The University of Georgia

University Council
Athens, Georgia 30602

October 14, 2016

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Dear Colleagues:

The attached proposal for a new Health Informatics Institute will be an agenda item for the October 21, 2016, Full University Curriculum Committee meeting:

Sincerely,

William K Vencill

William K. Vencill, Chair
University Curriculum Committee

cc: Provost Pamela S. Whitten
Dr. Rahul Shrivastav

The University of Georgia

College of Public Health
Office of the Dean

September 23, 2016

Pamela S. Whitten, Ph.D.
Provost and Senior VP for Academic Affairs
University of Georgia

Dear Provost Whitten,

With this note we submit our completed proposal to establish an interdisciplinary Health Informatics Institute (HII) at UGA. The proposal has developed positively since I sent a draft two weeks ago. It still focuses on three areas of opportunity for UGA: Public Health Informatics, Health Care Informatics, and Health Systems Modeling, but with more detail about our resources, intentions and alliances.

We seek approval for the Institute as a structure for teaching and research in health informatics. With the two faculty funded by the hiring initiative and a third new hire this fall, we already have the professors needed to teach the new courses, and their terms of employment include the creation of new health informatics coursework. In fact, some new course proposals have already been submitted to Curriculum Systems. With those courses in place and the Institute approved, we intend to submit a full curriculum proposal as early as next semester to the Graduate School and the UGA Curriculum Committee. Many of the additional courses needed already exist on campus. This combination of resources could allow the new program to commence as early as Fall 2017.

As I mentioned before, we met with Don Leo and the founders of the Georgia Institutes of Informatics. They agree that our program would fit very well as one of their affiliated institutes. This relationship is addressed in Section 11 of the proposal.

We have now also worked closely with Jessie Kissinger, Director of the Institute for Bioinformatics (IOB), to understand how our programs are differentiated but will still support each other. In fact, the positive discussion of IOB and HII in the report (Section 4 paragraphs 3-5) was reviewed and revised by Dr. Kissinger.

Another very positive development is our deepening collaboration with the Medical Partnership. Meetings with Shelley Nuss and some of her faculty confirm that they will contribute to the Institute's efforts in the health care informatics direction (Section 12.1) and that they see the Institute as a positive path for increased interaction with UGA programs.

We continue to believe that UGA has an opportunity now not only to join the many other universities in the region and nation with established programs in the health informatics field but also to do so in a way that will bring UGA early recognition for its innovation and impact.

Sincerely,

Phillip L. Williams, Ph.D.
Dean

PLW/dsb

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Proposal to Establish the UGA Health Informatics Institute (HII)

Final Version 12.1 for Submission to Curriculum Systems

Proposal Submitted by:
Phillip L. Williams, Ph.D., Dean, College of Public Health

Initial Proposal Developed by:
Dale Green, M.D., Associate Professor of Health Informatics, Department of Health Policy and Management, College of Public Health
Andreas Handel, Ph.D., Associate Professor of Epidemiology, Department of Epidemiology and Biostatistics, College of Public Health
Tim Heckman, Ph.D., Associate Dean for Research and Professor of Health Promotion and Behavior, College of Public Health
Chris Whalen, M.D., Ernest Corn Professor of Infectious Disease Epidemiology, UGA Distinguished Research Professor, and Director, Center for Global Health, College of Public Health
Eric Dahl, Ph.D., Associate Dean for Strategic Initiatives, College of Public Health

1. Program Name

The UGA Health Informatics Institute (HII)

2. Synopsis

A brief survey confirms that health informatics is a dynamically evolving discipline with established programs at many leading U.S. universities. Although UGA does not have a health informatics program, it does have the resources to build rapidly in this direction by creating an interdisciplinary Health Informatics Institute (HII). For example, the College of Public Health (CPH) has eight investigators whose research employs health informatics tools and methods. Their work collectively totals more than $7.6 million in active research funding for FY16-17 (see Section 16). With two new faculty recently hired during the President's Informatics Faculty Hiring Initiative and a third hired this fall, CPH has the instructional capacity to immediately add several new courses in this field, and the terms of employment for these faculty include the creation of new health informatics coursework. In fact, new course proposals have already been submitted to UGA Curriculum Systems. Many of the additional courses needed to establish a comprehensive health informatics curriculum in the HII already exist on campus at

the CPH and in other disciplines. With approval of the Health Informatics Institute, a detailed and comprehensive proposal for a full health informatics curriculum could be submitted to the Graduate School and the UGA Curriculum Committee as soon as spring semester 2017. The combination of resources described in the current document would enable a new health informatics program to commence in FY 18. In addition to taking its place among major research institutions committed to health informatics, UGA could do so in a particularly innovative way by interconnecting three specialized fields: (1) health care (medical) informatics; (2) public health (the health of human populations) informatics; and (3) health systems modeling. The current proposal also describes collaborative relationships with other informatics-oriented programs at UGA, including the Institute of Bioinformatics (Section 4 paragraphs 3-5), the Georgia Institutes of Informatics (Section 11), and the AU/UGA Medical Partnership (Section 12.1). We anticipate positive collaborative interaction with these and other UGA programs in related fields.

3. Mission

The UGA Health Informatics Institute will: (1) create a dynamic context and hub for interdisciplinary interactions among faculty with active research programs who share an interest in using health informatics techniques and capabilities to investigate and improve health care and population health outcomes while learning, creating, and applying new informatics methods and tools; (2) develop state-of-the-science courses and mentoring opportunities to prepare the next generation of innovators in health informatics to access an expanding range of health-related information, analyze it effectively, and use the outcomes to take appropriate actions that meet health care and population health objectives; and (3) engage with the wider community to gain pragmatic insight about applying health informatics tools and capabilities to understand and address real-world problems.

4. Context

The need for this Institute stems from the development of powerful new tools at the intersection of information science, computer science, health care, human population health research, and the application of these tools in health-related contexts. Many faculty in the UGA College of Public Health are conducting research involving computational and informatics approaches to human health, often in collaboration with faculty in other UGA programs. Importantly, the College has recently hired several faculty who directly contribute to health informatics research and education. Most recently, efforts in this field received significant reinforcement from the

President's Informatics Faculty Hiring Initiative that resulted in the recruitment of two new faculty members to the CPH with clear health informatics expertise: (1) an associate professor with considerable experience in clinical informatics, health care system data analysis, and the assessment of health care outcomes; and (2) an assistant professor with numerous publications and significant research funding resulting from his work in computational epidemiology, using systems-oriented modeling to analyze public health interventions and their efficacy on a national and international scale.

While the CPH currently has significant momentum in this area, establishing the Health Informatics Institute will create a framework for interdisciplinary collaboration with other UGA faculty working in health informatics and related fields. We anticipate that the Institute will build programs in three main areas: (1) **health care (medical) informatics**; (2) **public health (the health of human populations) informatics**; and (3) **health systems modeling**. The presence of medical and population informatics in the same program and a focus on the application of modeling tools and techniques as fundamental for this purpose will help to distinguish the HII from other public health informatics programs in the region, nation, and internationally.

The activities of the proposed Institute will complement other informatics efforts at UGA. For example, UGA has established a successful Institute of Bioinformatics (IOB). Much of the research and education conducted by IOB investigators focuses on genomic or population genomic and related -omic data, often at the cellular level. IOB scientists use techniques of genetics and molecular biology to identify the sets of genes, proteins, or metabolites associated with specific organisms or organismic conditions and organize these data for applications in medicine or biology.

In contrast, the main work of health informatics is seldom based on genetic information. It depends instead on a very wide range of data sources such as the massive data sets of the health care system collected by care providers, insurance companies, and government agencies, individual medical records aggregated, and increasingly, population data from new sources like cell phone data, social media, health tracking apps, and so forth. Researchers analyze these data with health informatics tools to understand and improve health care outcomes and to strengthen traditional public health functions like prevention, surveillance, and intervention.

Although health informatics and bioinformatics are very different disciplines, they are increasingly converging. Eventually, investigators in health informatics will learn to employ data streams from a variety of biomarkers, including genomic and related sources, along with other data sources for human characteristics and behavior—and to analyze them in an integrated fashion. This is very much a long-term goal, but health informatics and bioinformatics will interconnect more fully in the future, and that is a subject of interest in the present. We believe that as the IOB continues to pursue its strong molecular omics focus and the HII focuses on health system outcomes and public health informatics, productive interactions between the two will occur. In fact, several faculty in CPH are already members of IOB. We applaud UGA's decision to embrace and build strength in both of these human-health related fields with new appointments in health informatics and continued support for bioinformatics, as well as an understanding that informatics will expand and flourish at UGA in many other fields as well. Regarding the relationship of the HII to the newly formed Georgia Informatics Institutes for Research and Education (GII), see Section 11, below.

Looking at the national context, there is a heterogeneous array of academic health informatics programs across the U.S. to consider as potential program templates. For example, the University of Minnesota has a well-established interdisciplinary Institute for Health Informatics that teaches health information sciences to professionals in multiple fields, including public health, and it sponsors inter-professional research teams focused on improving health care. The School of Public Health at the University of Washington offers a bachelor's degree in health informatics and health information management and teaches skills that range from managing patient records to improving disease prevention and helping health care institutions to deliver more cost-effective services. The Bloomberg School of Public Health at Johns Hopkins, in collaboration with the Johns Hopkins School of Medicine, has formed a public health informatics (PHI) training program that offers a post-baccalaureate certificate in the field. Columbia University's Mailman School of Public Health offers a PHI certificate program, noting that, "*Public health leaders worldwide increasingly recognize the enormous potential of information technology as a tool to safeguard the health of populations, strengthen public health systems, and improve the reach and effectiveness of health promotion and disease prevention programs*." There are numerous newer programs. For example, the School of Public Health at the University of Texas Houston Health Sciences Center offers a PHI curriculum "*to address the*

growing emphasis on public health informatics at the federal and national level and in the employment market."

Closer to home, the Public Health Informatics Institute (PHII) in Decatur, Georgia, was originally established with funding from the Robert Wood Johnson Foundation in 1992 and now provides health informatics consulting and services to a range of U.S. public health programs—academic, corporate, and governmental. It is one of the leading independent organizations in this field and is closely affiliated with the Global Health Institute of the Rollins School of Public Health at Emory and with the CDC. Also in Georgia, the CDC sponsors numerous health informatics initiatives, and training related to the National Electronic Disease Surveillance System (NEDDS)—a protocol for submitting disease information quickly, securely, and in an understandable format. The Georgia Tech School of Industrial and Systems Engineering and the Center for Health & Humanitarian Systems are doing innovative work in health informatics with industry partners while the School of Computing there offers an outstanding online and on-campus health informatics course. The Carolina Health Informatics Program (CHIP) at UNC is an interdisciplinary research and training program involving the Gillings School of Public Health, the School of Medicine, related health professional programs, the Department of Computer Science, and numerous research centers and institutes. CHIP offers certificates and master's degrees in clinical informatics, and a Ph.D. program is being developed. UNC has other programs of interest in health informatics—a Translational and Clinical Sciences Institute and the Program on Health and Clinical Informatics based in their medical school. *Given this range of activity, there is no question that UGA must define and extend its commitment to health informatics in order to be competitive locally, nationally, and internationally for extramural funding, faculty hiring, and graduate student recruitment in the medical informatics, public health informatics, and health system analytics research fields.*

5. Goals of the Institute

5.1 Build on Existing UGA Strength in Three Related Health Informatics Fields

Health Informatics is a very broad and changing field. Fast advances in data availability, computational power, and increased sophistication of software and hardware being used to explore various health issues from a computational perspective mean that it is difficult to define health informatics comprehensively. A primary goal of the Institute is to start by defining specific

foci within the broad topic of health informatics where UGA has both disciplinary strength and a unique ability to combine areas not typically found together. We believe that we currently can build in three such areas: (1) Health Care Informatics, (2) Public Health Informatics, and (3) Health Systems Modeling. We believe that by bringing these three areas together in a single institute, UGA will establish itself as a content innovator in the national and international public health informatics community

5.2 Integrate the Expertise from All Three Fields

By proposing an Institute that is both broad in its mission and focused on specific strengths, we will create a resource that increases the visibility of UGA research involving health informatics. Interconnecting areas that are typically alienated by unnecessary and arbitrary boundaries will give rise to new strengths and synergies, setting the Institute apart from similar (but more siloed) institutes in other public health and medical programs. Bringing together health care (medical) informatics and public health (the health of populations) informatics is directly in line with the current need for health care systems to operate with full cognizance of population health outcomes. This is the "triple aim" conception that expects health care institutions to discontinue the "fee for service" model and adopt practices that improve quality of care while reducing costs and at the same time *improving population health outcomes*. Given the ambitions of a dramatically transformed health care system, there is a growing expectation that health care institutions will be responsive to overall public health outcomes. The proposed Institute will be uniquely positioned to analyze the practicality and outcomes of blending public health goals with the financial/quality/and safety imperatives of health care institutions.

Health systems modeling will also be an essential part of the Institute's integrated capability. It is a maxim of analytics that data sets, no matter how extensive or carefully assembled, are useless without a model to formulate and assess the data in order to arrive at decisions. Just as an elegant model without credible data is useless, data without a model is also useless. By definition, any legitimate informatics institute must have quality modelers. A difference with the UGA Health Informatics Institute compared to other health analytics programs will be that modeling is identified at the outset as an essential program emphasis.

UGA has significant strength in modeling across campus. One notable area is infectious disease modeling, with faculty in a number of different units involved. While infectious diseases

are certainly a public health topic to which systems modeling applies, there are many other public health areas that are starting to benefit from a systems modeling approach. For instance, intervention planning for obesity and tobacco consumption has seen the successful use of modeling approaches. In fact, since public health usually deals with systems consisting of complex interactions between diverse sets of players, many questions are well suited for a systems modeling approach. For example, how does capitation-based reimbursement (i.e., the end of fee-for-service) affect the health system? How can modelling contribute to surveillance for the dangerous side effects of new drugs once they have been approved and marketed? Modelling allows the researcher to derive a systems-based prediction, as well as alternate predictions if the data inputs are varied. Health systems modeling is one of the key tools necessary to make sense in a timely way of the information gathered via public health informatics and health care informatics.

While other institutes across the country have longer histories and a greater number of faculty, the HII breadth of experience, and particularly its potential to integrate health care informatics with public health informatics and health systems modeling, will position the Institute for the kind of interdisciplinary work that can break new ground in health care and public health research while rapid change continues to alter our opportunities domestically and abroad. In addition to shaping our research goals (see Section 8), this tripartite structure (health care/public health/modeling) will also provide a framework for eventually developing instructional programs (see Section 12).

5.3 Support Health Informatics Progress in Georgia's Health Departments

Another goal of the UGA Health Informatics Institute is in keeping with UGA's land grant mission to develop its research agenda and training programs in ways that directly serve the public by enhancing the health informatics capabilities of the state, particularly at the Georgia Department of Public Health and within the state-directed county health departments of Georgia. There is an interesting correlation between some of the leading city and state health departments in the U.S. and the presence of high quality, state university health informatics programs in the same region. Minnesota, Wisconsin, Indiana, Utah, and Washington are examples. The HII will make an effort to understand and replicate this kind of correlation in Georgia. The College of Public Health already has a very positive working relationship with the Georgia Department of Public Health. The new Institute could give this collaborative relationship a stronger emphasis on informatics and bring in the perspective of other disciplines. Programs from other states to

consider initially are: university/state informatics research collaborations, health data access portals, jointly operated disease surveillance networks, and curricular initiatives to ensure that the HII trains employees appropriately for service with the state health offices, including appropriate informatics training for the staff that state and county offices already employ.

5.4 Engage Outside Organizations in Health Informatics Collaborations

Another major goal of the Health Informatics Institute is to strengthen UGA's capacity to partner with outside organizations. Hospitals, private companies, government, and other non-university entities are increasingly concerned with analyzing and understanding the cost, quality, and accessibility of health care. The Institute will position UGA to partner with these organizations to explore and develop methods and policies that help to improve the quality of patient care, reduce escalating health care costs, and improve overall population health.

6. HII Special Activities and Resources

The Institute will serve as a hub for interdisciplinary learning and discourse dedicated to Health Informatics. The CPH Dean's Office has committed to supporting the following activities with discretionary funding during the first year of the Institute's operation. The following events will commence in 2017:

- HII Annual Spring Lecture Series April 2017
- HII Interdisciplinary Health Informatics Seminar Series Fall 2017
- HII Annual Fall Health Analytics Symposium September 2017

Other potential opportunities and events to be considered for support as the Institute matures are (1) seed funding for travel to conferences and meetings; (2) a summer Institute for students to advance their health informatics skills with short courses and hands-on training; and (3) an annual informatics competition with prizes for top student research projects. The Institute will also explore forming a Database Library to house and/or provide ready access to research databases as a resource for faculty and students in the program.

7. Added Value

UGA is gaining strength in health informatics, but the growth is disparate. The Health Informatics Institute will enable units across campus to participate in a more coordinated way to develop tools, expertise, and resources that are, by their nature, applicable in multiple disciplines. Over time, UGA will gain recognition for creating a highly innovative environment for health informatics research and graduate curriculum development. This, in turn, will increase access to larger interdisciplinary and multiple institution funding opportunities in an evolving field. While such goals are difficult to achieve without an institution-wide approach, it may also be advantageous that UGA has nearly a blank slate at this time in terms of developing a highly competitive, future oriented program in the evolving field of health informatics.

The Institute will offer a mechanism to deepen cross-disciplinary partnerships that already exist while adding a stronger health informatics perspective. For example, joint degree programs have been established by the School of Social Work, the College of Veterinary Medicine, the College of Pharmacy and the Terry College of Business with the College of Public Health. As the Institute matures to develop its curricula in Health Informatics, it could assist its partnering schools to develop courses for their joint degree programs. For example, the MSW/MPH dual degree program initially offered two concentrations: clinical practice (Social Work) and health promotion and behavior (Public Health). More recently, two new concentrations were added in community empowerment (Social Work) and gerontology (CPH). As the dual degree program evolves, new courses created at the HII in health informatics that are relevant to both public health and social work, such as "Informatics and Analytics in Public Health and Health Care Organizations" (currently under review) or " Digital and Social Communication Strategies" (proposed for development) could be added as electives. Beyond that, the partnering colleges with support from the interdisciplinary faculty of the HII could develop a joint concentration in Social Work/Public Health Informatics. The same dynamic could expand the curricular horizons for other dual degree programs at UGA.

One of the most important examples of value added that the Institute will provide is the capacity to develop stronger ties between the AU/UGA Medical Partnership and other UGA programs. The Medical Partnership has done a remarkable job with its primary task of establishing academic programs, selecting and training medical students, and sending them forward to successful residency training and medical careers. The HII will provide a mechanism for the

Medical Partnership to develop deeper collaborative relationships with other UGA units as it develops new initiatives in health informatics (see Section 12.1).

Significant collaborative relations are anticipated with other informatics entities established at UGA—such as the Georgia Institutes of Informatics (see Section 11) and the Institute of Bioinformatics (see Section 4). Serious collaborative conversations are also underway about health informatics initiatives with the AU/UGA Medical Partnership. There are also cross college relationships involving Computer Science, Engineering, as well as other units. Apart from the established core research collaborations, teaching partnerships and dual degree programs already in place, the Institute will bring together faculty and students from multiple programs for lectures, seminars, and conferences. Upon approval, the Institute will immediately convene faculty and students from all interested units for strategic discussions to further define the interdisciplinary opportunities of the Institute.

8. Research Core Areas

The research strengths of the Health Informatics Institute can be grouped into three core concentrations.

8.1 The Health Care Informatics Core (HCI)

Health Care Informatics involves the exploration and analysis of data generated within the health care system. Data sources range from electronic medical records used in patient care to support the medical treatment of individuals, to the massive data sets generated by health care providers, insurance companies, employers, and federal health agencies that are available for the analysis of a wide range of health system problems and outcomes. This is a broad category with many subcategories, including, for example, clinical informatics, which specifically focuses on the use of data by doctors in patient care for record keeping, case management, and evidence-based decision making. One goal within this specialized core will be to enhance and improve the utility of information technology for practicing physicians, a subject that will benefit directly from the collaborative involvement of medical faculty at the AU/UGA Medical Partnership.

On a different scale, Health Care Informatics has taken on the daunting task of evaluating the economic impacts of the Affordable Care Act and the complex effort in the U.S. to make public access to health care affordable and sustainable. A dominant issue is the increasing role of

value-based reimbursement models for efficient, high-quality management of populations in both the private and government payer arenas. Risk-based reimbursement is the single most important driver for the health care analytics industry. UGA has the opportunity to contribute with its Health Informatics Institute in collaboration with other programs of the University to conduct research in this dynamic field and help to prepare the next generation of its workforce.

In addition to Ph.D. researchers, the faculty who are engaged in health care informatics include scholar/MDs with a background in medical practice who have developed and sustained an active interest in the development of informatics tools and view health analytics as an essential discipline for the future of clinical care. Programs in this field are emerging in part because doctors with significant computational skills and a belief that medicine will evolve in this direction have combined medical practice with health informatics research, thus contributing directly to the informatics revolution in our health care system.

8.2 The Public Health Informatics Core (PHI)

Public health informatics involves the examination of the resources, devices, and methods required to optimize the acquisition, storage, retrieval, and use of information from the health and health care sectors. This involves using currently evolving methods to achieve traditional and essential objectives of the discipline, such as improving the health of whole populations, disease surveillance, analyzing disease transmission in epidemics, supporting disease prevention, and conceptualizing, implementing, and evaluating large-scale interventions. Public Health Informatics can, for example, involve experimenting with new methods, such as more effective disease surveillance based on social media messaging and other alternative data sources. Researchers in this field explore “trustworthy informatics” to determine if health-related data available on the World Wide Web is accurate, assessing the efficacy of large scale population health interventions through the analysis of "big data," or developing and evaluating the impact of data collection innovations such as health information exchanges for various diseases in a community.

To provide a specific example at UGA, faculty in the College of Public Health are partnering with faculty in the UGA Department of Computer Science and with scientists and policy makers at the Centers for Disease Control and Prevention on the use of “big data” to identify “hot spots” throughout Georgia where isolated HIV outbreaks may occur. There is a related interdisciplinary

project involving Public Health, Computer Science, and the Georgia Department of Public Health focused on identifying websites that use online collaborative documents (e.g., Wikipedia and HIV-related blogs) that are vulnerable to vandalism or that can be used to disseminate false and potentially harmful information and misconceptions about antiretroviral therapies (ARTs) for persons living with HIV/AIDS (asserting, for example, that HIV is unrelated to AIDS and that ARTs are toxic). Forming the Health Informatics Institute will amplify and accelerate the development of similar interdisciplinary collaborations with UGA and outside partners.

8.3 The Health Systems Modeling Core (HSM)

Almost any issue in public health consists of many different components, interacting in potentially complex ways and undergoing continuous change. Studying the different components of such a complex system in isolation and basing interventions on such narrow studies—which is the classic reductionist approach in conventional science—rarely yields optimal results. Instead, better results may be obtained by employing a *systems* approach, which means that an entire system is studied concurrently in a comprehensive observation.

A quintessential aspect of systems science is the use of mathematical and computational models. *Dynamic Systems Modeling* requires the simulation of a complex system and exploration of the impact of specific health interventions applied to the model. Bringing together scholars within the college and beyond that use systems modeling in their research will advance innovation and further strengthen collaboration among those individuals as they work to achieve the kind of analytical coherence that is valuable for decision making in complex health care fields. This will lead to increased research productivity and allow for the development of a curriculum around the theme of systems modeling applied to health care and public health problems. As far as we are aware, such a program would be unique in the U.S.

9. Organizational Structure

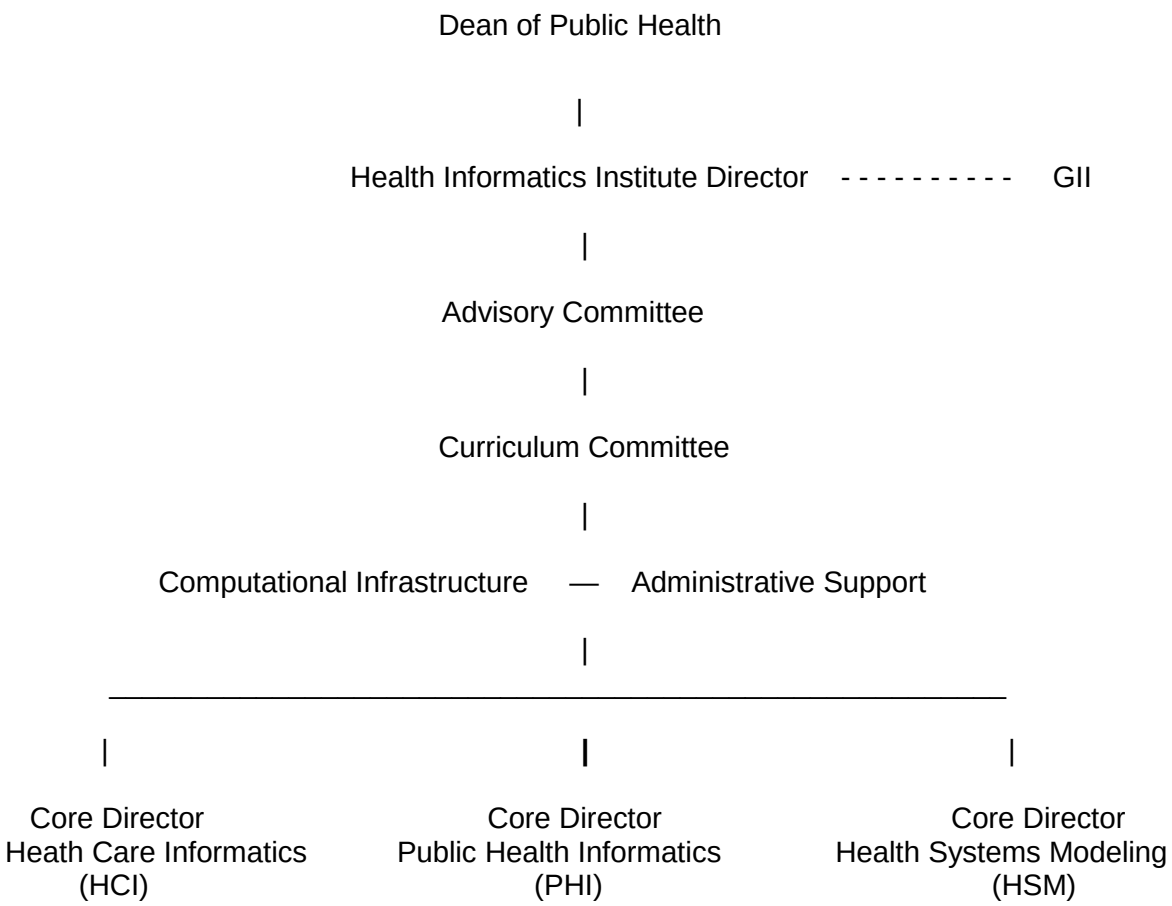
The Institute's administrative home will be the College of Public Health. The director of the Institute will be appointed by and report to the dean of Public Health. The director of the Institute will appoint directors for each of the three core areas: (1) health care informatics; (2) public health informatics; and (3) health systems modeling. The director will also have an open communications relationship with the director of the Georgia Institutes of Informatics (GII).

The HII director will appoint an Advisory Committee consisting of up to seven members, including all three core directors. The Advisory Committee will (1) serve as the initial faculty cohort of the Institute, (2) assist in establishing the policies of the Institute, (3) participate in planning for research and instruction initiatives aimed at accomplishing the mission of the Institute, (4) devise and conduct program assessment, and (5) establish the process for evaluating faculty applications for membership in the Institute. UGA tenure-track and research-track faculty with appropriate experience and research interests may apply for Institute membership following the process established by the Advisory Committee and director. Membership will be determined by a vote of the Institute's faculty. All faculty and affiliate faculty will retain appointments in their home academic unit.

The HII director will also appoint a Curriculum Committee whose first responsibility will be to work with the core directors and wider membership to establish the curriculum for the new institute and to prepare appropriate submissions for course and certificate approvals. The Institute will have two additional academic support elements—computational infrastructure provided by the CPH Office of Information Technology and administrative support assigned as needed.

The dean has asked Dr. Timothy Heckman, CPH Associate Dean for Research and Professor of Health Promotion and Behavior, to serve as the Institute director if the Institute is approved by the UGA faculty governance process. Dr. Heckman has identified Dr. Dale Green, Associate Professor of Health Informatics in the Department of Health Policy and Management to serve as the core director for Health Care Informatics and Dr. Andreas Handel, Associate Professor of Epidemiology, Department of Epidemiology and Biostatistics, to serve as core director for Health Systems Modeling. Dr. Heckman will also serve as core director for Public Health Informatics until a qualified investigator can be identified to lead this core.

The organizational structure of the HII is represented by the chart below. Brief bios for the institute director and core directors follow.



10. Leadership – Brief Bios

10.1 Timothy G. Heckman, Ph.D.

Director, Health Informatics Institute; Interim Director, Public Health Informatics Core.

Dr. Heckman is the Associate Dean for Research and Professor of Health Promotion and Behavior at the UGA College of Public Health. He earned his Ph.D. in Experimental Psychology from the University of Vermont and his B.A. in Psychology from Pennsylvania State University. For the past 20 years, his research has focused on conceptualizing, implementing, and evaluating telephone-administered interventions to reduce depression, increase medication adherence, and reduce risky sexual behaviors in persons living with HIV/AIDS. From 2008 through 2012, he served as Director of the Center for Telemedicine Research (CENTRI) at the Ohio University College of Osteopathic Medicine. Heckman recently completed online

coursework through the University of California-San Diego in "Big Data Science" and is now applying big data approaches to HIV primary and secondary prevention. As Associate Dean for Research he has overseen a thorough restructuring of that office and its support strategies for faculty who are currently experiencing their most prolific year of extramural research awards.

10.2 Dale Green, MD, MHA

Health Care Informatics Core Director

Dr. Green is Associate Professor of Health Policy and Management at the UGA College of Public Health. He earned his MD and MHA at UNC and practiced pulmonary and critical care medicine for 24 years at Athens Regional Medical Center. Also certified in clinical informatics, he served for eight of those years as CMIO, successfully implementing the hospital's patient electronic record, as well as overseeing patient safety, quality assessment, physician performance management and clinical decision support services. In 2012 he became CMIO at Cornerstone Health Care, based in High Point, N.C., a national leader in value-based health care delivery with 200 physicians. His focus has been on developing and implementing a scalable population health analytics platform using clinical, pre-adjudicated and adjudicated health care claims and other data. In 2016 he was recruited to UGA in health informatics.

10.3 Andreas Handel, Ph.D.

Health Systems Modeling Core Director

Dr. Handel is Associate Professor of Epidemiology and Biostatistics at the University of Georgia's College of Public Health. He earned his Ph.D. in Physics from the Georgia Institute of Technology, followed by a postdoctoral fellowship in computational Biology at Emory University. His research focuses on the spread and control of infectious diseases, mainly influenza, tuberculosis, and norovirus. He uses mathematical models, computational simulations, and statistical analysis to understand the dynamics of pathogens on different spatial and temporal scales. The ultimate goal of his work is to help design better intervention and control strategies against infectious diseases, both for individual patients and on the population level.

11. Relation to the Georgia Informatics Institutes for Research and Education (GII)

The UGA President's Informatics Faculty Hiring Initiative increased and energized informatics capability across the UGA campus. In this context, the CPH has supported the creation of the campus-wide Georgia Institutes of Informatics (GII) as a coordinating entity. We have also consulted with GII leadership while developing this proposal, and their advice is reflected in the proposed organization for the HII as a GII member institute. Although there are significant advantages in building an institute specifically for health informatics with academic programs structured to serve that focus, we intend for the Institute to be an affiliated unit of the GII, which has been created "*to connect and support, rather than direct and oversee any existing institute*." The proposed organizational structure for the GII includes affiliated institutes such as the Institute of Bioinformatics overseen by OVPR and the Digital Humanities Initiative directed by the Franklin College. We intend for the HII to be one of those GII affiliated institutes supporting GII programs and initiatives. We believe that this will be a distinguishing strength for our program because we will have a health informatics emphasis as found at many of our aspirational peer institutions, but we will also operate in collaboration with the GII and other informatics resources across campus. In this way, the HII will be a catalyst for cross-disciplinary communication and collaboration centered in health care systems and public health informatics.

12. New Curricula

Although this document does not propose creating any specific courses, certificates, or degree programs, we believe the Health Informatics Institute will eventually provide a platform for significant curricular innovation. We have discussed this in some detail, and if the Health Informatics Institute is approved, we will involve its membership in the development of a formal curriculum proposal to be sent to the Graduate School and the Curriculum Committee for review. Currently we expect that the three core program concentrations of the Institute defined in this proposal could each offer separate graduate level certificate programs. They are each sufficiently different in their methodologies and applications to warrant some differentiation in their curricula. We also believe that the Institute could offer a single professional master's degree with a foundation curriculum providing a common base for all three core areas that would branch from that base to form three specialized curricular tracks within the master's degree program.

12.1 Health Care Informatics Core (HCI) – Curriculum

There will be at least two different kinds of curricular opportunities in the Health Care Informatics area: (1) interdisciplinary courses developed with other programs at UGA for a graduate certificate in the field and (2) opportunities to collaborate with the AU-UGA Medical Partnership in developing other kinds of instruction specifically for doctors.

On the University side, a proposal has already been submitted to UGA Curriculum Systems for a CPH graduate-level course designated HPAM 8410 and titled "Informatics and Analytics in Public Health and Health Care Organizations" to be offered in fall semester 2017. If approved, this introductory course could serve as the starting point for an interdisciplinary certificate program in Health Care Informatics (HCI) that would require four additional courses and a practicum.

Collaborations in curriculum development between the Health Care Informatics Core and the UA-UGA Medical Partnership are also anticipated. The Partnership's MD curriculum integrates informatics training throughout, even though it is not currently labeled as such. As that curriculum evolves, affiliation with the HII will offer additional content options, and the relationship will be reciprocal. Medical Partnership faculty will contribute to the development of the formal HCI graduate certificate program.

Other potential curricular collaborations are already taking shape. For example, there is discussion at present about establishing a Clinical Informatics (CI) Fellowship in Athens for physicians, with the Health Informatics Institute providing the formal pedagogy. This fellowship could be associated with and promote the success of the local internal medicine residency program recently established. There are about 20 recognized CI physician fellowship programs in the U.S., and approval of the Health Informatics Institute would advance the effort to add a new one in Athens.

There are many other ways the new Institute could partner with and support the medical partnership. All of the intellectual, collegial, and social activities of the Institute will be as open and available to Partnership faculty and students as to the faculty and students from UGA schools and colleges. In brief, the Health Informatics Institute and particularly the Health Care Informatics core will offer the Partnership a new bridge to additional meaningful interactions with UGA.

12.2 Public Health Informatics Core (PHI) – Curriculum

There are many instructional models at different institutions for teaching "Public Health Informatics," the second core program of the proposed Health Informatics Institute. In addition to the many university academic models, there are agency specific resources to integrate into the curriculum. The CDC offers training modules that prepare health department professionals and public health field researchers for the use of evolving informatics tools and strategies to conduct disease surveillance and other tasks fundamental to the population health management mission. The goal should be to accomplish a balance between an academic/conceptual introduction to the field and hands-on experiential learning. The curriculum for this core should also take into account the goal of partnering with health departments to advance the public health informatics agenda. The newly created graduate introductory course titled "Informatics and Analytics in Public Health and Health Care Organizations" (HPAM 8410) would serve as an introduction to this field (as well as for the HCI track above), with four additional courses, plus a practicum required for the PHI graduate certificate.

12.3 Health Systems Modelling (HSM) Curriculum

We anticipate that forming the HSM core program will also result in the development of a graduate certificate in this field. The graduate certificate will require 15 credits of coursework and a practicum. A new introductory course, "Systems Modeling in a Health Systems Context," will be created as the required introduction. Students will take four other courses in methods and subject options before completing the practicum. One of the first tasks of the Institute, if approved, will be to establish its curriculum committee to identify appropriate courses taught among the Institute membership that will fit the content areas of the three specialty fields and to identify any new courses that will need to be developed.

12.4 Institute-wide Master of Health Informatics Degree

We anticipate eventually developing a single, Institute-wide Master of Health Informatics degree. The degree would have at its base a set of courses to serve as the health informatics core available to students in all three health informatics specialties. In addition to this common core, the HII curriculum would include separate tracks for each of the three specialties described in this proposal: health care informatics, public health informatics, and health systems modeling. Our vision is to interconnect these three differing but related fields of informatics in

order to support and produce research that can be translated to practical utility. We believe that juxtaposing and integrating all three specialties will distinguish the program and yield value in the current health informatics environment.

As with the certificate programs discussed above, we are not proposing or seeking approval for any specific courses for a master's degree at this time. That is a task that should involve the membership of the Institute once it is formed. However, that process could begin with the following conceptual outline. We envision a 2-year, 45-credit master's degree with the curriculum grouped into 3 parts:

- 15 credits of foundational and general informatics and computation skills (e.g., introduction to databases, coding, statistical software). These courses would be taken by all students, with possibly minor variations depending on area of emphasis.

- 15 credits of cross-cutting professional skills and training (project management, practicum, etc.). This component would again be the same for each track, with differences in the details (e.g., type and structure of the practicum).

- 15 credits of courses in the specialized field of each of the three core programs. These last 15 credits will be closely aligned with the certificate programs described previously for each of the three core areas. Most of the courses developed for the certificate programs are expected to be part of either the 15 credit foundation or the 15 specialization credits.

We will consider the possibility of delivering the program in an executive format, with several blocks of intense in-class experience, combined with online classes, a practicum, and a solid research experience. Emory's Executive Master of Public Health program (EMPH) could serve as a model. The Applied Public Health Informatics track of that program is an example to review as we develop our curriculum.

12.5 Foundation Skills

As the Institute contemplates and designs the interdisciplinary core curriculum for the health informatics master's program and the specialized graduate certificate curricula for its three specialty tracks, one very important question arises: what is the level of technical preparation

required for students to thrive in these courses? *In this regard, we strongly support the current initiative of the UGA Graduate School, working with the GII, IOB, College Public Health and several other academic units, to establish a program that will offer UGA graduate students core computational and data analytics training.* Prerequisite-free offerings at UGA like the "Foundations of Data Analytics" and "Foundations of Programming" courses currently under discussion could significantly expand access to the health informatics curriculum described in this document.

12.6 Occupational Opportunities

It is worth emphasizing that students trained under the umbrella of the Health Informatics Institute will have a wide range of possible career opportunities in addition to the academic and research professions, including employment with public health providers, health care providers, a long list of health IT and consumer health vendors, and almost 400 Medicare Accountable Care Organizations across the country controlling $73 billion in Medicare expenditures for 7.2 million beneficiaries (2015).

13. Facilities, Staffing, and Other Resources

The Institute will be provided with academic and office space as needed at the UGA Health Sciences Campus (HSC) in facilities currently overseen by the dean of Public Health. All of the classroom, conferencing, and research technology resources of the CPH at the HSC will be available for use by the HII. The Institute's administrative and research computing needs will be managed by the College of Public Health Office of Information Technology in cooperation with EITS. Administrative support for grant generation and submissions will be provided by the CPH Office of Research. Program budget processes and financial management will be overseen by the CPH Budget Director. The College will also assist in identifying and assigning appropriate administrative support staff. Finally, the new curriculum as outlined will require some new courses. These will mainly be taught by several new faculty at the College of Public Health who began their appointments in August 2016. In each case their offer letters state that they will be responsible for teaching these courses.

14. Budget

The Institute will require no funding from central UGA sources. Support for the initial activities of the Institute will be provided by the College of Public Health. Funding for the events of the Institute to build program cohesion, such as lectures, seminars and other gatherings (see Section 6), will be funded by the CPH from non-state sources. Staff support for the Institute and its director will be assigned as needed. It is expected that the Institute will become revenue positive. Anticipated revenue will include credit hour increases for new courses and certificate programs, a proportion of indirect costs for new research grants originating with the Institute, contracts with outside organizations, and gifts from various sources. The likelihood that forming the HII will increase research funding is suggested by the fact that eight CPH faculty whose work involves Health Informatics currently have nearly $7.6 million in active research grants. See Section 16 for a table of their funding and interests.

15. Program Review

By the end of its third year, the HII will undergo initial review by a review committee appointed by the dean. The Institute will be assessed in terms of its stated goals and a demonstration of its value added to the university. The review should consider the following issues: (1) Has the Institute become a catalyst at UGA for multi-disciplinary research and curriculum development in health informatics? (2) Have new academic courses, certificates, and/or degree programs been established through the involvement of the Institute? (3) Has the Institute helped to provide the means to enhance UGA's reputation in the field of health informatics? (4) Has the Institute developed meaningful interactions with public health organizations and health care institutions in the region and nation? (5) Has the Institute developed the necessary revenue streams and budget structure to progress toward self-sustaining status? If a positive outcome has been achieved in the majority of these fields, continuation of the Institute should be recommended, with future reviews occurring in a seven-year review cycle.

16. Participating Faculty and Staff

Letters of support from UGA deans and unit heads appear in Appendix A. A listing of faculty advocates for the Institute from the CPH and other units is given in Appendix B. The following chart lists some of the CPH PIs whose work involves health informatics expertise. Their combined active research funding exceeds $7.6 million for FY 16 and FY 17.

FY 16 and FY17 Funding (as of – 8/8/16) for CPH Investigators with Informatics Interests

Faculty	2016	2017	Total	Informatics Area
Steven Bellan	--	107,000	$107,000	The integration of mathematical and statistical models with empirical data to understand infectious disease processes
Jose Cordero	578,478	3,075,362	$3,653,840	The application of genetic, behavioral, and environmental data to model fetal health and birth outcomes in Puerto Rico
Andreas Handel	234,725	119,220	$353,945	Mathematical and computational modeling of within- and between-host infectious disease dynamics applied to Influenza, Tuberculosis, Norovirus, drug-resistance, pathogen-immune response interactions and evolution and adaptation of microbial populations
Nate Hansen	48,002	36,959	$84,961	Using cell phone data to model the spread of HIV transmission in high-risk populations
Tim Heckman	--	249,489	$249,489	Trustworthy informatics in HIV; Using social media (Twitter tweets) to identify isolated HIV outbreaks
J.S. Wang	383,488	828,975	$1,212,463	Relating human health and disease transmission to emerging environmental issues, such as global warming, climate change, population growth, and urbanization
Chris Whalen	990,314	735,789	$1,726,103	Using cell phone data to model the transmission of TB in Uganda
Ming Zhang	149,959	134,290	$284,249	Molecular epidemiology of infectious diseases; Computational immunology and virology
Total	$2,384,966	$5,287,084	**$7,672,050**	

Appendices

Appendix A: Letters of Support from UGA deans and unit heads

Appendix B: List of Faculty Advocates

UGA Health Informatics Institute Proposal

Appendix A : Letters of Support from Deans and Unit Heads

Dean Suzanne Barbour – Graduate School

Dean Alan Dorsey – Arts and Sciences

Dean Shelley Nuss – Medical Partnership

Dean Anna Sheyett – Social Work

VP David Lee – OVPR

Dr. Kyle Johnsen – Director, Georgia Institute for Informatics (GII)

Dr. Thiab Taha – Department Head, Computer Science

The University of Georgia

Graduate School

10 October 2016

Phillip L. Williams, Ph.D.
Dean, College of Public Health
University of Georgia
Rhodes Hall - HSC

Re: Proposed establishment of a Health Informatics Institute (HII)

Dear Dr. Whitten and members of the University Curriculum Committee,

I write as Dean of the Graduate School in support of the proposal to establish the UGA Health Informatics Institute (HII) at the University of Georgia, submitted by Dean Phillip Williams of the College of Public Health. Health informatics is a rapidly expanding field with significant opportunity for UGA in terms of research funding opportunities and providing coursework and experience of value to a growing number of students with interests in this field. Furthermore, Health Informatics is listed among the fastest growing sectors in the Georgia economy/ workforce.

Informatics has become increasingly important in many disciplines at UGA, and the University Council recently approved the creation of the Georgia Institutes of Informatics (GII) to encourage and coordinate the development of new programs in the field. We believe that the interdisciplinary Health Informatics Institute should be one of those new programs. Its emphasis on the use of informatics tools and data to assess and improve the health care system, human population health and the capabilities of medical professionals will position UGA correctly for expanded success in these areas.

We anticipate involvement of graduate students in the activities of the Institute that draw together faculty and students to share research perspectives and build research collaborations in Health Informatics. We also will participate in the effort now underway to establish an interdisciplinary curriculum for graduate students in the Health Informatics field. This effort is consistent with the Graduate School's priority to develop interdisciplinary training programs.

In summary, I support the formation of the Health Informatics Institute to help us better realize educational and research goals in a field of growing interest to our program and to the university.

Sincerely,

Suzanne E. Barbour

Dean

The University of Georgia

Franklin College of Arts and Sciences
Office of the Dean

October 10, 2016

Provost Pamela Whitten
Senior Vice President for Academic Affairs
and Provost

University Council
University Curriculum Committee

Re: Proposed establishment of a Health Informatics Institute (HII)

Dear Dr. Whitten and members of the University Curriculum Committee,

I write as Dean of Franklin College of Arts & Sciences in support of the proposal to establish the UGA Health Informatics Institute (HII) at the University of Georgia, submitted by Dean Phillip Williams of the College of Public Health. Health informatics is a rapidly expanding field with significant opportunity for UGA in terms of research funding opportunities and providing coursework and experience of value to a growing number of students with interests in this field.

Informatics has become increasingly important in many disciplines at UGA, and the University Council recently approved the creation of the Georgia Institutes of Informatics (GII) to encourage and coordinate the development of new programs in the field. We believe that the interdisciplinary Health Informatics Institute should be one of those new programs. Its emphasis on the use of informatics tools and data to assess and improve the health care system, human population health and the capabilities of medical professionals will position UGA correctly for expanded success in these areas.

There are a number of activities within Franklin College that are related to Health Informatics and opportunities where Franklin College departments and faculty could engage with HII. Our Computer Science Department has existing strengths in databases and security, both of which clearly will be central to the development of Health Informatics. Many of our faculty also work in Bioinformatics and contribute to the Institute of Bioinformatics. While analysis of DNA and genetics is not the main focus of the proposed HII, there will be instances in which this kind of data and its analysis will become an important part of patient records as part of personal genomics.

We anticipate involvement from our college in the activities of the Institute that draw together faculty and students to share research perspectives and build research collaborations in Health Informatics. We also will participate in the effort now underway to establish an interdisciplinary curriculum for students in the Health Informatics field.

In summary, I support the formation of the Health Informatics Institute to help us better realize educational and research goals in a field of growing interest to our program and to the university.

Sincerely,

Alan T. Dorsey, Dean
Franklin College of Arts & Sciences

Cc: Phillip L. Williams, Dean, College of Public Health

AUGUSTA UNIVERSITY
MEDICAL PARTNERSHIP
UNIVERSITY OF GEORGIA

Office of the Campus Dean
UGA Health Sciences Campus
108 Spear Road
Athens, Georgia 30602

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26 September 2016

Phillip L. Williams, Ph.D.
Dean
College of Public Health
University of Georgia
Rhodes Hall - HSC

Re: Proposed establishment of a Health Informatics Institute (HII)

Dear Dr. Whitten and members of the University Curriculum Committee

I write as the Campus Dean of the AU/UGA Medical Partnership to support the proposal to establish the UGA Health Informatics Institute (HII) at the University of Georgia, submitted by Dean Phillip Williams of the College of Public Health. The HII will be administratively housed in the College of Public Health. We are aware of the vast volume of digital information that is generated and gathered daily across all disciplines, including healthcare, and the need to educate our emerging workforce in this area.

As described in the proposal, the Health Informatics Institute will create a framework for interdisciplinary collaboration with other Faculty working across the university in health informatics and related fields. The HII will also create a context for active research programs with faculty who share an interest in using health informatics techniques to investigate and improve health care of populations. The field of medicine is changing so rapidly with advances in data availability, the implementation of an electronic medical record, and an increased focus on patient quality of care, the graduating physicians of today require a background in informatics to practice effectively in the 21st century.

The Medical Partnership campus employs a highly integrated curriculum that relies on active learning pedagogy that already includes a modest amount of health informatics. We would love to work collaboratively with the proposed Health Informatics Institute to help us develop and refine further the informatics portions of our educational programs. Collaborative research opportunities through the HII would also be of interest to faculty at the Medical Partnership campus. Lastly, students may also want to pursue advanced training and/or certification as suggested in the proposal.

In summary, I write to support the formation of the Health Informatics Institute to help us all better accomplish our educational and research missions.

Cordially yours,

Michelle A. Nuss

Michelle Nuss, M.D., FACP
Campus Dean
AU/UGA Medical Partnership
UGA HSC

The University of Georgia

School of Social Work
Office of the Dean

30 September 2016

Pamela Whitten, PhD
Senior Vice president for Academic Affairs and Provost
University of Georgia

Re: Proposed establishment of a Health Informatics Institute (HII)

Dear Provost Whitten and members of the University Curriculum Committee,

I write as Dean of the School of Social Work in support of the proposal to establish the UGA Health Informatics Institute (HII) at the University of Georgia, submitted by Dean Phillip Williams of the College of Public Health. Health informatics is a rapidly expanding field with significant opportunities for UGA in terms of research funding and providing coursework and educational experience of value to a growing number of students with interests in this field.

Informatics has become increasingly important in many disciplines at UGA, and the University Council recently approved the creation of the Georgia Institutes of Informatics (GII) to encourage and coordinate the development of new programs in the field. We believe that the interdisciplinary Health Informatics Institute should be one of those new programs. Its emphasis on the use of informatics tools and data to assess and improve the health care system, human population health and the capabilities of health professionals will position UGA correctly for expanded success in these areas.

Social work as a discipline is beginning a significant expansion into "big data" research, thus the HII will position our School to be at the cusp of these new efforts. In addition, the social variables studied in our field—poverty, violence, neighborhood instability—are essential components in robust population health models and we can make meaningful contributions to HII studies in these domains. We anticipate involvement from our School in the activities of the Institute that draw together faculty and students to share research perspectives and build research collaborations in Health Informatics. We also will participate in the effort now underway to establish an interdisciplinary curriculum for students in the Health Informatics field.

In summary, I support the formation of the Health Informatics Institute to help us better realize educational and research goals in a field of growing interest to our School and to the university.

Sincerely,

Anna Scheyett, MSW, PhD
Dean and Professor

279 Williams Street * Athens, Georgia 30602 * Telephone 706-542-5424 * Fax 706-354-3917

The University of Georgia

Office of the Vice President for Research

October 11, 2016

Dr. Pamela Whitten
Senior Vice President for Academic Affairs and Provost
203 Administration Building
Athens, GA 30602

Re: Proposed establishment of a Health Informatics Institute

Dear Provost Whitten and Members of the University Curriculum Committee,

I write in support of the proposal to establish the UGA Health Informatics Institute at the University of Georgia, submitted by Dean Williams of the College of Public Health.

Health informatics is a rapidly expanding field that offers major opportunities for UGA in terms of research and external grant funding, as well as coursework offerings for the growing number of students interested in this field. The proposal is also timely, given the decade-long expansion of human health programs at UGA, the recent establishment of the Georgia Institutes of Informatics, and the success of the existing Institute for Bioinformatics. The proposed Health Informatics Institute will build on and also synergize with these prior investments, while adding an important new dimension. Its emphasis on informatics tools and data to assess and improve the health care system, human population health and the capabilities of medical professionals will further position UGA for expanded impact in these areas.

The Institute for Bioinformatics reports to my office and I know that its director, Dr. Jessie Kissinger, is enthusiastic about the proposed Health Informatics Institute. She appropriately views it as filling another, very important niche within the broad informatics field at UGA. I will work with Jessie to ensure close, collaborative ties between the two institutes.

In closing, I am pleased to offer my strong support for the proposed Health Informatics Institute.

Best wishes,

David Lee, PhD
Vice President for Research

150 Paul D. Coverdell Center for Biomedical and Health Sciences
Athens, Georgia 30602 • Telephone 706-542-5969 • Fax 706-542-5978

30 September 2016

GEORGIA
Informatics Institutes
for Research and Education

Phillip L. Williams, Ph.D.
Dean, College of Public Health
University of Georgia
Rhodes Hall - HSC

Re: Proposed establishment of a Health Informatics Institute (HII)

Dear Dr. Whitten and members of the University Curriculum Committee,

I write as Director of the Georgia Informatics Institutes (GII) for Research and Education in support of the proposal to establish the UGA Health Informatics Institute (HII) at the University of Georgia, submitted by Dean Phillip Williams of the College of Public Health. As I detail below, and as I discussed with Dean Williams when I requested the support of the College of Public health for the GII, I believe that the HII represents a foundational step in the development of domain specific informatics efforts on campus to complement the mission of the newly formed GII.

The mission of the GII is to be a hub, integrator, and incubator for informatics activities on campus. One aspect of this mission is to promote the formation of new domain specific informatics programs as the expertise and activities emerge and coalesce on campus. In the case of the HII, such expertise and activities already exist, as described in the proposal. As such, the HII is well positioned to lead health informatics research and graduate programs, and I believe will be immensely successful at attracting new funding and talent to UGA.

As the proposal indicates, and as is the case with the Institute of Bioinformatics, we are happy to have the HII as an affiliated unit in the GII network, with the GII promoting the HII as one of the core informatics institutes on campus. In this way, we avoid confusion that UGA has overlapping efforts in informatics, highlighting that UGA has both broad support for the infusion of informatics across campus as well as for vertical growth in key areas. We intend to coordinate extensively with HII, and look forward to our future efforts in advancing informatics research and education.

Sincerely,

Kyle Johnsen, PhD
Director, Georgia Informatics Institutes
Associate Professor, College of Engineering
Driftmier Engineering Center
University of Georgia
kjohnsen@uga.edu

1785
The University of Georgia®

Department of Computer Science

06 October 2016

Phillip L. Williams, Ph.D.
Dean, College of Public Health
University of Georgia
Rhodes Hall - HSC

Re: Proposed establishment of a Health Informatics Institute (HII)

Dear Dr. Whitten and members of the University Curriculum Committee,

I write as the Department Head of the Computer Science Department at UGA in support of the proposal to establish the UGA Health Informatics Institute (HII) at the University of Georgia, submitted by Dean Phillip Williams of the College of Public Health. Health informatics is a rapidly expanding field with significant opportunity for UGA in terms of research funding opportunities and providing coursework and experience of value to a growing number of students with interests in this field.

Informatics has become increasingly important in many disciplines at UGA, and the University Council recently approved the creation of the Georgia Informatics Institute(GII) for Research and Education to encourage and coordinate the development of new programs in the field. We believe that the interdisciplinary Health Informatics Institute should be one of those new programs. Its emphasis on the use of informatics tools and data to assess and improve the health care system, human population health and the capabilities of medical professionals will position UGA correctly for expanded success in these areas.

In April 2016, the University Council has approved the Computer Science Undergraduate Certificate in Applied Data Science and a series of courses in Data Science. I expect that this certificate and the courses will greatly benefit the proposed Institute. In addition, a good number of Computer Science Faculty and students have strong interest in working with the proposed Health Informatics Institute and some have already strong collaboration with faculty in the health Sciences.

We anticipate involvement from our Department in the activities of the Institute that draw together faculty and students to share research perspectives and build research collaborations in Health Informatics. We also will participate in the effort now underway to establish an interdisciplinary curriculum for students in the Health Informatics field.

In summary, I support the formation of the Health Informatics Institute to help us better realize educational and research goals in a field of growing interest to our program and to the university.

Sincerely,

Thiab Taha/Professor & Head of Computer Science Department

415 Boyd Graduate Studies Research Center • Athens, Georgia 30602-7404 • Telephone 706-542-2911 • Fax 706-542-2966

The University of Georgia

College of Engineering

October 14, 2016

Phillip L. Williams, Ph.D.
Dean, College of Public Health
University of Georgia
Rhodes Hall - HSC

Re: Proposed establishment of a Health Informatics Institute (HII)

Dear Provost Whitten and members of the University Curriculum Committee,

I write as Dean of the College of Engineering in support of the proposal to establish the UGA Health Informatics Institute (HII) at the University of Georgia, submitted by Dean Phillip Williams of the College of Public Health. Health informatics is a rapidly expanding field with significant opportunity for UGA in terms of research funding opportunities and providing coursework and experience of value to a growing number of students with interests in this field.

Informatics has become increasingly important in many disciplines at UGA – engineering in particular -- and the University Council recently approved the creation of the Georgia Institutes of Informatics (GII) to encourage and coordinate the development of new programs in the field. We see numerous opportunities collaboration between the College of Engineering and the proposed HII in areas such as mobile health technology, new modalities for health assessment, and new solutions for analyzing and drawing knowledge from health-related data.

The interdisciplinary Health Informatics Institute will allow us to effectively collaborate across disciplinary boundaries. Its emphasis on the use of informatics tools and data to assess and improve the health care system, human population health and the capabilities of medical professionals will position UGA correctly for expanded success in these areas. We anticipate involvement from our college in the activities of the Institute that draw together faculty and students to share research perspectives and build research collaborations in Health Informatics. We also will participate in the effort now underway to establish an interdisciplinary curriculum for students in the Health Informatics field.

Room 130 Paul D. Coverdell Center • Athens, Georgia 30602 • (706) 542-1653 • FAX (706) 542-8806
An Equal Opportunity/Affirmative Action Institute

In summary, I support the formation of the Health Informatics Institute to help us better realize educational and research goals in a field of growing interest to our program and to the university.

Sincerely,

Donald J. Leo
Dean and UGA Foundation Professor in Engineering

The University of Georgia

Benjamin C. Ayers, *Dean*
Earl Davis Chair in Taxation

Terry College of Business
Office of the Dean

335 Brooks Hall
Athens, Georgia 30602-6251
Telephone 706-542-8100
Fax 706-542-3835
busdean@uga.edu

October 27, 2016

Phillip L. Williams, Ph.D.
Dean, College of Public Health
University of Georgia
Rhodes Hall - HSC

Re: Proposed establishment of a Health Informatics Institute (HII)

Dear Dean Williams:

I write as Dean of the Terry College of Business in support of the proposal to establish the UGA Health Informatics Institute (HII) at the University of Georgia, submitted by Dean Phillip Williams of the College of Public Health. The growing field of health informatics has significant promise for research funding opportunities. Students will also benefit from coursework in this field, which will enhance their understanding of this important sector in the Georgia economy.

We appreciate the mission of the Health Informatics Institute to create dynamic interdisciplinary interactions with faculty involved in health informatics techniques. Without question, informatics is increasingly important in many disciplines at UGA and the Health Informatics Institute will be integral to the use of informatics tools and data to assess and improve the health care system, human population health and the capabilities of medical professionals. The Health Informatics Institute will position UGA correctly for expanded success in these areas.

There are a number of faculty within the Terry College who are engaged in research related to health informatics. Faculty in Management Information Systems, Economics, Finance, Management and Risk Management are engaged in research relevant to the proposed Health Informatics Institute. We hope that involvement of Terry faculty in the Institute's activities will build important partnerships and intellectual intersections.

I support the formation of the Health Informatics Institute which will help us better realize educational and research goals. Our faculty look forward to engaging with the Institute on these important goals.

Sincerely,

Benjamin C. Ayers

/abg

The University of Georgia

College of Pharmacy

31 October 2016

Dr. Pamela Whitten
Senior Vice President for
Academic Affairs & Provost

Members of University of Georgia
Curriculum Committee

RE: Proposed Establishment of a Health Informatics Institute (HII)

Dear Provost Whitten and Members of the University Curriculum Committee:

I am writing to provide the College of Pharmacy's support for the proposal submitted by Dean Phillip Williams of the College of Public Health, to establish the Health Informatics Institute (HII) at the University of Georgia.

The use of informatics and data mining are becoming increasingly important tools for developing both preliminary data, and seeking answers from an accumulation of immense amounts of population, and environmental data sets. As such, informatics is becoming more essential for many disciplines, and the University Council recently approved the creation of the Georgia Institutes of Informatics (GII) to encourage, and coordinate the development of new programs in the field. We believe that the interdisciplinary HII should be one of those new programs. Its emphasis on the use of informatics tools, and data in the quest of improving the health care system, human population, and the capabilities of medical professionals will position UGA for expanded use of informatics in these fields.

The need for expertise in building better models, and data mining tools in the health sciences is critical for UGA to modernize and advance its research approach in improving the health and well-being of the U.S. population.

In summary, I support the formation of the Health Informatics Institute to help us better realize educational and research goals in a field of growing interest to our program, and to the University.

Sincerely,

Svein Øie
Dean

SØ:amp

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Appendix B: HII Faculty Advocates

CPH Faculty PIs with Funded Programs Involving Health Informatics

Steve Bellan
Jose Cordero
Andreas Handel
Nathan Hansen
Timothy Heckman
JS Wang
Christopher Whalen
Ming Zhang

CPH Faculty with Informatics Expertise and Research Involvement

Grace Bagwell
Mark Ebell
Kersten Gerst Emerson
Jennifer Gay
Dale Green
Britanni Harmon
Erin Lipp
Ye Shen
Janani Thapa
Mark Wilson

Advocates Outside CPH

Jonathan Murrow Medical Partnership
Scott Richardson Medical Partnership
Kyle Johnson Engineering
Larry Hornak Engineering
Lakshmish Ramaswamy Computer Sciences
Shannon Quinn Computer Sciences
Jung Sun Lee FCS
Mary Anne Johnson FCS