###### EDUCATION

Board Certified Cardiology 2015

Board Certified Internal Medicine 2010

#### **University Field of Study Degree Dates \_**

University of Utah Advanced HF/Transplant Fellowship 2012 - 2013

University of Utah Cardiology Fellowship 2009 - 2012

University of Utah Internal Medicine Residency 2006 - 2009

University of Utah Medical School MD 2002 - 2006

University of Utah Medical Informatics PhD 1999 - 2005

Penn. State Univ. Math, Applied Analysis BS 1987 - 1992

##### RESEARCH EXPERIENCE

***2012-2013 HF/Cardiology, University of Utah, Salt Lake City, Utah***

**Preceptor: Edward M. Gilbert, M.D.**

I am studied the effects of lactic acidosis post transplant compared to post elective LVAD placement

***2012-2013 Cardiology, University of Utah, Salt Lake City, Utah***

**Preceptor: Edward M. Gilbert, M.D.**

I am studied the effects of heart rate post heart transplant.

***2009-2012 Cardiology, University of Utah, Salt Lake City, Utah***

**Preceptor: Kevin Whitehead, M.D., Ph.D.**

I determined the population characteristics of people with cerebral cavernous malformations.

***2007-2009 Cardiology, University of Utah, Salt Lake City, Utah***

**Preceptor: Sheldon Litwin, M.D.**

I am studied the possible correlation of left and right ventricular timing and the relation to ventricular dysfunction and the effects of weight loss.

## 2/2000 – 6/2005 *Medical Informatics, University of Utah, Salt Lake City, Utah* PhD Thesis

## Chairman: Dwayne Westenskow, PhD I developed a graphical pulmonary display that visually represents respiratory related variables. By combining aspects of both cognitive and ecological graphical displays, the pulmonary display focused on data representation, emergent features, and reference frames. Five design iterations were needed to develop an intuitive display. To test the graphical pulmonary display accuracy and utility, I used an anesthesia high-resolution human simulator. Measuring time to diagnose and time to treat, I concluded that subjects were able to detect and treat adverse pulmonary events with the graphical pulmonary display faster than with conventional displays. I tested the usability and acceptance of the graphical pulmonary display by observing the display in the setting of an intensive care unit. I counted glances towards the display and analyzed questionnaires to measure usability and acceptance by clinicians. The pulmonary graphical display was perceived as useful and an accurate representation of respiratory variables.

**PROFESSIONAL EXPERIENCE**

**8/2013 – present** **Idaho Heart Institute, Advanced Heart Failure Director**

Currently working as a general cardiologist with emphasis in advanced heart failure/transplant and LVADs in Idaho Falls. I have an affiliation with Eastern Idaho Regional Medical Center (EIRMC) and the Advanced Heart Failure Clinic (Director). I am a team member of an excellent team of cardiologist and have experience reading Echos, Nuclear stress tests, Pacemakers, Monitors, Treadmill tests. I have experience with invasive procedures such as right heart caths and heart biopsies.

**7/2012 – 6/2013 *Advanced Heart Failure/ Transplant Fellowship, University of Utah, Salt Lake City, Utah***

I am training in advanced heart failure/heart transplant and cared for patients at 3 of the major hospitals in the SLC region to include the University of Utah, the SLC VA hospital, and Intermountain Health Care. The transplant program performs about 20 transplants per year within the Utah Cardiac Transplant Program.

**7/09 – 6/2012 *Cardiology Fellowship, University of Utah, Salt Lake City, Utah***

I have completed my general cardiology training at the University of Utah. I have trained in cardiac angiography, echocardiograms (TTE and TEE), cardiac CT, cardiac MRIs, cardiac Nuc stress tests, holter monitoring, cardioversions, and pacemaker interrogation.

**8/06 – 7/09 *Internal Medicine Resident, University of Utah, Salt Lake City, Utah***

I have completed my residency in Internal Medicine Resident serving the VA Hospital, IMC Hospital, and University of Utah. I have been responsible for the care of inpatients, outpatients on the general medicine service. I also have served on the ER service, Geriatrics, Medical ICU, and the Cardiac ICU.

**8/99 – 8/06*****Women’s and Newborn, iHC Lake Park, Salt Lake City*, Utah**

Medical Informatician for Maternal Fetal Medicine

I design, program, test, implement, and support a unique software tool that generates fetal ultrasound reports.  The software program is designed with a graphical user interface that integrates with perinatologists workflow processes.  The program uses discrete data elements that populates drop down boxes and popups to support research endeavors easily.  The database utilizes Oracle as the backend for speed, flexibility, and stability.  The program is currently installed at Intermountain Health Care Hospitals throughout Utah.

**8/99 – 11/02 *OB Diagnostic Center,* Univ. of Utah Hospital, Utah**

Medical Informatician for OB Diagnostic Center

I designed, programmed, tested, implemented, and supported a unique software tool that generated fetal ultrasound reports.  The software was intended to share data elements with the Intermountain Health Care version of software.  The University of Utah OB Diagnostic department decided to discontinue the project.

**7/00-11/00 *DoHealth,* Salt Lake City, Utah**

Women’s Health Web Developer Lead

I was the lead developer responsible for the women’s health section of a medical information web page.  I worked with a team of information managers, graphic artists, program managers, and other test leads.

**7/99-4/00 *UsMedicalNetwork,* New York, New York**

Software Developer Consultant

I worked as an independent remote medical informatics consultant for a New York based company that developed software for a medical knowledge system.

**7/97-8/99 *Intlex,* Hill Air Force Base, Utah**

Combined Test Facility Lead, Integration Test Schedule lead, Co-lead on the information system development team

I was the technical team manager charged with overseeing operational tests of the U2 reconnaissance aircraft software.  In addition, as the integration test schedule lead of all aircraft, I was responsible for ensuring all tests were scheduled, timely, and successful.

**4/93-7/97 *Lockheed Martin Management & Data Systems,* Valley Forge, PA**

Software Engineer, Test Director, Systems Engineer

I worked both as software systems engineer in the Systems Integration department and as a software engineer in the Technical Operations department and held classified security clearances.  As a systems engineer, I designed and coded test simulators, prepared deliverable databases, and developed test requirements.  As a software engineer, I designed, implemented, and verified database development using C++, embedded SQL, Fortran, and Object Oriented Analysis and Design programming.

PATENTS

Pulmonary Metaphor for ICU and Anesthesia (2001 University of Utah)

PI: SB Wachter

**Publications**

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| **Wachter SB, Gilbert EM** Beta-adrenergic receptors, from their discovery and characterization through their manipulation to beneficial clinical application, Cardiology 2012; 122(2):104-12 |
| **Wachter SB**, McCandless SP, Gilbert EM, Stoddard GJ, Kfoury AG, Reid BB, McKellar SH, Nativi-Nicolau J, Saidi A, Barney J, McCreath L, Koliopoulou A, Wright SE, Fang JC, Stehlik J, Selzman CH, Drakos SG [Elevated resting heart rate in heart transplant recipients: innocent bystander or adverse prognostic indicator?](http://www.ncbi.nlm.nih.gov/pubmed/26171948) Clin Transplant. 2015 Sep;29(9):829-34. doi: 10.1111/ctr.12587. Epub 2015 Jul 27 |
| MacGregor JF, **Wachter SB**, Munger M, Stoddard G, Bristow MR, Gilbert EM. [Carvedilol produces sustained long-term benefits: follow-up at 12 years.](http://www.ncbi.nlm.nih.gov/pubmed/19187400) Congest Heart Fail. 2009 Jan-Feb;15(1):5-8. |
| **Wachter SB**, Johnson K, Albert R, Syroid N, Drews F, Westenskow D. [The evaluation of a pulmonary display to detect adverse respiratory events using high resolution human simulator.](http://www.ncbi.nlm.nih.gov/pubmed/16929038) J Am Med Inform Assoc. 2006 Nov-Dec;13(6):635-42. Epub 2006 Aug 23. |
| **Wachter SB**, Markewitz B, Rose R, Westenskow D. [Evaluation of a pulmonary graphical display in the medical intensive care unit: an observational study.](http://www.ncbi.nlm.nih.gov/pubmed/15896697) J Biomed Inform. 2005 Jun;38(3):239-43. Epub 2004 Nov 30 |
| **Wachter SB**, Agutter J, Syroid N, Drews F, Weinger MB, Westenskow D. [The employment of an iterative design process to develop a pulmonary graphical display.](http://www.ncbi.nlm.nih.gov/pubmed/12668693) J Am Med Inform Assoc. 2003 Jul-Aug;10(4):363-72. Epub 2003 Mar 28. |