

Physician Education and Genomics

GM III

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Clinicians and Genomics

The Opportunity

- Rapid advances in genomic science
- Astonishing reductions in cost and turnaround time
- Increased public interest-expectations high
- Pharmacogenomics approaching the clinical horizon
- Clinical decision support via EMR under development
- Medical leadership available at academic centers

Clinicians and Genomics

The Opportunity

- Genuine interest and apprehension among many practicing physicians
- Successful and informative NEJM series on genomics
- NHGRI lecture series for clinicians on www.genome.gov/27546022

The Barriers

- Practicing physicians are largely innocent of genetics/genomics
- Multiple categories of physicians with different interests and needs
- Genomics transcends specialty areas-have to work with many professional associations with varying sophistication and interest in genomics

The Barriers

- Professional associations worry about getting ahead of their membership-wasting funds and disappointing the membership
- Multiple educators with an interest in the topic and without means of funding the effort or collaborating with others
- Difficult to monitor advances across the whole of medicine to find advances near the clinical horizon

Physician Statistics

- 850,000 physicians are licensed to practice in the US (2010)
- An estimated 624,434 physicians spend a majority of their time in direct patient care
- Approximately 209,000 are active primary care physicians-family physicians, general practitioners, general internists, general pediatricians and geriatricians
- Estimated shortage of 150,000 in 15 years

Physician Education

The way forward

- Do nothing-rely on traditional methods-journals, professional meetings to carry the burden – not very satisfying and perhaps irresponsible
- Set in place a process for review and consensus development whereby clinical research findings might be deemed sufficiently reliable to cross into the realm of the practicing physician

Physician Education

The way forward

- Devise an educational approach for all physicians, particularly those in primary care, to provide for general genomics literacy
- Pharmacogenomics should be a prominent part of this as most physicians prescribe drugs
- Create a collection of vignettes that demonstrate the importance of pharmacogenomics in avoiding harm and reducing cost

Physician Education

The way forward

- Rank order physician specialties by proximity of science to the clinical horizon and the likely number of patients involved
- Plan educational efforts with professional societies in such a way that these efforts begin as the clinical science matures and guidelines are being prepared
- Plan public educational efforts in parallel
- Repeat the successful NEJM series as needed

Physician Societies - Potential partners

Physician Society	Members
American College of Physicians	132,000
American Academy of Pediatrics	60,000
American College of Cardiology	39,000
American Psychiatric Association	36,000
American Soc of Clinical Oncology	30,000
American Gastroenterology Assoc	17,000
American Diabetes Association	16,000
American Thoracic Society	15,000
American Geriatric Society	6,000
American Assoc of Clin Endocrinology	6,000

Physician Societies Potential Partners

Others

- American Heart Association
- American Cancer Society
- American Medical Association

Next Steps

