Neurosurgeons and Ownership of Innovation at Academic Institutions

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Introduction

- Innovation in academic neurosurgery has produced technologies and therapies that directly benefit patients
- As state and federal budgets shrink, universities are extracting additional revenue by limiting royalty streams for innovations by academic neurosurgeons
- Previous studies reveal that 147 board-certified neurosurgeons hold 582 patents

Objective

In this study, we examine patent and royalty policies at academic institutions with and without neurosurgical training programs

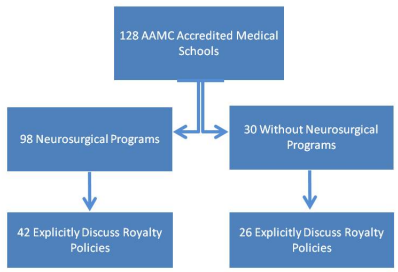
Methods

- The Association of American Medical Colleges recognizes 128 medical schools in the United States
- 98 of these schools have accredited neurosurgical training programs
- We examined the bylaws and technology transfer policies of all 128 institutions to evaluate:

(a) The scope of policies regarding ownership of patent rights (neurosurgeon versus university)

(b) Divisions of royalty payments between innovators and universities

Innovation Policies Among Medical Centers



Results

- 42 medical centers with neurosurgical training programs explicitly discuss royalties in their bylaws
- Only 7 institutions provide 50% of royalty revenues to the inventor (after patent filing fees and administrative overhead are deducted)
- Royalty divisions are highly variable, with some institutions capping payments (e.g. $150K/year maximum) and others paying innovators a proportion of the royalty received (e.g.: <$20K: 40%, next $20K: 35%, >$40K: 30%)
- Of the 26 medical centers without neurosurgical training programs, royalty policies are similarly variable
- 5 of these institutions provide 50% of royalty revenues to the inventor (after patent filing fees and administrative overhead are deducted)
- Most medical centers retain ownership of patent rights, with innovators serving as co-authors
- In fewer than 20 institutions, division of patent ownership can be discussed on a case-by-case basis, which creates some opportunity for inventors to negotiate for additional compensation

Conclusions

- Despite public perceptions of profiteering by medical innovators, academic licensing agreements only modestly compensate innovators with a percentage of returns
- Most academic centers are quite restrictive in the opportunities offered to neurosurgeon innovators to financially benefit from the development of novel technologies or treatments

Implications

- In the context of declining reimbursement for clinical procedures and diminished research support to help fund laboratories, highly restrictive intellectual property policies may drive innovative neurosurgeons out of academics and into private sector partnerships
- The neurosurgical societies have an important role in advocating for neurosurgeon innovators, and helping to educate the public as to the impact neurosurgeons have on developing new techniques and therapies to benefit patients

References

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