DEPARTMENT OF PUBLIC HEALTH SCIENCES

ANNUAL REPORT 2006-07

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Mission and Background

Formal Mission Statement

The Department of Public Health Sciences focuses its energies, expertise and collaborations on enabling the University of Virginia and its School of Medicine to improve the health and well being of individuals and populations. By assembling multidisciplinary teams that combine expertise from biostatistics, clinical epidemiology, informatics and public health in collaboration with clinicians and scientists, we create new technologies for the generation, analysis, interpretation and management of basic and health-related data, as well as new educational and learning opportunities and program offerings. These efforts are intended ultimately to assist individuals, clinicians, communities and public health policymakers in making informed, wise, equitable and cost-effective choices, and to establish the University of Virginia and its School of Medicine as an international leader in medical science, technology and the increasingly complex challenges of public health and personalized medicine.

Brief History

The Department of Public Health Sciences (DPHS) was originally established in 1995 as the Department of Health Evaluation Sciences. It was created to provide comprehensive and multidisciplinary scientific and analytical services to the University of Virginia Health System, as well as other components of the University. The initial business plan described the development of an infrastructure designed to initiate, expand and enhance clinical and translational research education and activities throughout the School of Medicine rather than the traditional investigator-initiated model.

The plan also called for development of a medical-management and quality-assurance capability that supported these activities in the University of Virginia Health Sciences Center. During 1996, a series of weekend retreats was held at the Darden School with senior leadership from across the School of Medicine and the Health Sciences Center to help launch these activities. In its initial five years, the department grew in size and began having an institutional impact and a positive financial record. Beginning in approximately 2000, however, the senior leadership of the School of Medicine and Health Sciences Center elected to discontinue their support for the medical-management and quality assurance capability described in the initial business plan. The department lost a number of its key senior faculty and morale dropped.

In 2002 with the arrival of a new dean and vice president, the department re-energized. It added a new focus on public health while also continuing its ongoing clinical informatics and biostatistical and epidemiological activities. New senior leaders were recruited to head clinical informatics, biostatistics and epidemiology, and a new division of public health and a new MPH program were begun. In 2005 the Department of Public Health

Sciences was adopted as the department's new name to reflect its emphasis on public health education, training and service. In 2007 the department successfully concluded a major two-year recruitment process with the appointment of Stephen Rich as a Distinguished Board of Visitors Scholar and the establishment of his new Center for Public Health Genomics at the University of Virginia.

As the formal mission statement indicates, DPHS is an infrastructure and discovery department devoted to finding new research strategies and providing new educational offerings for health promotion and preservation, disease prevention, diagnosis and treatment, as well as the development of contemporary tools in genetic risk assessment, medical decision making, biostatistical and epidemiologic methods, and medical service delivery for individuals and populations. DPHS continues its original mandate to provide support for students and investigators throughout the School of Medicine and across University grounds as they come together to learn about and develop: (1) new ways to evaluate more precisely the efficacy of new and existing medical care and health improvement practices, and (2) the efficient and fair delivery of health services.

Organizational Structure

The Department of Public Health Sciences, which is staffed by 35 primary, a large number of secondary academic appointments and a support staff of 13, is currently composed of three major divisions and one closely aligned Center:

- Clinical Informatics: communications technology to support and analyze biomedical research and health data.
- Biostatistics & Epidemiology: research and consulting on the application of statistical analyses to biomedical research data. Biostatistics and Epidemiology provides statistical support for many research projects at the University of Virginia.
- Public Health Policy & Practice: teaching, research and community interventions in public health practice and health care policy.
- The Center for Public Health Genomics : stimulates research in human genetics and expands the range of services available to the academic community of the University of Virginia.

MAJOR DEPARTMENTAL AND DIVISION ACCOMPLISHMENTS 2006-07

Highlights

***Funded Research expands to $33,165,396**
***New University Center for Public Health Genomics established**
***Department plays major role in CTSA application**
***New web based search engine for Pub Med (www.ReleMed.com) launched**
***New Certificate Courses offered to UVA residents and fellows**
***New NLM Funded Informatics training grant with Systems Engineering**

***New Global Public Health Partnership with Center for Global Health**
***New MPH Health Disparities for MD-MPH Degree**
***James Harrison named Director of Cancer Informatics for Cancer Center**
***New expanded agreement with Health Sciences Center for CDR**

Research

DPHS faculty served as principal investigators on 15 grants and as collaborators on 87 RO1 grants, program projects, training grants and other comparable undertakings. These same faculty submitted 16 new grant proposals for which they would serve as principle investigator and 86 for which they would serve as collaborators.

Research dollars generated on grants where a DPHS faculty member served as principle investigator totaled $33,165,396, with $31,750,828 credited to the Center for Public Health Genomics that joined the department in January 2007. Research grants in other departments in which DPHS faculty served as collaborators totaled approximately $20 million.

Members of the department's faculty published 46 peer-reviewed papers as first or senior authors and 115 such papers as collaborators; they also published 12 white papers and chapters.

Additionally, two new NIH grants were funded this year, an R01 and an R03, with Division of Biostatistics and Epidemiology faculty serving as the principal investigators.

The Center for Public Health Genomics (CPHG) was created in January 2007 in recognition of the need for integration of molecular genetics, statistical genetics, genetic epidemiology, bioinformatics and public health policy. The resources for this Center were contributed by several University of Virginia sources, including commitments from the Board of Visitors, the School of Medicine, and the Department of Public Health Sciences. Previously, genomics research at the University of Virginia was limited to selected laboratories, with many investigators focused on genes within model systems (e.g., mice) rather than humans. Relatively few genomics resources were available for investigators at the University, thereby limiting the University's ability to extend research into diseases of clinical significance. As a result of these programmatic needs, the CPHG was established to stimulate research in human genetics and to expand the range of services available to the academic community of the University of Virginia.

Members of the department also played major roles in the development of the University of Virginia Clinical & Translational Research Award (CTSA) application, one of the major research grant application efforts for the School of Medicine. The importance of biomedical informatics to the future of translational research was emphasized by the requirement to include a Program in Biomedical Informatics in the CTSA application. The Division of Clinical Informatics co-wrote this section with the University's Department of Computer Science. It was one of the two highest-rated sections during the

proposal's initial review. The Division of Clinical Informatics is currently co-writing its revision for resubmission in the fall of 2007.

Similarly, the Division of Biostatistics and Epidemiology authored the Biostatistics Program portion of the January 2007 CTSA submission. It, too, was cited as a major strength of the application. Division members from Biostatistics and Epidemiology are continuing their participation in the re-submission of this application.

While officially on reduced assignment for much of the 2006-07 academic year, the chairman of the department invested considerable time and effort in development efforts on behalf of the University. Working with staff from UVA's Office of Corporate and Foundation Relations, the chairman contacted and engaged several external corporations, foundations and agencies. As an initial result of these efforts, a new research and development agreement was recently signed between DPHS and Genworth, a major life- and long-term-care insurance provider based in Richmond, Virginia.

The chairman, in conjunction with Dr. Mir Siadaty who serves on the Division of Clinical Informatics faculty, created a new biomedical search engine called Relevant Medicine (or ReleMed as it is more familiarly known). The search engine, which launched in January 2007, allows users to access and more efficiently use PubMed, the National Library of Medicine's major repository of the world's biomedical research publications. ReleMed, located online at www.ReleMed.com, has received overwhelmingly positive reviews from health sciences librarians and is currently ranked Number 5 by Google among more than 30 biomedical-literature-related search engines.

The Division of Public Health Policy and Practice celebrated the publication of "Health Care Half-Truths: Too Many Myths, Not Enough Reality," a book co-authored by Carolyn Engelhard and the University of Virginia's Executive Vice President and Provost, Arthur (Tim) Garson.

Education

The Department of Public Health Sciences offered two graduate programs during 2006-07: the Master of Science in Clinical Research (with 30 students enrolled and 12 students awarded the degree), and the Master of Public Health (with 30 students enrolled and 9 students awarded the degree). The department also provided educational opportunities to many other graduate and undergraduate students, as well as residents, fellows and faculty. The latter was accomplished through the newly established certificate program supported by the Health Sciences Center administration. This program offers residents and fellows the opportunity to attend intense four two-week courses on topics such as epidemiology and biostatistics taught by DPHS faculty. These courses meet new residency training program requirements, and the academic credits earned can also fulfill some of the requirements within the two degree programs offered by the department: Masters of Science in Clinical Research and Masters of Public Health. The first of these

certificate courses, Introduction to Epidemiology, was held in the summer of 2007 and was taught by Dr. Viktor Bovbjerg from the Division of Biostatistics and Epidemiology. The reviews of Dr. Bovbjerg's teaching by the residents were extraordinarily positive, achieving an overall ranking of 4.8 on a 5-point scale.

DPHS and its Division of Clinical Informatics led a successful effort to gain funding from the National Library of Medicine for a PhD training program in medical informatics, one of only 18 funded nationally. This five-year program involves an innovative collaboration between the Division and the Department of Systems and Information Engineering in the School of Engineering.

DPHS also provided the required fourth-year Medical School course, DxRx: Health Care System, which introduces students to the range of organizational, economic, political and legal dimensions of the health care system. In addition, a fourth-year elective in Public Health Policy and Practice provides students with opportunities to work in state and local health departments.

Through its Division of Public Health Policy and Practice, the department has created a new Global Public Health Minor, in partnership with the Center for Global Health, that provides selected undergraduates with the possibility of internships in public health, enrollment in graduate courses in public health, and special meetings with visiting scholars.

This year the Five-Year BA/BS-MPH Program began admitting undergraduates into the public health program at the end of their third year of undergraduate studies so that they can focus on public health research, education and community projects over the two years that bridge their final undergraduate year and the one-year MPH program.

To support the University's emphasis on diversity, the department created a new MPH Health Disparities Focus for MD-MPH students in the Medical School's Generalist Scholars Program.

Finally, a new Clinical Translational Research course was established and co-taught by Division of Public Health Policy and Practice faculty members: Erik Hewlett, the School of Medicine's associate dean for research; and Philippe Sommer, a professor at the Darden Graduate School of Business.

Service

Department faculty serve on many of the most important research committees in the University and the School of Medicine, including the Institutional Review Board, the GCRC Protocol Review Committee, the Cancer Center Protocol Review Committee, the Cancer Center Data Safety and Monitoring Committee and the Children's Hospital Grant Review Committee. Division members have also served on a number of administrative committees, including the School of Medicine Promotion and Tenure Committee. In addition, the Department has contributed strongly to strategic planning for biomedical

informatics; for example, DPHS faculty developed plans for a Core Facility in Biomedical Informatics at the request of the Research Advisory Council (RAC) and the School of Medicine Dean's Office.

James Harrison, Division Director of Clinical informatics, was appointed Director of Cancer Informatics in the University of Virginia Cancer Center.

The Department, through its Division on Public Health Policy and Practice, was active in a variety of community-service endeavors. Masters of Public Health students, working with Division faculty, were invited to present their community research projects at the American Public Health Association Annual Conference. The accepted abstracts included Jennifer Young's "Ethical and legal issues regarding HPV vaccine legislation"; Michele Bucci's "Comparison of mothers' motivation to prevent preschool childhood obesity across four ethnic groups"; and Rebecca Angevine's "Barriers to HAART adherence in a cohort of adolescents in urban Uganda." At the recent University-wide Conference on Health Care Disparities, the Department presented its first Public Health Community Impact Award to Dr. Wendi El Amin from the Department of Family Medicine.

The Department continues to serve as the developer, manager and consulting entity for the Clinical Data Repository (CDR), a research and education resource. The Division of Clinical Informatics is working hard to maintain and improve the access of researchers and students to the CDR, in a manner consistent with federal guidelines and national best practices. This year the Division successfully negotiated a Memorandum of Understanding with the Health System to allow new data types that are beginning to populate the electronic medical record to also flow to the CDR for research applications, and also to act as the Health System Honest Broker in managing access to the data.

The remainder of this annual report consists of faculty listings by Division, the executive summaries from each of the three Division's annual reports, detailed documentation of all accomplishments, along with summaries of the current status of the Center for Public Health Genomics, the Masters of Science in Clinical Research and the Masters in Public Health degree programs.

THE DIVISION OF CLINICAL INFORMATICS

The Division of Clinical Informatics in the Department of Public Health Sciences conducts original research and teaching to advance the field of health informatics, and provides key collaborations, consultations and services in informatics to support the academic, research and healthcare missions of the School of Medicine and the University of Virginia Health System**.**

The faculty and technical staff of the Division are currently pursuing work in several key areas within the overall mission of the Division:

- Original research in health informatics, with a particular focus on clinical systems, healthcare process improvement, population studies and community/consumer education.
- Development and management of the Clinical Data Repository a large-scale integrated database of clinical and population data optimized for research.
- Teaching health informatics principles, tools and techniques appropriately targeted to trainees at multiple levels so that they will become leaders in and contributors to the optimal application of health informatics techniques in healthcare and research.

The Division also supports key collaborations that strengthen the research, educational and clinical capabilities of the School of Medicine and Health System:

- Collaborative support of clinical and biomedical science investigators who need to incorporate current medical informatics tools and techniques into their research.
- Collaboration with investigators from engineering, business and other disciplines to allow best practices in those areas to be critically evaluated for health-related applications.
- Consultation, planning for and evaluation of production and research information systems to ensure quality, appropriate standards compliance and optimal implementation.
- Collaboration in curriculum development and teaching in clinical and other training programs that need to incorporate health informatics principles as instructional components.

Division of Clinical Informatics
July 2006 - June 2007

Division Members (core faculty)

James Barrett, PhD	Assistant Professor
Wendy Cohn, M Ed, PhD	Associate Professor
James Harrison, MD, PhD	Associate Professor, Division Director
Jason Lyman, MD, MS	Assistant Professor
Josyf Mychaleckyj, MA, D Phil	Associate Professor
Andrew Post, MD, PhD	Assistant Professor
Jane Schubart, PhD, MS, MBA	Assistant Professor
Kenneth Scully, MS	Instructor
Mir Siadaty, MD, MS	Assistant Professor

EXECUTIVE SUMMARY

The Division of Clinical Informatics is composed of nine full-time core faculty members (3 Associate Professors, 5 Assistant Professors and an Instructor). It serves a fourfold mission in the UVA School of Medicine and Health System:

1. The Division offers graduate courses in medical informatics that are integral parts of several training programs and are available to the general university community.
2. It conducts original research in applied and theoretical medical informatics.
3. It supports clinical research, medical education and patient care through information systems that are designed and maintained by Division personnel (e.g., the Clinical Data Repository, CDR).
4. It provides expert consultation on the design, application, best practices and policies related to information systems for investigators, students and practitioners in the School of Medicine and the Health System

Medical informatics has become crucial infrastructure for successful biomedical research and clinical practice in academic medical centers. UVA lags in implementing this infrastructure, and thus is at a disadvantage compared with other institutions in both research and patient care. Recent efforts by the medical school to improve this situation have included Division faculty in leadership roles. Important examples include:

- The Division is responsible for authoring or co-authoring two sections of the institutional CTSA application: the Program in Biomedical Informatics (and co-direction of the Program), and the Evaluation section. Four Division faculty have funded leadership roles in the proposed CTSA program.
- A Division faculty member has been appointed Director of Cancer Informatics in the UVA Cancer Center.
- The Division developed plans for a core facility in biomedical informatics and submitted them to the Research Advisory Council and the Medical School Dean's office.
- In cooperation with the Dean's office, the Division negotiated a Memorandum of Understanding between the School of Medicine and the Health System for expanding the scope of the CDR and designating the CDR staff as the official honest broker for the Health System. This MOU is crucial for clinical research at UVA and is a model for agreements expanding UVA research relationships with other healthcare organizations.
- Successful programs have been developed using the CDR to support identification of adverse drug events in patients and enhance the quality of graduate medical education.
- UVA successfully competed for a new training grant in biomedical informatics funded by the National Library of Medicine. The program was conceptualized and co-authored, and is co-directed, by Division faculty.

The Division has also been productive by traditional academic measures, as briefly outlined below and detailed on the following pages:

Teaching: The division fields four semester-length (3 hr) graduate courses which are core or popular electives in several training programs, and Division faculty also contribute to other courses. Four Divisional faculty are members of the Executive Committee of the new Biomedical Informatics Training Program of National Library of Medicine.

Publications: The Division contributed 10 first- or senior-author publications, 16 collaborative (middle-author) publications and 4 book chapters and national white papers.

Active grants and grant applications: During 2006-2007, Divisional faculty were PI on three active grants (one was an internal grant; TDC $209,500 in aggregate). The faculty collaborated on 16 active grants (TDC almost $15 million in aggregate). Five grant applications were submitted with faculty as PI and 13 were submitted with faculty as collaborators.

Local and national committees: Faculty served on 8 national and state committees, including NIH study sections, and 5 faculty members served on 11 School of Medicine and Health System committees with missions encompassing patient care, education and research.

1. Teaching

A. Semester courses

Fall 2006

Instructor	Course	Number	Students	Class hrs
Harrison, J	Introduction to Healthcare Informatics	PHS 707	18	3
Lyman, J	Database Design & Implementation	PHS 745	22	3

Spring 2007

Cohn, W	Evaluation Methods	PHS 706	12	3
Harrison, J	Applied Informatics in Medicine and Health	PHS 743	2	3
Lyman, J	Clinical Epidemiology (2nd year med students) – Small Group Leader		11	10 (5 2 hr sessions)

B. Lectures, Symposia or Journal Clubs at UVA

Speaker	Date	Topic	Location
Cohn, W	fall 2006	Consumer Health Informatics; Evaluation of Medical Information systems (2 1:15 sessions)	PHS 707 guest lectures
Harrison, J	fall 2006	Laboratory evaluation of renal function (1 hr)	Pathology Dept., residency program didactic series
Harrison, J	fall 2006	Calcium and bone metabolism (1 hr)	Pathology Dept., residency program didactic series
Lyman, J	summer 2006	Cells to Society, Small Group Leader, 2 2 hour sessions	Health Sci. Library
Lyman, J	fall 2006	Data standards; Coding and natural language processing; Information security and ethics (3 1:15 sessions)	PHS 707 guest lectures
Lyman, J	Nov 2006	Using Secondary Data for Clinical Investigation and the UVa Clinical Data Repository (1 hr)	MTPCI Program
Lyman, J	Mar 2007	The Role of Information Technology in Patient Safety (1:15)	PHS 747 guest lecture
Post, A	Sept 2006	Decision support and patient monitoring (2 1:15 sessions)	PHS 707 guest lectures

Speaker	Date	Topic	Location
Scully, K	Oct 2006	Clinical data warehouse (1:15 session in PHS 707)	PHS 707 guest lecture
Scully, K	Jan 2007	Clinical data warehouse	GNUR Classroom

C. Student Advising

Instructor	Student	Program
Cohn, W	Judy Bartlett	MPH
Lyman, J	Ruo Jia	MS-HES
Mychaleckyj, J	Keith Keene, PhD thesis committee	Molecular Medicine Program, Wake Forest University School of Medicine
Mychaleckyj, J	Tennille Leak, PhD thesis committee	Molecular Genetics Program, Wake Forest University School of Medicine
Mychaleckyj, J	Rachel Hoelman, PhD candidate	Department of Pharmacology, School of Medicine
Post, A	Ning Zhang	Masters in Health Evaluation Sciences Practicum
Siadaty, M	Eric K. Cannon	Medical student summer research program MSSRP

D. Faculty Development Mentoring

Instructor	Student	Role
Lyman, J	Dr. Joshua Attridge	MTPCI Program Mentor

2. Publications in 2006-2007

A. First or senior author in Clinical Informatics Division

1. **Cohn WF**, Pannone A, **Schubart J**, **Lyman J**, Kinzie M, Broshek DK, Guterbock TM, Hartman D, Mick D, Bolmey A, Garson AT. Tailored Educational Approaches for Consumer Health (TEACH): a model system for addressing health communication. AMIA Annu Symp Proc. 2006:894 (published abstract).
2. Saadawi G, and **Harrison JH**. Definition of an XML markup language for clinical laboratory procedures (CLP-ML) and comparison with generic XML markup. Clin Chem 52:1943-1951, 2006.

3. **Lyman J**, Schorling J, May N, **Scully K**, Sarafian N, Nadkarni M, Voss J. Customizing a Clinical Data Warehouse for Housestaff Education in Practice-Based Learning and Improvement. AMIA Fall Symposium 2006.

4. Hall K and **Lyman JA**. An Updated Review of Blood Culture Contamination. Clinical Microbiology Reviews 19(4):786-802, 2006.

5. **Post AR**, **Harrison JH**. Data acquisition behaviors during inpatient results review: implications for problem-oriented data displays. AMIA Annu Symp Proc 2006:644-648

6. **Post AR**, **Harrison JH**. PROTEMPA: A Method for Specifying and Identifying Temporal Sequences in Retrospective Data for Patient Selection. accepted, Journal of the American Medical Informatics Association 2007 (PrePrint published June 28).

7. **Post AR**, Sovarel AN, **Harrison JH**. Abstraction-based Temporal Data Retrieval for a Clinical Data Repository. accepted, Proceedings of the American Medical Informatics Association Annual Symposium 2007.

8. Schubart, J.R., Hilgart, M., and Lyder, C. (2007). Pressure Ulcer Prevention and Management in Spinal Cord Injured Adults: Analysis of Educational Needs. *Advances in Skin & Wound Care. (In Press)*

9. **Schubart, J.R.**, Kinzie, M.B., and Farace, E. (2007). Caring for the brain tumor patient: Family caregiver burden and unmet needs. *Neuro-Oncology (In Press)*

10. **Siadaty MS**, Shu J, Knaus WA. Relemed: sentence-level search engine with relevance score for the MEDLINE database of biomedical articles. BMC Med Inform Decis Mak. 2007;7.

B. Collaborative publications

1. Weiner MG, Murphy S, **Lyman JA**, Weiner M. Electronic Health Records: High Quality Electronic Data for Higher Quality Clinical Research. AMIA Fall Symposium 2006.

2. Amy LA, **Lyman JA**, Borowitz SM, Brown PA, Mendelsohn MJ. Impact of a Web-baed Diagnosis Reminder System on Errors of Diagnosis. AMIA Fall Symposium 2006.

3. Mullins IM, **Lyman J**, **Scully K**, Garrett CT, Miller WG, Muller R, Robson B, Apte C, Weiss S, Rigoutsos I, Platt D, Cohen S, Knaus WA. Data mining and clinical data repositories: Insights from a 667,000 patient data set. Comput. Biol. Med, pp 1351-1377, 36(12), 2006.

4. Evans HL, Lefrak SN, **Lyman J**, Smith RL, Chong TW, McElearney ST, Schulman R, Hughes MG, Raymond DP, Pruett TL, Sawyer RG. Costs of Gram-Negative Resistance. Crit Care Med., 2007. 35(1):89-95.

5. Weiner MG, **Lyman JA**, Murphy S, Weiner M. Electronic health records: high-quality electronic data for higher-quality clinical research. Informatics in Primary Care 2007. 15:121-7.

6. Worrall BB, **Mychaleckyj JC**. PDE4D and Stroke. A Real Advance or a Case of the Emperor's New Clothes? (2006) Stroke 37:1955-7.

7. Hulbert EM, Smink LJ, Adlem EC, E Allen J, Burdick DB, Burren OS, Cavnor CC, Dolman GE, Flamez D, Friery KF, Healy BC, Killcoyne SA, Kutlu B, Schuilenburg H, Walker NM, **Mychaleckyj J**, Eizirik DL, Wicker LS, Todd JA, Goodman N. (2007) T1DBase: integration and presentation of complex data for type 1 diabetes research. Nucleic Acids Res. 5(Database issue):D742-6.

8. Giaccaglia V, Nicklas BJ, Kritchevsky SB, **Mychalecky J**, Messier S, Bleecker E, Pahor M. Interaction between Angiotensin Converting Enzyme Insertion/Deletion Genotype and Exercise Training on Knee Extensor Strength in Older Individuals. (2007) Int. J. Sports Med. Jul 5; [Epub ahead of print]

9. Gallagher CJ, Keene KL, **Mychaleckyj JC**, Langefeld CD, Hirschhorn JN, Henderson BE, Gordon CJ, Freedman BI, Rich SS, Bowden DW, Sale MM. Investigation of the Estrogen Receptor Alpha gene with type 2 diabetes and/or nephropathy in African American and European American populations (2007) Diabetes 56(3):675-84.

10. Gallagher CJ, Langefeld CD, Gordon CJ, Campbell JK, **Mychalecky JC**, Bryer-Ash M, Rich SS, Bowden DW, Sale MM. (2007) Association of the estrogen receptor-alpha gene with the metabolic syndrome and its component traits in African-American families: the Insulin Resistance Atherosclerosis Family Study. Diabetes. 56(8):2135-41.

11. Leak TS, Keene KL, Langefeld CD, Gallagher CJ, **Mychaleckyj JC**, Freedman BI, Bowden DW, Rich SS, Sale MM (2007) Association of the proprotein convertase subtilisin/kexin-type 2 (PCSK2) gene with type 2 diabetes in an African American population. Mol. Genet. Metab. Jul 5; [Epub ahead of print]

12. Sale MM, Smith SG, **Mychaleckyj JC**, Keene KL, Langefeld CD, Leak TS, Hicks PJ, Bowden DW, Rich SS, Freedman BI. (2007) Variants of the Transcription Factor 7-Like 2 (TCF7L2) Gene are Associated with Type 2 Diabetes in an African American Population Enriched for Nephropathy. Diabetes. 2007 Jun 29; [Epub ahead of print]

13. Segade F, Suganuma N, **Mychaleckyj JC**, Mecham RP. (2007) The Intracellular Form of Human MAGP-1 Elicits a Complex and Specific Transcriptional Response. Int. J. Biochem Cell Biol. (in press.).

14. Ding L, **Mychaleckyj JC**, Hegde AN. Full length cloning and expression analysis of splice variants of regulator of G-protein signaling RGS4 in human and murine brain (2007) Gene (in press).

15.Wolf AM, **Siadaty M**, Yaeger B, Conaway MR, Crowther JQ, Nadler JL, Bovbjerg VE. Effects of lifestyle intervention on health care costs: Improving Control with Activity and Nutrition (ICAN). J Am Diet Assoc. 2007 Aug;107(8):1365-73.

16.Philbrick JT, Shumate R, **Siadaty MS**, Becker DM. Air travel and venous thromboembolism: a systematic review. J Gen Intern Med. 2007 Jan;22(1):107-14.

C. Book chapters

1. **Mychaleckyj JC**. Chapter 22 Genome Mapping Statistics and

Bioinformatics, in Topics in Biostatistics, (ed.) W.T. Ambrosius, 2007, Humana Press, Totowa, NJ, USA

2. Jackson B, **Harrison JH**. Clinical Laboratory Informatics. *in:* Tietz Fundamentals of Clinical Chemistry, 6th Ed. Burtis CA, Ashwood ER, Bruns DE, eds. Saunders, *in press*.

D. White Papers and Other

1. **Harrison, J**. Web site comparison: The Apache Foundation and the Cancer Biomedical Informatics Grid. CaBIG Documentation and Training Workspace White Paper, December 2006.
2. Derr, L, Hadfield, J, **Harrison, J**, Keller, J, Monaco, V, Purohit, P, Scheetz, T, Tucker, J. The Cancer Biomedical Informatics Grid (caBIG) Primer. CaBIG White Paper, 2006.
3. **Siadaty MS.** ReleMed.com: the publicly accessible, free-of-charge, search engine for MEDLINE. This service has been published on the Internet since January 2007.

E. Reviews

Division Member	Journal	Role
Harrison, J	Clinical Chemistry Archives of Pathology and Laboratory Medicine	Reviewer Reviewer
Lyman, J	American Medical Informatics Association Annual Symposium	Reviewer
Post, A	Journal of the American Medical Informatics Association American Medical Informatics Association Annual Symposium	Reviewer Reviewer
Schubart, J	Journal of Educational Technology & Society	Reviewer

3. Research Talks

A. National and International

Speaker	Date	Topic	Location
Harrison, J	Sep 21, 1960	The future of Clinical Laboratory Medicine: The impact of informatics on the clinician-laboratorian relationship (invited presentation)	Clinical Laboratory Improvement Advisory Committee (CLIAC) meeting, Atlanta, GA
Mychaleckyj, J	Feb 26 – Mar 3, 2007	Committee Chair and Co-organizer International T1DGC Genome Informatics Workshop	Melbourne, Australia
Lyman, J	Fall 2006	Data Warehousing – Panel Presentation	AMIA Fall Conference

Speaker	Date	Topic	Location
Post, A	Nov 12, 2006	Data acquisition behaviors during inpatient results review: implications for problem-oriented data displays.	American Medical Informatics Association Annual Symposium, Washington, DC

B. Local

Speaker	Date	Topic	Location
Harrison, J	Mar 21, 2007	Mining Interval-based Patterns from Clinical Time-series Data	Dept of Public Health Sciences Research Conference
Harrison, J	Feb 20, 2007	Specifying and Identifying Temporal Sequences in Retrospective Data for Patient Selection	Dept of Pathology Research Conference
Harrison, J	Aug 11, 2006	Detection of Context in Clinical Data to Support Physician Decision-making and Medical Research	Clinical Library Research Presentation
Harrison, J	Jan 17, 2006	Detection of Patterns in Clinical Data to Support Physician Decision-making and Medical Research	Charlottesville Java Users Group
Scully, K	Oct 13, 2006	Clinical Data Warehouse	Clinical Research Group

4. Honors and Awards

Division Member	Award
Siadaty, M	Friend of the Library award, University of Virginia Claude Moore Health Sciences Library

5. Grants

A. Active

As PI

PI	Title	Funding source/type	2006-2007 direct costs
Harrison, J	NCI Cancer Bioinformatics Grid, University of Virginia Cancer Center	Booz-Allen/NCI subcontract	$40,000
Harrison, J	Clinical decision-making using a data-driven display	R01 LM0008192	$120,000

PI	Title	Funding source/type	2006-2007 direct costs
Lyman, J	Development of a Web-based Information System for Describing the Inpatient Clinical Experiences of Medicine Housestaff	Internal GME Innovation Grant	$49,500

Collaborative (as co-investigator), program projects or training grants

PI	Title	Funding source/type	Division member	Current year direct costs
Guerlain (Systems Engineering)	A systems engineering focus on medical informatics (training grant)	T15 LM009462	**Harrison, J**	~$625,000

Collaborative (as co-investigator), R-01 or equivalent

PI	Title	Funding source/type	Division member	Current year direct costs
Ritterband	UCP2	NIH R01	**Cohn, W**	$300,000
Templeton (Path)	PICquant-An integrated platform for biomarker discovery	R01CA126101	**Harrison, J Siadaty, M**	$200,000
Krolewski, Joslin	Mapping Genes for End Stage Renal Disease in Type 1 Diabetes Subcontract with Joslin Diabetes Center	R01DK077532	**Mychaleckyj – subcontract PI**	$365,896
Krolewski, Joslin	Mapping Genes for Proteinuria in Type 2 Diabetes Subcontract with Joslin Diabetes Center	R01DK058549	**Mychaleckyj – subcontract PI**	$557,548
Bowden, WFUHS	Molecular Genetics of Glucose Homeostasis and Fat Sub-contract with Wake Forest University Health Sciences	R01HL060894	**Mychaleckyj – subcontract PI**	$841,740
Mauer, Univ Minnesota	Mitochondrial and Oxidative Stress in Type1 Diabetes Subcontract with University of Minnesota	R21DK0738276	**Mychaleckyj – subcontract PI**	$90,000

PI	Title	Funding source/type	Division member	Current year direct costs
Meschia, Mayo Clinic	Siblings with Ischemic Stroke Study (SWISS) Sub-contract with Mayo Clinic Jacksonville	R01NS39987	**Mychaleckyj**	$137,594
Rich (PHS)	Type 1 Diabetes Genetics Consortium (International) Data Coordinating Center	U01DK62419	**Mychaleckyj**	$10,926, 112
Rotter, CSMC	MESA Family Study Sub-contract with Cedars Sinai Medical Center	R01HL71205	**Mychaleckyj**	$480,896
Rotter, CSMC	MESA Eye Genetics Study Sub-contract with Cedars Sinai Medical Center	R01HL071205	**Mychaleckyj**	$93,501
Daly, Univ Minnesota	Genetic Epidemiology of Chronic/Recurrent Otitis Media Subcontract with University of Minnesota	2R01DC00316	**Mychaleckyj**	
Bowden, WFUHS	Genetics of African American Type 2 Diabetes Sub-contract with Wake Forest University Health Sciences	R01DK066358	**Mychaleckyj**	$254,187
J Harrison (PHS)	Clinical decision-making using a data-driven display	R01LM0008192	**Post, A Siadaty, M**	$120,000

Other (NIH R21, K-awards, DoD, supplements)

PI	Title	Funding source/type	Division member	Current year direct costs
M Hauskrecht (Pitt, Comp Sci)	Evidence based anomaly detection in clinical databases	1R21LM009102	**Harrison, J Post, A**	$100,000

Internal and Industry

PI	Title	Funding source/type	Division member	Current year direct costs
Garson & **Cohn**	Tailored Educational Approaches for Consumer Health	Anthem	**Cohn, W**	$500,000
Lyman, J	Development of a Web-based Information System for Describing the Inpatient Clinical Experiences of Medicine Housestaff	Internal GME Innovation Grant	**Scully, K**	$49,500

6 Committee Service

A. National and State

Division Member	Organization, Committee	Role
Harrison, J	College of American Pathologists, Internet Editorial Board	Vice-chair
Harrison, J	College of American Pathologists, Information Science & Technology Comm.	Member
Harrison, J	National Library of Medicine K22 Special Emphasis Panel, 7/20/06	Reviewer
Mychaleckyj, J	Special Emphasis Panel: RFP# NIH-NIAID-DAIT-07-33, Collaborative Network for Clinical Research on Immune Tolerance. ZAI1-PA-I-C1	Reviewer
Mychaleckyj, J	New Zealand Health Research Council Reviewer/Referee Feb 2007	Ad-hoc Section Reviewer
Mychaleckyj, J	Scientific Advisory Board and Working Group, Immune Epitope Database and Analysis Resource (IEDB), NIAID, DAIT-03-31	Member
Lyman, J	Virginia MCAID Drug Utilization Review Board	Vice-Chair
Scully, K	Compliance Software Selection	Technical Advisor

B. School of Medicine

Division Member	Organization, Committee	Role
Cohn, W	MPH Evaluation Committee	Chair

Division Member	Organization, Committee	Role
Cohn, W	MPH Curriculum Committee	Member
Cohn, W	Medical Informatics Training Program Executive Committee	Member
Harrison, J	Biomedical Informatics Steering Committee	Member
Harrison, J	Clinical Systems Oversight Committee	Member
Harrison, J	Computational Science Advisory Council	Member
Harrison, J	Cancer Center Clinical Trials Management System Oversight Committee	Chair
Harrison, J	Medical Informatics Training Program Executive Committee	Co-chair
Harrison, J	Task Force on Electronic Orders	Member
Mychaleckyj, J	Biomedical Informatics Steering Committee	Member
Lyman, J	Information Management and Critical Thinking SOM Curriculum Subcommittee	Co-chair
Lyman, J	Patient Safety Subcommittee	Member
Lyman, J	Adverse Drug Event Prevention Workgroup	Co-chair
Lyman, J	Medical Informatics Training Program Executive Committee	Member
Post, A	Medical Informatics Training Program Executive Committee	Member
Schubart, J	Patient Safety Subcommittee	Member

7. Consulting Projects

PI	Title	Hours	Division Member
Cohn, W	Signals Evaluation	50	**Cohn, W**
Cohn, W	Library Evaluation of Services	200	**Cohn, W**
Lyman, J	Statistical Modeling for the 2007 VHI Consumer Guide to Obstetrical Care	~30	**Lyman, J**
Lyman, J	Adverse Drug Event Monitoring	~15-20 / week	**Lyman, J**
Dozens of physicians, nurses, staff, and students	Clinical Data Repository routine consultation	8 Months	**Scully, K**
John Voss	SPARC – revisions for year 2	2 months	**Scully, K**

Viktor Bovbjerg	ICAN: Improving control with activity and nutrition	Ongoing	**Siadaty, M**
Dan Theodorescu	Prostate cancer genomics	Ongoing	**Siadaty, M**
Fern Hauck	Comparison of Risk Factors for SIDS and Other Sudden Unexpected Deaths	Ongoing	**Siadaty, M**

DIVISION OF BIOSTATISTICS & EPIDEMIOLOGY

Faculty in the Division of Biostatistics and Epidemiology conduct their own research and provide statistical services for the School of Medicine, the Health Sciences Center, industry, government agencies, and foundations. The Division facilitates and enhances biomedical research in the School of Medicine and provides high priority free assistance in developing grant proposals. This assistance includes designing studies, developing analytic plans, and analyzing pilot data. For other projects the Division offers a Biostatistical Consulting Service.

Division of Biostatistics and Epidemiology Report:
July 2006 – June 2007

Division Members

Robert Abbott, MPH, MA, PhD	Professor
Viktor Bovbjerg, MPH, PhD	Associate Professor
Mark Conaway, PhD	Professor
Kelly Gurka, MPH	Visiting Scholar/ Assistant Professor

Matt Gurka, PhD	Assistant Professor
Jae Lee, PhD	Associate Professor
Lei Liu, PhD	Assistant Professor
Jennie Ma, PhD	Associate Professor
John O'Quigley, PhD	Professor
James Patrie, MS	Senior Biostatistician
Gina Petroni, PhD	Professor
Jianfen Shu, MS	Biostatistician III
Mark Smolkin, MS	Biostatistics III
George Stukenborg, PhD	Associate Professor
Doug Wagner, PhD	Professor
Hongkun Wang, PhD	Assistant Professor
Xin-Qun Wang, PhD	Senior Biostatistician
Paul Williams, PhD	Research Scientist
Guofen Yan, PhD	Assistant Professor

EXECUTIVE SUMMARY

The Division of Biostatistics and Epidemiology in the Department of Public Heath Sciences has provided valuable expertise to support the teaching and research missions of the School of Medicine. The Division was involved in the January 2007 submission of the CTSA, one of the major grant application efforts for the School of Medicine. In the review of this grant, the Biostatistics program was cited as a major strength of the CTSA application. Division members have continued their participation in the re-submission of this application, due in October 2007.

Faculty members in the Division of Biostatistics and Epidemiology have pursued independent research through grants and publications. Members of the Division provide service to national organizations including NIH study sections, journal editorial boards and Data Safety Monitoring Boards and serve on numerous School of Medicine and University-wide committees.

Teaching

In the 2006-2007 academic year, including the summer of 2007, the Division was responsible for teaching 7 full-semester courses in the Department of Public Health Science M.S. and MPH programs. In addition, in the summer of 2007, the first course in the certificate program for residents, Introduction to Epidemiology, was taught. Division members contributed substantial efforts to courses coordinated in other departments, journal clubs, lectures to residents and fellows, and in student advising of M.S. and PhD students in other departments as well as in DPHS.

Grants

Members of the Division support 56 externally funded projects as co-investigators, including 7 center grants or program projects. Two Division members are currently leading R01-level grants as the principal investigator and one faculty member was just

awarded an R03. Three faculty members are principal investigators on subcontracts. From July 2006 - July 2007, nine grants were submitted with Division members as principal investigators. For this period, division members collaborated on 83 grant submissions as co-investigators.

Publications

In 2006, up though July 2007, Division members have 29 peer-reviewed publications as the first- or senior-author. Consistent with the Division's collaborative responsibilities, Division members were co-authors on an additional 95 peer-reviewed publications in 2006 and 2007.

National reputation

In addition to their work on grants and publications, members of the Division contributed significantly to the University of Virginia's reputation and visibility at the national level. Division members served on numerous national committees, including study sections, review panels and Data Safety Monitoring Boards.

Committees

Division members serve on many of the most important research committees in the University and the School of Medicine, including the Institutional Review Board, the GCRC Protocol Review Committee, the Cancer Center Protocol Review Committee, the Cancer Center Data Safety and Monitoring Committee and the Children's Hospital Grant Review Committee. Division members have served on a number of administrative committees including the School of Medicine Promotion and Tenure Committee.

TEACHING

A. Semester Courses

i. Fall 2006

Instructor	Course	Course number	Students	Class hours
Bovbjerg, V	Cells to Society		7	
Conaway, M	Statistical Methods in Clinical Trials	STAT531	25	42
Gurka, K	Fundamentals of Epidemiology	PHS701	32	42
Gurka, M	An Introduction to Biostatistics	PHS700 STAT500	35	42
Petroni, G	Advanced Topics in Cancer	BIMS841	15	1.5
Stukenborg, G	Clinical Epidemiology	MED632		5
Stukenborg, G	Cells to Society			
Wagner, D	Introduction to SAS	PHS717		14
Wagner, D	Clinical Epidemiology	MED632	15	5

ii. Spring 2007

Instructor	Course	Course number	Students	Class hours
Stukenborg	Health Technology and Outcomes	PHS 712	20	42

	Evaluation			
Stukenborg	Clinical Epidemiology, Small group	MED 632	15	10
Bovbjerg	Applied Epidemiologic Methods	PHS 702	14	42
Entire Division (course coordinator: Wagner)	Applied Biostatistics	PHS 751	12	42
Petroni, G	Introduction to Clinical Trials	HES 731	15	42

iii. Summer 2007

Instructor	Course	Course number	Students	Class hours
Bovbjerg	Introduction to Epidemiology	PHS 881	20	40

B. Lectures, Symposia or Journal Clubs at UVA

Speaker	Date	Topic	Location
Bovbjerg, V	10/06	The role of non-randomized studies in clinical research	MTPCI
Conaway, M	7/23/2007	Basic statistical concepts	Resident research program, Department of Physical Medicine and Rehabilitation
Conaway, M	10/06	Choosing Endpoints in Clinical Studies	Internal Medicine Residents Lecture Series
Conaway, M	09/06	Experimental design of clinical studies: role of the biostatistician	MTPCI
Gurka, M	06/07	Pediatric Fellows Statistics Symposium: *Statistics and Epidemiology in* Clinical Research	4 day short course
Gurka, M.	2/7/2007	Internal pilot designs for studies with repeated measures	UVA Department of Public Health Sciences Research Seminar
Gurka, M.	5/31/2007	Using Existing Databases in Research	UVA Children's Hospital Resident Research Symposium
Gurka, M.	Monthly	Pediatrics Residents' Journal Club	
Lee , J		Clinical informatics	PHS 591
Petroni, G	10/06	Randomized controlled clinical trials	Internal Medicine Residents Lecture Series
Petroni, G	10/06	Randomized clinical trials	MTPCI
Stukenborg, G	11/06	Overview of health outcomes research for HES 701	Dept of Public Health Sciences
Stukenborg, G	10/06	Introduction to statistical modeling	Internal Medicine Residents Lecture Series
Wagner, D	6/25/07	Stat methods in Identification of Hospitals with excess death rates	PHS Research conference
Yan, G	10/06	Introduction to Multilevel Analysis	Rural Research Methods Workshop, School of Nursing

C. Student Advising

Instructor	*Student*	*Program*
Bovbjerg	Christine Cordero	Human Biology (undergrad)
Bovbjerg	Rachel Hallmark	doctoral program, MSTP, Exercise Physiology
Bovbjerg	Damon Swift	doctoral program, Exercise Physiology
Bovbjerg, V	Curtis Argo	MS HES thesis
Conaway, Bovbjerg	Michael McCulloch	PHS-MS
Conaway, M	Jeff Ferguson	PHS-MS
Conaway, M	Jennifer Young	PHS-MS
Conaway, M Gurka, K	Kevin Cross	PHS-MS
Gurka, M.	Scott Altschuler	MS HES Thesis
Gurka, M.	Andreas Kramer	MS HES Thesis
Lee	Feng Cheng	PhD, Biophysics
Lee	Dane Dunson	MS, Biomedical Engineering
O'Quigley	Nolan Wages	PhD Statistics, with concentration in Biostatistics
O'Quigley	Jianfen Shu	PhD Statistics, with concentration in Biostatistics
Stukenborg	Chris McCartney.,	MS PHS program thesis
Stukenborg	Nancy Harthun,	MS PHS program practicum/thesis
Stukenborg,	Jason LaChance	MS HES thesis
Stukenborg, G	Curtis Argo	MS HES thesis
Stukenborg, G Yan, G	Dierdre Thornlow	School of Nursing doctoral program
Stukenborg, G	Jaywant Parmar	School of Medicine Radiology Fellow
Yan, G	Irma H. Mahone	School of Nursing doctoral program
Yan, G	Bernice Mowery	School of Nursing doctoral program
Yan, G	Aletha Rowlands	School of Nursing doctoral program
Yan, G	Francie S. Bernier	School of Nursing doctoral program
Yan, G	Marianne Baernholdt	School of Nursing doctoral program
Yan, G	Nancy Crego	School of Nursing doctoral program

D. Faculty Development Mentoring

Instructor	*Student*	*Role*
Bovbjerg	Nisha Botchwey	NIH Minority supplement sponsor
Bovbjerg, V	Christopher Davis MD	PhD committee
Conaway	Lisa Rollins	Mentor, Dept of Family Medicine
Jae Lee	Paul Williams, PhD, Research Associate	Mentor and Supervisor
Jae Lee	Sooyoung Cheon, PhD, Research Associate	Mentor and Supervisor
Wagner	Khalil Amir	Advice and stat analysis
Yan, G	Marianne Baernholdt, PhD, MPH, RN, School of Nursing	Career Development Award application, "Impact of Nurse Work Environment on Rural Quality of Care and Clinical Outcomes"

PUBLICATIONS

A. First or Senior Author:

1. **Abbott, RD**, Launer LJ, Rodriguez BL, Ross GW, Wilson PWF, Masaki KH, Strozyk D, Curb JD, Yano K, Popper JS, Petrovitch H. Serum Estradiol and Risk of Stroke in Elderly Men. Neurology 68:563-568, 2007.
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3. **Abbott RD**, Ross GW, Petrovitch H, Tanner CM, Davis DG, Masaki KH, Launer LJ, Curb JD, White LR. Bowel Movement Frequency in Late-Life and Incidental Lewy Bodies. Movement Disorders (to appear).
4. **Abbott RD**, Ueshima H, Masaki KH, Willcox BJ, Rodriguez BL, Ikeda A, Yano K, White LR, Curb JD. Coronary Artery Calcification and Total Mortality in Elderly Men. Journal of the American Geriatrics Society. (to appear).
5. Cho H and **Lee JK**. (2007). Capturing Heterogeneous Error in Small-Sample Microarray Data for Improved Statistical Discovery, in press, *IEEE-SMC-A*.
6. Cho H and **Lee JK**. (2007) Empirical Bayes Analysis of Oligonucleotide Microarray Data Without Replication, in press, *Computational Statistic.*
7. Cho H and **Lee JK**. (2006). Response on the letter of Wu et al. (2006), *Bioinformatics, June 20* web pre-publication.
8. Cho H, Shashkin P, Jain N, Galkina E,Dunson D, **Lee JK**, Miller Y, and Ley K. (2006). Induction of Dendritic Cell-like Phenotype in Macrophages during Foam Cell Formation, *Physiological Genomics, forthcoming*.
9. Cho HJ, Smalley D, Ross M, Ley K. Theodorescu D, **Lee JK** (2007). Statistical Identification of Differentially Labeled Peptides from Liquid Chromatography Tandem Mass Spectrometry, in press, *Proteomics.*
10. Flandre, P. and **O'Quigley, J.** (2007, in press) Predictive strength of Jonckheere's test for trend: an application to genotypic scores in HIV infection. Statistics in Medicine.
11. **Gurka, M.J.**, Edwards, L.J., Nylander-French, L. (2007). Testing transformations for the linear mixed model. *Computational Statistics and Data Analysis* 51: 4297-4307**.**
12. **Gurka, M.J.**, Coffey, C.S., Muller, K.E. Internal pilots for a class of linear mixed models with Gaussian and compound symmetric data. *Statistics in Medicine* (in press).
13. **Gurka, M.J.*** (2006). Selecting the best linear mixed model under REML. *The American Statistician* 60: 19-26.
14. **Gurka, M.J.***, Edwards, L.J., Muller, K.E., Kupper, L.L. (2006). Extending the Box-Cox transformation to the linear mixed model. *Journal of the Royal Statistical Society, Series A* 169: 273-288.

15. **Gurka, M.J.***, Wolf A.M., **Conaway M.R**., Crowther J.Q., Nadler J.L., **Bovbjerg V.E**. Lifestyle intervention in obese patients with Type 2 Diabetes: The impact of the patient's educational background. *Obesity* 14: 1085-1092.
16. Huang, X. and **Liu, L**. (2007). A joint frailty model for survival time and gap times between recurrent events. *Biometrics*. 63 (2): 389-397 JUN 2007.
17. **Lee JK**, Havaleshko DM, Cho H, Weinstein JN, Kaldjian EP, Karpovich J, Grimshaw A, Theodorescu D (2007). A strategy for predicting the chemosensitivity of human cancers and its application to drug discovery. Proc Natl Acad Sci U S A. 104(32):13086-91 (PMID: 17666531).
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24. **Wang, H**. and Zhao, H. (2007). Regression Analysis of Mean Quality-Adjusted Lifetime with Censored Data. Biostatistics. 8, 368-82.
25. **Wang, H** and Zhao H (2006), ``Estimating Incremental Cost-Effectiveness Ratios and their Confidence Intervals with Differentially Censored Data," *Biometrics*, Vol 62, 570-575.
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B. Collaborative:

1. Aisiku IP, Penberthy LT, Smith WR, **Bovbjerg VE**, McClish DK, Levenson JL, Roberts JD, Roseff SD. Patient satisfaction in specialized versus non-specialized adult sickle cell care centers: The PiSCES study. *Journal of the National Medical Association*, in press.Attridge, J.T., Herman, A.C., **Gurka, M.J.**, Griffin, M.P., McGahren, E.D., Gordon, P.V.* (2006). Discharge outcomes of extremely low birth weight infants with spontaneous intestinal perforations. *Journal of Perinatology* **26**: 49-54.
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3. Beuten J, **Ma JZ**, Lou XY, Payne TJ, Li MD. (2007). Association analysis of the protein phosphatase 1 regulatory subunit 1B (PPP1R1B) gene with nicotine dependence in European- and African-American smokers. American Journal of Medical Genetics Part B: Neuropsychiatric Genetics. 144(3):285-90.
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5. Blackman, J.A., **Gurka, M.J**. (2007). Developmental and behavioral co-morbidities of asthma in children. *Journal of Developmental and Behavioral Pediatrics* **28**: 92-99
6. Blanchard, L., **Gurka, M.J.**, Blackman, J.A.*. (2006). Emotional, developmental, and behavioral health of American children and their families: A report from the 2003 National Survey Of Children's Health. *Pediatrics* 117: e1202-e1212.
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12. Caldwell, S.H. Hespenheide E.E., Greenwald B.D., Northup P.G. **Patrie J.T**. Enbucrilate for gastric varices: extended experience in 92 patients. Aliment Pharacol Ther. 26, 49-59, 2007.

13. Camacho, J., Qadri, SA, **Wang, H**. and Worden, MK. (2006) Temperature acclimation alters cardiac performance in the lobster *Homarus americanus. Journal of Comparative Physiology A.* in press.
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17. Copp, H, Chin, J, **Conaway, M** and Theodorescu, D (2006) "Prospective evaluation of the prognostic relevance of molecular staging for urothelial carcinoma" *Cancer* 107 (1): 60-66.
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19. Corbett, E., Elnicki, X, **Conaway, M**.(2007) "Clerkship Directors Opinions About the Teaching of Physical Examination Skills to Third Year Students: A National Survey" (in press, *Academic Medicine*)
20. de Lange EE. Altes TA. **Patrie** JT. Parmar J. Brookeman JR. Mugler JP 3rd. Platts-Mills TA**.** The variability of regional airflow obstruction within the lungs of patients with asthma: assessment with hyperpolarized helium-3 magnetic resonance imaging. Journal of allergy and clinical immunology 119 (5), 1072-1078, 2007.
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C. Books

O'Quigley, J. (2007) Proportional Hazards Regression. Springer. New York.

D. Book Chapters

1. **Petroni, G.R**. and **Conaway, M.R**. (2006) "Phase II trials with combined response and toxicity endpoints" Handbook of Statistics in Clinical Oncology. 2nd edition. Editor: John Crowley. Marcel Dekker.
2. **Petroni, G.R**. (2006) "Design Issues for Early Stage Clinical Trials for Cancer Vaccines" Immunotherapy of Cancer. Editor: Mary L. Disis. Humana Press.

E. Book Reviews

Gurka, M.J. (2007). *Applied Mixed Models in Medicine, 2nd Edition* by Brown, H. and Prescott, R. (book review). *Biometrics* **63**: 626-627.

F. Editorial Boards & Journal Reviews

Division Member	***Journal***	***Role***
Bovbjerg, V	American Journal of Managed Care	Reviewer
Bovbjerg, V	American Journal of Epidemiology	Reviewer
Conaway, M	Statistics in Medicine	Reviewer
Conaway, M	Journal of Nuclear Cardiology	Reviewer
Conaway, M.	Biometrics	Reviewer
Gurka, M.	Computational Statistics and Data Analysis	Reviewer
Gurka, M.	Journal of the Royal Statistical Society, Series C	Reviewer
Gurka, M.	Statistics in Medicine	Reviewer
Gurka, M.	The American Statistician	Referee
Gurka, M.	Statistics in Medicine	Referee
Gurka, M.	International Journal of Obesity	Referee
Gurka, M.	Journal of Preventive Methods	Referee
Gurka, M.	Psychological Methods	Referee
Gurka, M.	Journal of the Royal Statistical Society, Series A	Editorial Board
Lee, J.	IEEE, SMC-A (5 manuscripts)	Associate Editor
Lee, J.	Bioinformatics (2 manuscripts)	Reviewer
Lee, J.	BMC Bioinformatics (2 manuscripts)	Reviewer
Lee, J.	Nucleic Acids Researcher (1 manuscript)	Reviewer
Lee, J.	Genome Research (1 manuscript)	Reviewer
Liu, L.	Journal of computational and graphical statistics	Reviewer
Petroni, G.	Clinical Prostate Cancer	Editorial Board
Petroni, G.	Journal of Clinical Oncology	Editorial Board
Petroni, G.	Clinical Prostate Cancer	Editorial Board
Stukenborg	Medical Care	Reviewer
Stukenborg	Journal of Clinical Epidemiology	Reviewer
Stukenborg	Pharmacoeconomics	Reviewer
Stukenborg, G	Canadian Medical Association Journal	Reviewer
Stukenborg, G	Health Services and Outcomes Research Methodology	Reviewer
Stukenborg, G	Medical Care	Reviewer
Wang, H.	Statistics in Medicine	Reviewer
Wang, H.	Lifetime Data Analysis	Reviewer
Yan, G	Critical Care Medicine	Referee
Yan, G	Circulation	Referee

RESEARCH TALKS

E. National and International

Speaker	***Date***	***Topic***	***Location***
Gurka, M.	3/13/ 2007	Extending the Box-Cox transformation to the linear mixed model (Invited)	2007 International Biometric Society: Eastern North American Region (ENAR) Spring Meeting
Stukenborg	11/07	Title: "Comorbidity and five year survival for older men with localized prostate cancer"	American Public Health Association 135th Annual Meeting and Exposition. Oral

Speaker	*Date*	*Topic*	*Location*
		http://apha.confex.com/apha/135am/techprogram/paper_148777.htm	presentation to Statistics section session on Modeling Techniques for Health Outcomes Research. Washington, DC.
Bovbjerg	3/07	Translating lifestyle interventions to practice in diabetes: Depression, risk status, and retention	Washington, DC
Lei Liu	06/07	The Use of Gaussian Quadrature in Frailty Proportional Hazards Models	Division of Biostatistics, IUPUI
Yan, G	March 23	Bayesian Diagnostics for Detecting Hierarchical Structure	Methodology Section, Washington Statistical Society
Yan, G	June 20	Review and Evaluation of Bayesian Diagnostic techniques for Hierarchical Models.	Department of Statistics, East China Normal University, Shanghai, China
Yan, G	June 21	What Biostatistics Is and What Biostatisticians Do	Department of Statistics, East China Normal University, Shanghai, China
Gurka, M.	08/06	Violating the assumption of independence of the error components in the linear mixed model for longitudinal data	Seattle, WA, Joint Statistical Meetings
Lee, J	08/06	Statistical Methods for Integrative Genomics, Integrative Homologous Regulation Analysis between Mouse and Human Microarray Gene	Seattle, WA, Joint Statistical Meetings
Stukenborg, G	11/06	Improved risk adjustment identifies fewer hospitals with better or worse than expected mortality among acute myocardial infarction patients	Statistics Section on Biostatistical Modeling Techniques, American Public Health Association 134th Annual Meeting, Boston MA
Wang, H	07/06	Regression Analysis of Mean Quality-Adjusted Lifetime with Censored Data	XXVth International Biometric Conference, Montreal, Canada
Yan, G	08/06	Bayes methodology accounting for uncertainty of commonality in 'random effects' in a linear mixed model	2006 Joint Statistical Meeting, Seattle, WA
Yan, G	08/06	Bayesian methodology which accounts for uncertainty about the commonality of a set of small area parameters	IMS Ninth Meeting of New Researchers in Statistics and Probability

F. Local

Speaker	*Date*	*Topic*	*Location*
Bovbjerg	4/07	Improving Control with Activity and Nutrition: Diabetes Control in Community Settings	Staunton, VA

HONORS AND AWARDS

Division Member	*Award*
Abbott RD	Fellowship in Cardiovascular Disease Research , Japan Cardiovascular Research Foundation, 2007
Gurka, M.	Elected member of the International Statistical Institute (ISI)
Stukenborg	Selected by Medical Care , the official journal of the Medical Care section of the American Public Health Association, as 'exceptional reviewer' for the period 2005 to 2006 (http://dx.doi.org/10.1097/01.mlr.0000107180.80387.75)

GRANTS

A. Active

i. As PI

PI	*Title*	*Funding source/type*	*Current Year Direct*
Abbott	Biostatistics Core for the Pacific Health Research Institute	Subcontract: Pacific Health Research Institute	$132,049
Bovbjerg	Improving control with activity and nutrition	NIH R18	$707,846
Lee	UVA GeneChip/Microarray Bioinformatics Core	UVA Pratt Fund	$41,000
Lee	Emory PO1: Prostate Cancer Bone metastasis: Biology and Targeting Bioinformatics Subcontract)	NIH/NCI	$24,600
Lee	Genome Integrative Pathway Modeling of Diabetic Atherosclerosis	NIH:R01	$332,493
Liu	Statistical Method for Longitudinal Medical Costs	NIH:R03	FY2008
Wagner	Consulting contract	Subcontract: US Veterans Administration	$25,000
Total			$1,262,988

ii. Collaborative (as Co-investigator)

a. NIH P01, P30, P20, U01

PI	*Title*	*Funding source/type*	*Division member*	*Current Year Direct*
Garson	General Clinical Research Center Core Grant	NIH	Patrie	$3,654,767
Cominelli	Silvio O. Conte UVA Digestive Health Research	P30	Conaway, Lee	$725,856

	Center			
Merwin	Center for Rural Health	P20	Conaway	$180,443
Nadler	Diabetes and its complications	P01	Lee	$1,132,026
Platts-Miles	Asthma Center Core Grant	NIH	Patrie	$630,895
Theodorescu	Signaling and Progression in Prostate Cancer	P01	Conaway, Lee, Wang, Smolkin	$1,154,203
Weber	Cancer Center Support Grant (Biostatistics Core)	NIH P30	Petroni,Conaway, Ma, Smolkin, Shu	$1,691534
Total				$9,169,724

b. NIH R01 or equivalent

PI	***Title***	***Funding source/type***	***Division Member***	***Total Direct***
Gaston, B	Redox Determinants of Severe Asthma	NIH/R01	Liu	$258,373
Gaston, B	S-Nitrosothiol Breakdown by Airway Epithelial Cells	NIH/R01	Liu	$227,643
Guise, T	Prostate Cancer Bone Metastases: Role of Adrenomedullin	NIH/R01	Conaway	$222,823
Hauenstein	Mental Health Treatment for the Rural Poor and Minorities	NIH/R01	Wagner	$159,994
Hollen, P	A Decision Aid for Cancer-Surviving Adolescents	NINR/R01	Petroni, Shu	$236,411
Holroyd, S	Visual Hallucinations and Visual Abnormalities in Patients with Parkinson's Disease	NIH/R01	Conaway	$217,313
Hunt, J	Exhaled Biomarkers during Treatment of Rhinovirus	NIH/R01	Liu	
Johnson, B.	New Medications to Treat Alcohol Dependence	NIAAA	Liu, Wang	$232,174
Johnston, K.	Glucose Regulation for Acute Stroke Patients (GRASP)	NIH R01	Conaway, Wang	$415,729
Kramer, C.	Comprehensive Magnetic Resonance in Peripheral Arterial Disease	NIH R01	Wang	$507,590
Kerrigan, D.C.	Age-Related Gait Changes and Hip Flexibility	NIH R01	Conaway	$261,175
Li, M	Fine mapping susceptibility Loci for Nicotine Dependence	NIH/R01	Ma	$359,792

PI	*Title*	*Funding source/type*	*Division Member*	*Total Direct*
Matsumoto, A	CORAL Angiography Corelab Protocol	NIH/R01	Conaway Liu	$42,434
Moorman,Rl	Impact of Neonatal Heart Rate Characteristics Monitoring	NIH/RO1	Wagner	$313,700
Mugler, J	Improved Methods for Hyperpolarized-Gas MRI of the Lung	NIH/R01	Conaway	$387,494
Parsons	c-Src/EGF Receptors Interactions and Therapeutic Resistance in Breast Cancer	NIH R01	Conaway	$197,820
Petri, W	Field Studies of Human Immunity to Amebiasis in Bangladesh	NIH/R01	Shu	$139,319
Rich, S	MESA Family Study (Rotter)	NIH/R01	Ma	$2,851,143
Santen, R	The role of Cell Cycling in Hypersensitivity to Estradiol	NIH/R01	Petroni	$213,341
Schroen, A	Oncology Clinical Trial Accrual Study	NCI	Petroni, Wang	$177,524
Shi, W	Regulation of Atherosclerosis Susceptibility	NIH/NHLBI	Lee	$189,636
Slingluff, C	Multi-peptide Vaccine Administered with Cyclophosphamide for High-risk Melanoma	NIH/R01	Petroni, Smolkin	$252,658
Slingluff, C	Melanoma Vaccines Using MHC-Associated Peptides	NIH/R01	Petroni Smolkin	$360,666
Theodorescu	Ral in Human Bladder Cancer Progression	NIH R01	Conaway	$216,248
Woodfolk	Immune Response to Cat: Regulatory and Effector T cells	NIH/NIAID	Lee	$165,932
Total				**$8,606,932**

c. Other: NIH R21, NIH K-awards, DoD, Supplements

PI	*Title*	*Funding source/type*	*Division member*	
Blackman, J.	NIH Grant Prep.Workshops for Rehabilitation Research	NIH/T15	Gurka, M.	$96,740
Bolton	Growth hormone secretagogue MK677 therapy in CKD and ESRD	NIH/R21	Patrie	$124,180
Caldwell	Omega 3 polyunsaturated fatty acids as a treatment for non-alcoholic fatty liver disease	NIH/R21	Patrie	$137,599
Diamond	Relationship of Hematocrit to Ischemic Stroke Outcome	NIH R21	Conaway, Shu,	$100,000

			Wagner	
Hauck	Comparison of Risk Factors for SIDS and Other Sudden Unexpected Deaths in Infancy	NIH/R03	Bovbjerg	$48,231
Guise	Effect on high bone turnover state induced by estrogen deficiency	DoD	Conaway	$125,000
Hollen, P	A decision aid for advanced lung cancer patients	NINR/R21	Petroni Shu	$272,077
Hullfish	Patient centered goals for pelvic floor dysfunction	NIH/R03	Bovbjerg	
Irvin, W	Evaluation of the Immunogenicity of Vaccination with Synthetic Peptides Mixed with GM-CSF-in-Adjuvant, Following Surgical Debulking, in Patients with Advanced Ovarian Cancer	CRI	Petroni Smolkin	
Jackson, S.	Financial Abuse of the Elderly vs. Other Forms of Elder Abuse: Assessing Their Dynamics, Risk Factors, Society's Response, and Relevant Conceptual Models	NIJ	Gurka, M.	
Johnston	The Acute Physiology of Stroke Score : APSS	NIH/NINDS/K24	Wagner	$66,505
Jones, R	Prostate-Cancer Decision-Making (NIH/R21)	NCI/R21	Petroni, Shu	
Kalantarina	Adenosine 2A Receptor Agonist in Diabetic Nephropathy.	NIH/K-award	Patrie	$85,707
Oliver	African Americans and Prostate Cancer: A Spatial and Multilevel Analysis of Posttreatment Care and Outcomes	DoD	Stukenborg	$87,374
Pastore	Influence of acupuncture on reproductive hormones and ovulation in polycystic ovarian syndrome.	NIH/R21	Patrie	$54,431
Patrick, P.	Growth Hormone Treatment in TBI	VA Neurotrauma Initiative	Gurka, M.	$136,364
Slingluff, C	Targeted Molecular Therapeutics for Melanoma: CCI-779 and Bevacizumab R21	NCI/R21	Petroni Smolkin	$199,181
Stevenson, R.	Growth and Physical Maturation in Cerebral Palsy	NIH/K24	Gurka, M.	$71,653
Strayer	A stage-based tailored support	NIH/STIR	Bovbjerg	

	tool for alcohol counseling at the point of care			
Total				$1,605,042

d. Internal and Industry

PI	***Title***	***Funding source/type***	***Division member***
Chevalier	University of Virginia Department of Pediatrics Contracts	Internal	Gurka, M.
Corbett	UVA Clinical Clerkship Study		Xin-Qun Wang
Garson	Consumer Health Education Institute	Healthkeeper's, Inc	Yan, G
Grosh, W	Evaluation of the Clinical Efficacy of Leukine® Administered in Conjunction with Paclitaxel in Patients with Advanced Melanoma	Berlex Inc.	Petroni
Hollen, P	A Theory-Based Decision Aid for Patients with Breast Cancer	Ca Ctr	Shu
Haugh, K	Increasing Activity in Rural Dwelling Adults with Heart failure.	School of Nursing	Patrie
Lyman, Jason	Reporting Cesarean Delivery Rates	VHI	Wagner

COMMITTEES

A. National

Division Member	***Organization, Committee***	***Role***
Bovbjerg, V	NIDDKD, SEP:Translational Research for the Prevention and Control of Diabetes	Member
Bovbjerg, V	NIH, Global Health Research Initiative Program for New Foreign Investigators	Member
Bovbjerg, V	International Collaborative Projects	Member
Bovbjerg, V	International Law Enforcement Forum for Minimal Force Options, Advisory Board	Member
Bovbjerg, V.	National Institutes of Health Study Section ICP-1 (International Collaborative Projects)	Study section member
Bovbjerg, V.	Advisory Board, International Law Enforcement Forum for Minimal Force Options	US Medical advisor

Division Member	***Organization, Committee***	***Role***
Bovbjerg, V.	National Institutes of Health ZDK1 GRB-1: National Institute of Diabetes and Digestive and Kidney Disorders, Translational Research for the Prevention and Control of Diabetes	Study section member
Conaway, M	DSMB, MOTOR Clinical Trial	Member
Conaway, M.	CLIP clinical trial, DSMB	Member
Conaway, M.	MOTOR clinical trial DSMB	Member
Lee, J	NIH Arthritis and Musculoskeletal and Skin Disease Special Grant Review Committee	Ad hoc reviewer
Lee, J	NIDDK B Subcommittee for Mentored Research Scientist Awards	Ad hoc reviewer
Lee, J	NIH/NCI, SEP for Cancer Genetics Network	Ad hoc reviewer
Lee, J	NIH/NCI, SEP for Advanced Proteomic Platforms and Computational Sciences for the NCI Clinical Proteomic Technologies Initiative	Ad hoc reviewer
Lee, J	NIH/NCI, SEP for Cancer Prevention and Cancer Epidemiology	Ad hoc reviewer
Lee, J.	National Cancer Institute Special Emphasis Panel: Cancer Prevention Research Small Grant Program & Small Grants Program for Cancer Epidemiology	Ad Hoc Panel Member
Lee, J.	American Cancer Society & Canary Foundation postdoctoral fellowship program	Ad Hoc Panel Member
Lee, J.	NIH, Special Emphasis Review Panel for the Clinical and Translational Science Awards (CTSA) Support Center	Panel Member
Lee, J.	Molecular Genetics and Oncogenes (MGO) Section, American Cancer Society	Panel Member
Lee, J.	NIH, Special Emphasis Panel/Scientific Review Group	Panel Member
Petroni, G.	NIH/NCI, Subcommittee C (Parent committee)	Member
Petroni, G.	American Society of Clinical Oncology, Scientific Program Committee	Member
Petroni, G.	Fred Hutchinson Cancer Research Center, Observational Study Monitoring Board	Member
Petroni, G.	Moffitt Cancer Center, Moffitt Cancer Center Data Monitoring Committee	Member
Petroni, G.	Children's Oncology Group, Leukemia/Lymphoma Data Safety Monitoring Committee	Member
Stukenborg, G	NIH/AHRQ, SEP for review of applications for RFA HS-05-010	Member
Stukenborg, G	American Public Health Association: for review of abstracts submitted for the Statistics program of the 134th Annual Meeting	Panelist
Stukenborg, G	American Public Health Association: Statistical Advances and Applications -- Posters II session of the 134th Annual Meeting	Presider
Stukenborg, G	American Public Health Association:: Biostatistical Modeling Techniques and Applications oral presentation session	Moderator
Stukenborg, G.	Agency for Healthcare Research and Quality. Special Emphasis Panel, Scientific Review Group for	Member

Division Member	*Organization, Committee*	*Role*
	Health Care Research Training (HCRT) Grants Program, June 2007	

B. School of Medicine/ University

Division Member	*Committee*	*Role*
Bovbjerg, V	Clinical Translational Science Award, Education Advisory Board	Member
Conaway, M	School of Medicine Promotion and Tenure Committee	Member
Conaway, M	CTSA Writers	Member
Conaway, M	Dean Re-appointment committee	Member
Conaway, M.	Promotion and Tenure Committee	Member
Conaway, M.	Department of Psychiatric Medicine DSMB	Member
Gurka, M	University of Virginia Children's Hospital Grants Committee	Member
Lee, J	UVA Computational Science Advisory Council Committee	Member
Lee, J	UVA Task Force on Information Technology Infrastructure Supporting Research in Engineering and Science Advisory Committee	Member
Ma, J	Center for Public Health Genomics faculty search committee	Member
Ma, J	UVa Cancer Center Protocol Review Committee	Member
Patrie, J	GCRC protocol review committee	Biostatistician
Patrie, J	GCRC protocol review committee	Member
Petroni, G	Cancer Center Minority Recruitment Task Force	Member
Petroni, G	Cancer Center Data and Safety Monitoring Committee	Co-chair
Petroni, G	Cancer Committee	Member
Petroni, G	Cancer Center ACS IRG Committee	Member
Petroni, G	Cancer Center Protocol Review Committee	Member
Shu, J	Cancer Center Data and Safety Monitoring Committee	Member
Wagner,D	HIC (IRB) alternate member, 2005, full member 2006-09	Member

CONSULTING PROJECTS

PI	*Title*	*Hours*	*Division Member*
Braithwaite	Analysis of EMS times for stroke calls	15	Conaway
Brown, M	NZWBF2 mutations in mice	1	Conaway
Burns, S.	Miscellaneous projects	15	Conaway
Burns, T.	Development of a MG symptom questionnaire	30	Conaway
Carey	Miscellaneous projects	12	Conaway
Cathro	CD20 Renal Transplant Biopsy Study	5	Liu
Dent, J.	The Cardiovascular Discharge Agreement Initiative	80	Xin-Qun Wang

Epstein	Strain measures in WT and nNOS mice	2	Conaway
Flury, S	Evaluating whether sealant product over a suture line at the time of surgery would improve earlier foley catheter removal and better outcomes in men who underwent robotic prostate cancer surgery	30	Jennie Ma
Ghazi, N	Errors in Automated Retinal Thickness Measurements by Optical Coherence Tomography in Neovascular Age-Related Macular Degeneration, ARVO Annual Meeting (Association for Research in Vision and Ophthalmology), Fort Lauderdale, Florida, May 6-10, 2007.	27	Yan, G
Hagspiel, K	High Resolution Contrast Enhanced MR Angiography for the Assessment of Vascular Complications of Pancreas Transplantation	2	Liu
Howell	Signals program	15	Yan, G Conaway
Jagannathan	Acromegaly follow-up	10	Conaway
Jagger, J	Rates of patient fatalities during bone marrow aspiration in U.S. and Japan (International Health Care Worker Safety Center)	1.5	Yan, G
Keeley	Polymorphisms and cardiac outcome	5	Conaway
Kemp	BP	3	Conaway
Kozower	Evaluation of effect of LAD scoring for lung transplants	6	Conaway
Krause	Coaxial everting membrane catheter for bronchoalveolar lavage	2	Patrie
Lin , K	Predictive Model of Major Complications Among Infants Who Had Cleft Lip/Palate	65	Xin-Qun Wang
Lin, K	A Predictive Model for Complications following Breast Reconstruction	84	Wang, X-Q
Linden, J	Allosteric Enhancement of Adenosine Receptors	10	Liu
Phillips, E	Proposal for a survey of African surgeons (International Health Care Worker Safety Center)	2	Yan, G
Pinkerton, P	Histadine's Efficacy As a Dietary Supplement for Menstrual Cramps	60	Wang, X-Q
Saleh	NAKAR follow-up	25	Conaway
Sheehan	Gamma knife follow-up	15	Conaway
Shim	Pulmonary rehabilitation in patients with COPD	120	Patrie
Stelow	Survival analysis by IHC	10	Conaway
Tessier	Preliminary studies of ET toxin	8	Conaway
Turner	The effect of patient positioning, timing and health care examiner on manual blood pressure measurements	6	Conaway
Witmer	Predictors of PK failure	12	Conaway

Wylie	Defining the ability of UPDRS to measure the disease progression in Parkinson's disease	16	Patrie

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THE DIVISION OF PUBLIC HEALTH POLICY & PRATICE

The Division of Public Health Policy and Practice provides a unique home for faculty interested in multidisciplinary approaches to addressing the health needs of populations. It is comprised both of faculty members with primary appointments in the division and of others with secondary appointments who are based in departments and schools across the University and in public health departments and agencies in the community. Wide-ranging faculty interests include U.S. and international health policy; public health ethics and law; health disparities and vulnerable populations; community obesity interventions; community health needs assessment, women's health, and mental health.

The Division of Public Health Policy and Practice focuses on teaching, research, and community interventions in public health practice and in health care policy. The division provides a unique home for those interested in multidisciplinary approaches to addressing the health needs of populations.

The Division of Public Health Policy & Practice is the academic home of the Master of Public Health Program. The Division also provides opportunities for undergraduates

through the Global Public Health Minor and the Five-Year BA/BS - MPH Program

Public Health Policy & Practice Faculty

Primary Appointments

Ruth Gaare Bernheim, JD, MPH, Associate Professor; Director, Division of Public Health Policy & Practice, Department of Public Health Sciences, Associate Director, Institute for Practical Ethics and Public Life

Robert E. Reynolds, MD, DrPH, Professor; Vice Chair, Department of Public Health Sciences

Denise E. Bonds, MD, Associate Professor, Department of Public Health Sciences

Donna T. Chen, MD, MPH, Assistant Professor, Department of Public Health Sciences

Carolyn L. Engelhard, MPA, Assistant Professor & Health Policy Analyst; Director, MS Program in Clinical Research, Division of Public Health Policy & Practice, Department of Public Health Sciences

Lydia Killos, PhD, Research Associate, Division of Public Health Policy & Practice, Department of Public Health Sciences

Claudia A. Linares, MA, Research Assistant, Division of Public Health Policy & Practice, Department of Public Health Sciences

Elizabeth L. McGarvey, EdD, Associate Professor, Division of Public Health Policy & Practice, Department of Public Health Sciences

Secondary and Visiting Appointments

Ralph O. Allen, PhD, Professor, Department of Chemistry

Jennifer Bauerle, PhD, Director, National Social Norms Institute, University of Virginia

Nisha A. Botchwey, MCP, PhD, Assistant Professor, Department of Urban and Environmental Planning, UVA School of Architecture

Viktor E. Bovbjerg, PhD MPH, Associate Professor; Director, ICAN Project, Department of Public Health Sciences

Arthur T. Garson, Jr., MD, MPH, Executive Vice President and Provost

Doris F. Glick, PhD, RN, Associate Professor, School of Nursing

Pamela A. Kulbok, Associate Professor, School of Nursing

Pamela A. Kulbok, DNSc, MS, RN, Associate Professor, School of Nursing

Thomas A. Massaro, MD, PhD, Associate Dean for Graduate Medical Education and Director of Performance Improvement

Wendy M. Novicoff, PhD, Assistant Professor, Orthopaedic Surgery Research Center

M. Norman Oliver, MD, Associate Professor; Director, Center for Improving Minority Health

Margaret (Mimi) Foster Riley, JD, Professor, General Faculty, University of Virginia, School of Law

Jonathan Evans, Associate Professor and Head, Section Of Geriatrics, Department of Medicine

Steven Heim, MD, Associate Professor, Department of Family Medicine

Fern Hauck, MD, Associate Professor, Department of Family Medicine

John Schorling, MD, Professor and Head, Section Of General Medicine, Department of Medicine

Scott Strayer, MD, Associate Professor, Department of Family Medicine

R. Thomas Leonard, PhD, Lecturer, General Faculty and Biosafety Office, Office of Environmental Health & Safety

Wendi El-Amin, MD, Assistant Professor, Department of Family Medicine

Rebecca West, JD, Assistant Professor, General Faculty and Chief Executive Office/Trustee, Piedmont Liability Trust

Kelly Near, MSN, RNC, MLS, Lecturer, General Faculty, and Outreach Librarian, University of Virginia Claude Moore Health Sciences Library

Rebecca Dillingham, MD, MPH, Assistant Professor, Division of Infectious Disease and International Health, Department of Medicine

Wende Marshall, PhD, Assistant Professor of Anthropology, University of Virginia

John Bryant, MD, Visiting Professor, Department of Public Health Sciences

David Compton, MD, MPH, District Health Director, Rappahannock/Rapidan Health District (Culpepper)

Lisa Kaplowitz, MD, MS, Deputy Commissioner for Emergency Preparedness and Response, Virginia Department of Health

John Marr, MD, PhD, Visiting Professor, Department of Public Health Sciences

Philip Nieburg, MD, Visiting Professor, Department of Public Health Sciences

Larry Palmer, Visiting Professor, Department of Public Health Sciences

Lilian Peake, MD, MPH, District Director, Thomas Jefferson Health District

EXECUTIVE SUMMARY

The Division of Public Health Policy and Practice launched new educational and community health initiatives, in line with the Division's mission to enrich educational, research and service opportunities in public and community health for students and faculty across the University. The new educational programs include:

- The Certificate Program in Public Health and Health Policy for the physician house staff, cosponsored by the Health System's Graduate Medical Education Office. Residents will have the opportunity to take courses in biostatistics, epidemiology and related courses in intense two-week courses. Residents who complete four courses will receive a Certificate. The courses are Graduate School courses and can be later counted toward an MPH or MS degree, if students decide to apply to and matriculate in these degree programs after they complete the Certificate.
- Medical school courses and electives in public health and health policy. The required 4th year medical school course, DxRx: Health Care System, introduces students to the range of organizational, economic, political, and legal dimensions of the health care system, through a case-based approach featuring experts/faculty from across the University. In addition, a 4th year elective in Public Health Policy and Practice provides students with opportunities to work in the state and local health departments.
- For undergraduates, the Division has created a new Global Public Health Minor, in partnership with the Center for Global Health, that provides selected undergraduates with the possibility of internships in public health, enrollment in graduate courses in public health, and special meetings with visiting scholars.
- The Five-Year BA/BS-MPH Program will admit a few undergraduates into the public health program at the end of their 3rd year of undergraduate studies so that they can focus on public health research, education, and community projects over two years that bridge their final undergraduate year and a one-year MPH program.

- An MPH Health Disparities Focus for MD-MPH students in the Medical School's Generalist Scholars Program will provide students interested in primary care with special courses, research, and field placement opportunities on health disparities topics that bridge primary care and community health.
- Clinical Translational Research course, cotaught by Erik Hewlett (SOM Associate Dean for Research), Ruth Gaare Bernheim, and Philippe Sommer (Darden professor).

Among the community health projects, Division faculty worked with a number of community organizations on community health needs assessment. One such project in the Roanoke area was a collaboration with the Belmont Community Health Center Board, which documented the need for primary care and mental health professionals in an underserved region of the city.

In addition, MPH students, working with Division faculty, were invited to present their community research projects at the American Public Health Association Annual Conference. The accepted abstracts include:

- Ethical and legal issues regarding HPV vaccine legislation
- Comparison of mothers' motivation to prevent preschool childhood obesity across four ethnic groups
- Barriers to HAART adherence in a cohort of adolescents in urban Uganda
- Involuntary Commitment: Barriers to optimal service delivery

Other Division highlights include:

- The publication of "Health Care Half-Truths: Too Many Myths, Not Enough Reality," a book co-authored by Carolyn Engelhard and UVa Vice President and Provost Arthur (Tim) Garson;
- Dr. Denise Bonds research on Guideline Adherence for Healthy Hears (GLAD Heart), a practice-based randomized trial of technological aids to improve ATP3 cholesterol and JNC7 blood pressure guideline compliance;
- Dr. Elizabeth McGarvey's community studies on involuntary civil commitment for the Commission on Mental Health Law Reform of the Supreme Court of Virginia; and
- Ruth Gaare Bernheim's talk on Ethical and Legal Issues in Biopreparedness at the Center's for Disease Control and Prevention (CDC) and publication "Ethics in Public Health Practice and Management" in the textbook, "Public Health Administration," 2nd ed.

2. TEACHING

A. Semester Courses

i. Fall 2006

Instructor	*Course*	*Course number*	*Students*	*Class hours*
Bernheim	Germs, Guns, Lead	PHS 705	17	3

Bernheim	The Practice of Public Health	PHS 718	13	1
Bernheim	Field Placement/Culminating Experience	PHS 889/890		6
C. Engelhard	Health Policy & Mgt	PHS 710/510	21	3

ii. Spring 2007

Instructor	*Course*	*Course number*	*Students*	*Class hours*
Bernheim	Public Health Research Ethics	PHS 732	1	3
Bernheim	Field Placement/Culminating Experience	PHS 889/890		6
Bernheim (with Tom Massaro)	DX-RX: Health Policy	Med School 4th year	140	40 contact hours
Bernheim (with Tom Massaro)	DX-RX: Health Policy	Med School 3rd year	140	8 contact hours
Bernheim	4th year Medical Student Elective on Public Health	Med School elective	3	4 weeks
C. Engelhard	Health Policy & Mgt	PHS 710/510	24	3
C. Engelhard (with Garson, Howell, van Bree)	Health Policy, Organization, and Administration	PHS 720	13	3
C. Engelhard	Internal Medicine Ambulatory Seminars January – June 2007	NA	5-7/month	NA

iii. Summer 2007

Instructor	*Course*	*Course number*	*Students*	*Class hours*
Bernheim	Health Services Law and Management	PHS 552/752	4	3
Bernheim	Field Placement/Culminating Experience	PHS 889/890	3	6

B. Lectures, Symposia or Journal Clubs at UVA

Speaker	*Date*	*Topic*	*Location*
Bernheim	7/18/07	Public Health in 21st Century	UVa Summer Medical/Dental Education Program
Bernheim	7/10,13,19,20	Public Health and Community Medicine	Generalist Scholars Program
Bernheim	1/24/07	Race-Based Therapeutics	SOM Medical Center Hour
Bernheim	3/7/07	Genetic Research and IRBs	Dept of Pub Health Sciences Sem
Bernheim	2/23/07	Communicable Disease Control	Dept of Family Medicine

Speaker	*Date*	*Topic*	*Location*
		and Public Health	
C. Engelhard	July 11, 2007	"Health Policy and the Delivery of Medical Care: An Uneasy Compromise." GME Core Competency Lecture Series,	McKim Auditorium, UVASOM
C. Engelhard	June 13, 2007	"Behind the Numbers: The Cost and Value of Medical Spending." Neurology Department	MR-5 Classroom, UVASOM
C. Engelhard	January 2, 2007.	"The Cost of Health Care: Too Expensive or Priceless?" J-Term lecture to UVA undergraduates,	Global Health Center, UVASOM
C. Engelhard	November 28, 2006	The Cost of Health Care: Too Expensive or Priceless?" 1st year medical students, Social Issues in Medicine Program	Jordan Hall Auditorium
C. Engelhard	November 30, 2006	Who Pays for Health Care?" UVASOM Medical Students' Health Economics and Policy Club,	Jordan Hall Auditorium
C. Engelhard	October 4, 2006	The U.S. Health Care System: Where are we going? Why? Do we care?" Family Medicine Residency Rounds	Dept of Family Medicine
C. Engelhard	June 29, 2006	What Price Success? Clinical Research and the U.S. Health Care System," faculty participant in the Microbes and Mucosal Immunity Course sponsored by the Digestive Health Center, UVASOM	Jordan Hall Conference Center
C. Engelhard	Academic year	IM residents (~ 15-20/year) Faculty contact/teaching for monthly elective and journal club in health policy	DPHS classroom and conference room

C. Student Advising

Instructor	*Student*	*Program*
Bernheim	All MPH Students	Master of Public Health Program
Bernheim	Natalie Banks	Undergraduate Human Biology Major
C. Engelhard	Bryan Wheeler	4th year Human Biology -- thesis
C. Engelhard	All MS students (~15/year)	MS in Clinical Research
C. Engelhard	1st and 2nd year medical students	Faculty Liaison for the Health Economics and Policy Club and Seminar Series
Bernheim	Bucci	MPH
	Banai	MPH

D. Faculty Development Mentoring

Instructor	*Student*	*Role*	

C. Engelhard	Laura Lee, MD	MTPCI mentor	
C. Engelhard	Nancy Harthun, MD	MTPCI mentor	

3. PUBLICATIONS in 2007

A. First or Senior Author:

1. Bonds DE*, Kurashige EM, Bergenstal R, Brillon D, Domanski M, Felicetta J, Fonseca V, Hall K, Hramiak I, Miller ME, Osei K. Simons-Morton DG, for the ACCORD Study Group. Severe Hypoglycemia Monitoring and Risk Management Procedures in the ACCORD Trial. Am J Cardiology. 2007 Jun 18;99 (12A):80i-89i
2. Bonds DE, Ellis SD, Weeks E, Palla SL, Lichstein P. A practice-centered intervention to increase screening for domestic violence in primary care practices. BMC Family Practice. 2006;7:63
3. Bonds DE, Ellis SE, Weeks E, Lichstein P, Burke K, Posey C. Patient attitudes toward screening. North Carolina Medical Journal. 2007;68:23-29
4. Engelhard C. and Garson A. (2007). "In the Shadow of Cost Containment: Americans, Affordability, and Health Reform." American Heart Hospital, Vol 5(1, Winter):6-9.
5. Engelhard C. (2007). THE ART OF THE POSSIBLE?: A Review of President Bush's Health Insurance Proposal. Biolaw, Spring.
6. Koopman, C., Ismailji, T., Palesh, O., Gore-Felton, C., Narayanan, A., Saltzman, K.M., Holmes, D. & **McGarvey, E.L**. (2007). Relationships of depression to child and adult abuse and bodily pain among women who have experienced intimate partner violence. *Journal of Interpersonal Violence*, 22, 438-455.
7. Serrano, E., Gresock, E., Suttle, D., Keller, A., & **McGarvey, E**. (2006). Fit WIC: Attitudes, perceptions and practices of WIC staff toward addressing childhood overweight. *Journal of Nutrition Education and Behavior*. 38(8), 151-6.

B. Collaborative:

1. Ginsberg HN, Bonds DE, Lovato LC, Crouse JR*, Elam MB, Linz PE, O'Connor PJ, Leiter LA, Weiss D, Lipkin E, Fleg JL, for the ACCORD Study Group. Evolution of the lipid trial protocol of the Action to Control Cardiovascular Risk in Diabetes (ACCORD) Trial. Am J Cardiology. 2007 Jun 18;99(12A):56i-67i
2. Ellis SD, Bertoni AG, Bonds DE, Balasubramanyam A, Blackwell C, Chen H, Clinch CR, Lischke M, Goff Jr. DC. Value of recruitment strategies used in a primary care practice-based trial. Contemporary Clinical Trial. 2007 May;28(3):258-67
3. Garson A., and Engelhard C. (2007). "Attacking Obesity." Viewpoint, Journal of the American College of Cardiology, Vol. 49(16):1673-1675.
4. Brown, G.L., Keller, A.E., **McGarvey, E.L.,** Shirtcliff, E., & Flavin, K. Salivary cortisol, dehydroepiandrosterone, and testosterone interrelationships in healthy young males. *Psychiatric Research*. (accepted, 2007).

C. Book Chapters

1. Bernheim, RG, Ethics in Public Health Practice and Management, Novick et al eds. *Public Health Administration* 2d ed, Jones and Bartlett, 2007
2. Gaare-Bernheim,R, Neiburg P, Bonnie R. Ethics and the Practice of Public Health. Goodman et al eds. *Law in Public Health Practice*. Oxford University Press, 2002, 2007
3. Garson, A and C. Engelhard (2007). "Health Care Half-Truths: Too Many Myths, Not Enough Reality." Rowman & Littlefield Publishers

D. Editorial Boards & Journal Reviews

Division Member	***Journal***	***Role***
Bernheim	BioLaw (Lexis-Nexus Publiation)	Co-Editor
Bernheim	American Journal of Public Health	Ad hoc Reviewer
Bernheim	Kennedy Institute of Ethics Journal	Ad hoc reviewer
Bonds	Archives of Internal Medicine	Ad hoc reviewer
Bonds	Pharmacy and Therapeutics	Ad hoc reviewer

4. RESEARCH TALKS

A. National and International

Speaker	***Date***	***Topic***	***Location***
Bernheim	6/18/07	Biopreparednes: Law and Ethics	Centers for Disease Control and Prevention (CDC)
Bernheim	3/30/07	Ethics and Law in Public Health Practice	National Association of County and City Health Officials (NACCHO)
Bernheim	11/6/06	Public Health Research and Practice	American Public Health Association national meeting
Bernheim	4/18/07	Legal and Ethical Issues in Allocation of Flu Medications and Care	Charlottesville/Albermarle Health Department
Denise Bonds	4-07	Cardiovascular disease and menopausal hormone therapy: reading the fine print	Annual Meeting Society of Toxicology Charlotte, North Carolina
McGarvey, E, (coauthors: Baum L, Brenin, D., Clark, B., Acton, Scott, Parker, E)	03/07	Help with Alopecia Adjustment through Image Representations (HAAIR)	4th Annual American Psycho-oncology Society Conference, Austin, TX.
Koopman, C.,	11/06	Child abuse as a predictor of	Symposium panel at the Annual

Speaker	*Date*	*Topic*	*Location*
Palesh, O., Ismailji, T., Holmes, D., Butler, L.D., Gore-Felton, C., & McGarvey, E.		depression and PTSD for intimate partner violence.	Meeting of the International Society of Traumatic Stress Studies, Hollywood, CA.,
Cobbs J., Keller A., McGarvey E	11/06	Evaluation of a Model Prevention Program for Families of Elementary Aged Children in a Non-Metropolitan Community	134th American Public Health Association Annual Meeting, Boston, MA.

B. Local

Speaker	*Date*	*Topic*	*Location*
McGarvey, E	04/07	TV Media news show to demonstrate the HAAIR computer system to help prevent distress in cancer patients who lose their hair as a side effect of cancer.	CBS news show Broadcast locally and in other locations nationally (I didn't keep tract of this.)
McGarvey, E.	01/17/07	Discussion on problems with the Civil Commitment process in VA with Region 10 Consumers of mental health services	Charlottesville
McGarvey, E.	03/16/07	Focus group results from statewide study of civil commitment	Charlottesville VA
McGarvey	06/21/07	Focus group results from statewide study of civil Commitment	Fredericksburg VA

5. GRANTS

A. Active

i. As PI

PI	*Title*	*Funding source/type*	*Current year direct costs*
Bernheim	Promoting Research Integrity	Office of Research Integrity- (DHHS) and Association of American Medical Colleges	$7,500
Bonds	Personal Digital Assistant for Guideline Adherence (PDA GLAD)	Subcontract to Wake Forest (original funder NHLBI)	$12,910
Bonds	Action to Control Cardiovascular Risk in Diabetes (ACCORD) Coordinating Center	Subcontract to Wake Forest (original funder NHLBI)	$42,500

Bonds	Intensive Glycemic Control and Skeletal Health (ACCORD BONE)	Subcontract to Wake Forest (original funder NIDDK)	$4,042
Bonds	The lutein/zeaxanthin and omega-3 supplement trial--a multicenter randomized trial of lutein, zeaxanthin and omega-3 fatty acids in age-related macular degeneration (AREDS2)	Subcontract to EMMES Corporation (original funder NEI)	$32,155

ii. Collaborative (as Co-investigator)

a. Other: NIH R21, NIH K-awards, DoD, Supplements

PI	***Title***	***Funding source/type***	***Division member***	***Current year direct costs***
Parker (PI), UVA subcontract: McGarvey, E	Division of Cancer Control and Population Sciences, SBIR, PHASE 1-III	NIH/NCI 2 R44 CA099873-02	DPHPP	$25,000
UVA subcontract: McGarvey, E (Director of Evaluation)	Targeted Capacity Expansion (comparison of two treatments for substance abuse for adolescents) to Central Virginia Community Service Board, Lynchburg, $750,000	Substance Abuse and Mental Health Services Administration (SAMHSA),	DPHPP	$55,000

b. Internal and Industry

PI	***Title***	***Funding source/type***	***Division member***	***Current year direct costs***
Greyson B.	NDE Time of death and birthday relations		Psychiatric Medicine	N/a
Clayton Anyta	Bupropion XL in the menopausal Transition		Psychiatric Medicine	N/a
Bernheim R.	VHI data(work with the data, preliminary analysis and answering questions about data)		Public Health sciences	N/a
McGarvey E.and Bernheim R.	Civil commitment Practices in VA. ER (data Analysis)		Public Health Sciences	N/a
Elizabeth McGarvey	CSAT-SAMHSA-Central VA community service Board. Lynchburgh.		Public Health Sciences	N/a
Bernheim R. and McGarvey E.	The Impact of Race on Parent's Perception of Obesity		Public Health sciences	N/a
Bonnie, Richard	Research Director for studies for the Commission on Mental Health Law Reform	Commonwealth of VA	DPHPP	Apx $165,000

6. COMMITTEES (Service)

A. National/State/Community

Division Member	*Organization, Committee*	*Role*
Bernheim	Virginia Area Health Education Centers (AHEC)	UVa representative of SOM Dean
Bernheim	Virginia Youth Tobacco Project	Member
Bernheim	Charlottesville Health Dept's Community Needs Assessment Committee	Member
Bernheim	Virginia Pandemic Flu Advisory Committee	Member
Bernheim	Engaged Workgroup – Charlottesville/Albermarle Commission on Children & Families	Member
Bernheim	AIDS Services Group (ASG), Charlottesville	Board Member
Bonds	Society of Clinical Trials, Education Committee	member
Bonds	Action to Control Cardiovascular Risk in Diabetes (ACCORD), Lipid Comm.	member
Bonds	Action to Control Cardiovascular Risk in Diabetes (ACCORD), Morbidity and Mortality Comm.	member
Bonds	Women's Health Initiative, Outcomes Adjudication Comm.	member
C. Engelhard	Charlottesville Free Clinic	Board Member
DPHPP	NIH/NIDA – ZDA1-GYM-A-58	Reviewer
DPHPP	NIH/CSR Health of the Population (HOP) Integrated Research Groups, Community Participation Research	Reviewer

B. School of Medicine

Division Member	*Committee*	*Role*
Bernheim	CTSA Executive Committee	Member
Bernheim	Faculty Search Committee for Center for Biomedical Ethics	Member
Bonds	Ambulatory Regional Quality Team	member
C. Engelhard	Member of Advisory Board, Community Service Initiative, UVA Health System Decade Plan, 2003 – present	Committee member
C. Engelhard	Member, Advisory Board, Multidisciplinary Training Program in Clinical Investigation, UVA School of Medicine, 2002-present	Committee member

C. University

Division Member	*Committee*	*Role*
Bernheim	Battten School of Public Policy	Member
Bernheim	Institute for Practical Ethics and Public Life	Associate Director
Bernheim	Flu Preparedness Academic Affairs Committee	Member

7. CONSULTING PROJECTS (Service)

PI	*Title*	*Hours*	*Division Member*
Bernheim	Ethics and Public Health Leadership; Public Health Leadership Society	4 hours a month	

Bernheim	Belmont Community Association (community needs assessment report)	40 hours	
Prentice	Women's Health Initiative Coordinating Center Outcomes Adjudication	8/month	Bonds
McGarvey E.	Health Behavior Survey report- 2006		Psychiatric Medicine
McGarvey, E	University of Virginia Health Survey, spring 2006 (Completing projects begun in Psychiatric Medicine).	10	DPHPP

THE CENTER FOR PUBLIC HEALTH GENOMICS

The Center for Public Health Genomics (CPHG) was created in January, 2007, in recognition of the need for integration of molecular genetics, statistical genetics, genetic epidemiology, bioinformatics, and public health policy. The resources for this Center were contributed by several University of Virginia sources, including a commitment from the Board of Visitors, the School of Medicine, and the Department of Public Health Sciences. Previously, genomics research at the University of Virginia was limited to selected laboratories, with many investigators focused on genes within model systems (e.g., mice) rather than humans. Relatively few genomics resources were available for investigators at the University, thereby limiting the University's ability to extend research into diseases of clinical significance. In recognition of these programmatic needs, the CPHG was established to stimulate research in human genetics and to expand the range of services available to the academic community of the University of Virginia.

The CPHG is directed by Stephen S. Rich, Ph.D., a genetic epidemiologist who has published extensively in the areas of type 1 diabetes, cardiovascular disease, stroke, and diabetic complications. Dr. Rich is appointed as the University of Virginia Board of Visitors Distinguished Faculty Scholar, the Harrison Teaching Chair in Public Health Sciences, and holds the positions of Professor of Public Health Sciences and Internal Medicine (Cardiovascular Medicine) at the University of Virginia School of Medicine. Previously, Dr. Rich was Vice-Chair and Professor of Public Health Sciences and Neurology at the Wake Forest University School of Medicine. The Associate Director of the CPHG is Patrick Concannon, Ph.D., a molecular geneticist whose work centers on mapping complex traits in humans, with particular interest in type 1 diabetes and breast cancer (second primary breast cancer as a result of radiation therapy). Prior to his recruitment to the University of Virginia, Dr. Concannon was the Associate Director of the Benaroya Research Institute and Professor of Immunology at the University of Washington.

The CPHG is currently composed of seven resident faculty. In addition to Drs. Rich and Concannon, there are three additional molecular geneticists, a statistical geneticist, and a bioinformatician. The molecular genetics faculty members are Michele Sale, Ph.D., an Associate Professor of Internal Medicine (Cardiovascular Medicine) and Biochemistry & Molecular Genetics, Suna Onengut-Gumuscu, Ph.D., an Assistant Professor of Internal Medicine (Endocrinology), and Sharon Teraoka, Ph.D., an Assistant Professor of Biochemistry & Molecular Genetics. The statistical geneticist is Wei-Min Chen, Ph.D., an Assistant Professor of Public Health Sciences (Biostatistics and Epidemiology), and the bioinformatician is Josyf Mychaleckyj, D.Phil., an Associate Professor of Public Health Sciences (Clinical Informatics). The CPHG is currently recruiting an additional five faculty members in molecular genetics, statistical genetics, and bioinformatics, and expect to ultimately include up to 20 resident faculty in the CPHG space in the Medical School.

For FY 2007, the Center for Public Health Genomics tallied nearly $32 millions in grant support, with a strong likelihood that this number will increase as the number and diversity of its scientists and staff increases.

The CPHG will be composed of nearly 15,000 square feet of space upon completion of renovation of laboratories and office space in the West Complex of the University of Virginia School of Medicine. The CPHG currently occupies approximately 4,000 square feet of office and laboratory space on the 6th floor of the West Complex. The CPHG support research laboratory space for Drs. Sale, Onengut-Gumuscu and Teraoka on the 6th floor as well as a 'shared equipment room' that houses most of the major equipment for robotic DNA extraction from blood and tissue samples, PCR amplification of DNA, robotic manipulation of DNA samples for genotyping, and the high through-put genotyping and mutation detection devices. Renovation of additional space is ongoing, providing three additional laboratories by the end of 2008, and five additional laboratories by the end of 2009.

The CPHG faculty/staff provide significant expertise in the generation and analysis of human genetic data. The methodologies include analyses of cohort, case-control, and family data using SNPs, copy number variants (CNVs), or other DNA polymorphisms. Both model-dependent and model-independent approaches can be employed, and empiric p-values can be generated using simulation methods. These approaches have been developed for examination of single SNPs as well as genome-wide linkage (6,000 SNPs) and genome-wide association scans. Importantly, bioinformatics tools have been developed to visualize and characterize the related genes and pathways that are associated with the significant SNPs from these genetic analyses.

Much of the progress in detecting genes that contribute to risk of common human disease has been made through technological developments in genotyping of human specimens (DNA) and statistical genetic analyses. The CPHG provides a resource for investigators at the University of Virginia and elsewhere in the nation to overcome these technological barriers. The CPHG has developed instrumentation for genotyping (high through-put analysis of DNA samples, targeting on single nucleotide polymorphism (SNP), or up to one million SNPs in an experiment. The CPHG has capabilities for high through-put mutation detection using DHPLC. For situations in which there is evidence that mutations that are thought to be causal (e.g., BRCA1 or BRCA2 for breast cancer), the current technology is ideal for screening samples in a rapid and accurate process, providing a useful tool for clinical and translational investigators.

The establishment of the Center for Public Health Genomics at the University of Virginia, with exploitation of the resources from the human genome project and the analytic and bioinformatics technology, should be viewed as preparation for research and translation over the next two decades. As the field of human genetics and molecular medicine rapidly evolves, clinicians and researchers must be prepared to use the resources of the Human Genome Project as they come "on line" and exploit new methods of gene localization and identification, functional genomics, pharmacogenomics, and

translational research. It is anticipated that the CPHG will partner with medical professionals across Virginia to lead discovery of genomic information that can be taken from the bench to the bedside and into the community for years to come.

MASTERS DEGREE PROGRAMS

A major focus of the Department of Public Health Sciences is providing education in biostatistics, epidemiology and a range of public health research and policy subjects. In addition to courses and seminars for medical students and residents, the Department offers two Master Degree Programs, which are awarded through the Graduate School of Arts & Sciences: the Master of Science in Clinical Research and the Master of Public Health.

The Master of Science (MS) Degree Program marked its 10-year anniversary in the Department of Public Health Sciences in 2007. The program was built upon the academic scaffold of the previously offered MS in Epidemiology, and the Master of Science in Health Evaluation Sciences (MS-HES) was established along with the new Department of Health Evaluation Sciences. The revised degree program supplanted and expanded the course offerings to include comprehensive training in clinical investigation, health outcomes evaluation, and information management. This past year, in conjunction with changing the name of the department to Public Health Sciences and in concert with the larger institutional effort to build a training program in clinical and translational science, the degree was expanded and renamed to be the MS in Clinical Research (MS-CR). The class of 2008 will be the first to receive the MS in Clinical Research.

The Master of Public Health (MPH) Degree was approved by the Board of Visitors in the spring of 2003 and is structured as a professional degree offered individually or jointly with other professional degrees at the University. Created as an interdisciplinary program, it draws upon the strengths of UVA faculty within the Schools of Medicine, Arts & Sciences, Nursing, Law, Business, Education, and Architecture as well as the larger university community. The MPH Program was accredited by the Council on Education for Public Health (CEPH) in 2006.

The first MS program graduated 7 students, with 145 students graduating by 2007. The first four MPH students graduated in 2004, and a total of 26 MPH students have now graduated. Of both the MS and MPH students, approximately 50% are health care professionals (primarily physicians).

Currently there are a total of 50 Master Degree students (including full-time and part-time); 28 MS students and 22 MPH students.

A fuller description of the two Master Degree Programs is provided below.

Master of Science Program in Clinical Research

An innovative one-year multidisciplinary degree program linking advances in the biologic, medical, information, and social sciences to new approaches in education, translational and clinical research, and patient care

The M.S. in Clinical Research is an interdisciplinary graduate degree designed to meet the changing needs of professionals working in various health care fields with an emphasis on providing training to those who require well-developed quantitative and analytic skills in patient-oriented and translational research.

Changes in the organization and financing of health services, combined with rapid and groundbreaking developments in the fields of information technology, presentation, and processing, has translated into a dramatically increased interconnection among business, politics, science, and medicine. These trends, combined with far-reaching biologic discoveries and advances such as the mapping of the human genome, have changed the environment of health care in the United States and produced a demand for new types of innovative training for clinicians, administrators, and others involved in the research, delivery, or evaluation of health care services.

The M.S. in Clinical Research at the University of Virginia School of Medicine equips graduates to tackle a variety of topics, ranging from broad questions of health care organization and financing to specific instances of how to maximize medical benefit while controlling medical costs. Our enhanced interdisciplinary program in clinical research provides a broad range of training opportunities for students interested in these new areas of clinical investigation, clinical information management, medical economics, and health services research.

The interdisciplinary blend of biostatistics, epidemiology, health services research methodology, clinical trial design, economics, information studies, and health policy offered through the M.S. in Clinical Research is taught by faculty in the Department of Public Health Sciences in collaboration with other faculty at UVA in the Schools of Medicine, Nursing, Arts and Sciences, Business, and Law. The experience is one of intensive study aimed toward giving students the analytical skills needed in all areas of clinical research.

Students complete a minimum 31-credit curriculum that includes core courses, specialized coursework, and a final project in the form of a publishable thesis or a practicum. Full-time students complete most or all core coursework in the fall semester, then devote the spring to advanced coursework and the completion of the thesis or practicum. Shorter-term practicum projects can be completed in one academic semester while a thesis requires more time, and students choosing to write a thesis usually complete their work over the summer. The final practicum or thesis project must be presented to DPHS faculty prior to graduation. Part-time study options are also available.

The MS Program is directed by William Knaus (Clinical Director) and Carolyn Engelhard (Academic Director).

Combined Training Programs

The MS-CR degree is ideal for physicians completing a research-oriented fellowship in a clinical subspecialty.

A joint degree program is available through the schools of Medicine and Arts & Sciences. Students participating in the MD/MS degree program will fill requirements for both degrees.

Master of Public Health Program

A unique, individualized program in public health that prepares students with the quantitative research skills; interdisciplinary social and behavioral perspectives; and analytic foundations in law, ethics and policy to solve complex health problems at the community and population level**.**

The Master of Public Health (MPH) is a 42-credit, professional degree designed to provide health care and other professionals with an understanding of the public health sciences, population-based research, and the community practice of public health, as well as with the knowledge and skills that can be used in health care policy and management. The program was nationally accredited by the Council on Education for Public Health in 2006.

The MPH Program recognizes that tackling huge societal problems, such as obesity and diabetes, requires a public health approach – not only the most advanced medical care but also preventive care – to empower individuals to make healthy choices and engage communities in creating healthier places to live.

Graduates are generally prepared for roles in a variety of private, public, and regulatory agencies, in for-profit and not-for-profit health organizations, and in health services research. Degree concentrations are available in two areas: Generalist: Practice & Research; and Health Policy, Law, and Ethics.

MPH students complete courses in the five core areas of public health: epidemiology, biostatistics, social and behavioral sciences, environmental health, and health policy and management. In addition, students pursue advanced course work and field study on topics tailored to their particular interests, ranging from obesity and diabetes prevention to tobacco policy to global health disparities. They have the opportunity to work with faculty from across the University, drawing on the faculty expertise from the Schools of Medicine, Law, Nursing, Arts & Sciences, and others.

The MPH Degree Program is administered by the Division of Public Health Policy and Practice and is directed by Ruth Gaare Bernheim, JD, MPH.

Combined MPH Educational Programs

Joint degree programs are available through the schools of Medicine, Law, and Arts & Sciences. Students participating in the MD/MPH or JD/MPH degree programs will fulfill requirements for both degrees. In addition, a 5-Year BA/BS-MPH Program is available to select undergraduate students, who can begin their public health course work during their fourth year of undergraduate education.