self with multi-year involvement that may not be feasible for students while on the medical school pathway; (b) the project ownership that drives the aptitude and zeal for research pursuits may not be possible with short-term involvements in medical research; and (c) the absence of well-defined and mandatory course-based undergraduate research experiences and/or abundant medical research internships may preclude the popularity of medical research among student researchers. The medical students have opportunities (a) to apply for extremely limited research positions that pay stipend (long term jobs or summer jobs), (b) to choose elective rotations for learning and experience in medical research as part of their educational curriculum, and (c) to volunteer as "researchers" for ongoing medical research projects at financially-constrained departments. Overall, the major avenue that society needs to ponder is that when "only zilch comes free", it should not expect medical research to drive itself into a promising future in the absence of research dollars' abundance. Therefore, it is high time that research teams should plan minimum wage medical research internships to "give" stipends to their student researchers before asking to "take" their time for teams' planned and ongoing medical research projects. This is long overdue because for umpteen times, student researchers have demonstrated their readiness to "give" their dedication for research while making their legitimate case to "take" positions among highly competitive graduate medical education programs in the United States and tread their future into practicing and/or innovating medicine.

## Perspective

As a researcher myself, I have always wondered about what drives the pursuit of research. It could be about out-of-the-box thinking, inability to sleep on unsolved mysteries, or a congenital asset-or-defect (depending on how one sees it) to live with. However, this can only drive personal pursuit for excellence in seeking answers after raising the questions in the first place. Contrarily, the society's desires for creativity and innovation are quenched by the research teams that in turn, require appropriate nurture and "payout" by society.

Based on my limited understanding, I start by reviewing the current scene in medical research. Firstly, it is surprising to ponder that society mandates its clinical medical faculty to invent (or discover) creativity within themselves to fulfill essential faculty development in academics even though the primary goal pursued by and expected from clinical medical faculty is patient care. Secondly, it is interesting that Accreditation Council for Graduate Medical Education (ACGME) and its Specialty Review Committees (SRCs) expect the residents or fellows (trainees) to accomplish mandatory scholarly activities[1] that can be misconstrued as mandatory pursuit for medical research by trainees; however, the major payer for graduate medical education (GME), Centers for Medicare & Medicaid Services (CMS), may not invest in trainees' protracted period of time for non-patient related research per Section 5505 of Public Law 111-148-Mar. 23, 2010 [2-3]. It becomes more interesting when some ACGME subspecialties expect their key clinical faculty (KCF) to invest time and efforts into acceptable products of scholarship that include mandatory publications in peer-review journals to meet the ACGME productivity expectation requirements to justify faculty position as KCF [4]. Comparatively, American Osteopathic Association (AOA) has better-defined expectations from their faculty and trainees to conduct research projects mandatorily at least for some AOA specialties [5-7]. Thirdly, the irony becomes more apparent when the society expects physician-scientists to "freely" create so as to counter stagnation in innovation while healthcare research dollars are allowed to follow trend

of decline with each passing year as per the National Health Expenditure (NHE) tables [8] despite healthcare expenditures trending to rise. Finally, "zilch comes free" seems irrelevant when it comes to the undergraduate and medical students' involvement in medical research.

The students involved in medical research can be on the pathway of graduation from the United States (U.S.) medical schools as pre-medical undergraduates or medical students. Alternatively, these student researchers may have been on the pathway of graduation from international medical school as medical students/collegiates or medical graduates/doctors. Future U.S. graduates (USGs) may have the opportunities (a) to apply for extremely limited research positions that pay stipend (long term jobs or summer jobs) [9], (b) to choose elective rotations for learning and experience in medical research as part of their educational curriculum, and (c) to volunteer as "researchers" for ongoing medical research projects at financially-constrained departments. However, due to the work-limitations for non-immigrant aliens as compared to the U.S. citizens and the U.S. immigrants, future or current international medical graduates (IMGs) primarily explore volunteering for medical research to educate themselves while preparing for matching into the U.S. programs (residencies or fellowships) of GME.

There is data to suggest the positive impact of medical student research for future evolution as academic physicians or physician-scientists [10-11] but the programs, that were studied, had research opportunities with stipends for student researchers. The data from undergraduate student research, however, suggests that pre-medical students prefer to focus more on clinical care than on research pursuits when compared with non-pre-medical students [12]. The reasons for students showing non-primary interests in medical research can be that (a) the undergraduate research achieves more fulfillment for self with multi-year involvement [13] that may not be feasible for students while on the medical school pathway; (b) the project ownership that drives the aptitude and zeal for research pursuits [14] may not be possible with short-term involvements in medical research; and (c) the absence of well-defined and mandatory course-based undergraduate research experiences [15] and/or abundant medical research internships may preclude the popularity of medical research among student researchers. Additionally, per one study from United Kingdom [16], only half of the projects provide sufficient opportunities to develop research skills with data gathering being the primary

skill acquired by the students. Despite these constraints, the undergraduate research engages students' interest to imbibe critical thinking processes that pave the path for scientific intrigues in future [17]. However, the utopist and altruist view for research pursuits should not overlook that while applying for GME fellowship programs, IMGs apparently deemed high-value to research and publications in the context of improving their curriculum vitae and probability to match into programs of interest [18].

In a nutshell, it can be safely presumed that the primary driving force for medical student researchers is to achieve or receive the "ultimate prize" of matching into GME programs. That is the ultimate "take" for the students but not a guaranteed one compared to the "guaranteed" experience in medical research depending on the acumen of the department or team wherein the students are "giving" in their precious time, energy and intellectual input for medical research. Complementarily, the "take" for the research teams is the abundance of "volunteering" student researchers to whom the departments are "giving" access of their established research teams and ongoing explorations into innovations.

To overcome the subjectivity while quantifying give-and-take in human transactions, universal currency (money) had been invented so that the givers cannot claim they have given all and the takers cannot say they have taken none. In the absence of stipends, it can be difficult to identify the roles or quantify the mutual expectations that the research teams have from their "volunteering" medical student researchers. Moreover, in the absence of dedicated research funds by CMS, departmental support for the research involving clinically busy residents-fellows can be difficult and limited despite ACGME-AOA scholarly activity requirements being in place. Therefore, the society needs to decide (a) whether it would courageously inject more research dollars into healthcare system to align and enhance medical research economics, (b) whether it would encourage only futuristically relevant and financially sustainable medical research while discouraging the research conducted only for mandatory job requirements so as to offload the burden from the extremely limited research dollars, (c) whether it would ensure allocation of dollars from medical students' tuition and fees to the research teams if the medical students are being tutored per their educational curriculums during elective or mandatory research rotations, and (d) whether it would ensure that the "volunteering" student researchers are paid for their precious time, energy and intellectual input to the delegated medical

research. Overall, the major avenue that society needs to ponder is that when "only zilch comes free", it should not expect medical research to drive itself into a promising future in the absence of research dollars' abundance.

Coming back to the point, although data from The Student Hopes and Dreams Survey 2012 among university students in United Kingdom had elicited that at the start of their careers, 50% graduates would work for free [19] (in spite of those corresponding avenues' oft-potential to being considered illegal at least in the U.S. [20]) and 41% graduates would work at minimum wage internships [19], it is high time that research teams should plan minimum wage medical research internships to "give" stipends to their student researchers before asking to "take" their time for teams' planned and ongoing medical research projects. This is long overdue because for umpteen times, student researchers have demonstrated their readiness to "give" their dedication for research while making their legitimate case to "take" positions among highly competitive GME programs in the U.S. and tread their future into practicing and/or innovating medicine. Summarily, it is all a matter of perspective wherein "give-then-take" always seems better than "take-then-give".

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