

Healthcare Pathways



Tony Hansberry II - Medical Inventor

Tony Hansberry II is only 15, but has already become instrumental in developing an advanced surgical stitching procedure used in hysterectomies. His goal is to attend medical school and become a neurosurgeon. How does a high school freshman in Florida develop new methods for invasive surgery using laparoscopic instruments?

For Tony, it began in school. He attends Darnell-Cookman School of the Medical Arts, a medical magnet school for middle and high school students. As part of its integrated medical curriculum, students receive medical instruction, but are also exposed to medical professionals who demonstrate advanced surgical techniques with specialized equipment.

His lead medical teacher, Angela TenBroeck, told the Florida Times-Union that Hansberry is a typical student, but is way ahead of his classmates when it comes to surgical skills. "I would put him up against a first year medical student. He is an outstanding young man," she said.

During his summer break, Tony volunteered at the University of Florida's Center for Simulation Education and Safety Research (CSESaR) at Shands Jacksonville Hospital. He was supervised by Dr. Brent Siebel, a urogynecologist, and Bruce Nappi, the administrative director. Together they worked with Tony exploring the mannequins and simulation equipment that physicians and nurses use in training. He became quite interested in invasive surgery and using laparoscopic instruments.

"If you have a passion for it – it's probably for you."

— Tony Hansberry II



Tony Hansberry II (front right), during Medical Education Week at the University of Florida.

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As the story goes, one day an obstetrics and gynecology professor asked the group to help him figure out why no one was using a particular surgical device, called an endostitch, for hysterectomy suturing procedures. This long medical device has clamps on the end, but Tony used the instrument in a new way allowing for vertical suturing, instead of the traditional horizontal method.

After a day or two, Tony had perfected and tested his new technique. He soon developed a science fair project comparing the suturing times of the vertical endostitch closures vs. the horizontal closures using a conventional needle driver instrument. His results showed he was able to stitch three times faster using this new method. Use of this inventive technique may lead to shorter surgical times and improved patient treatment.

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Educational Tips – Keep on the Right Path to College, Medical School, and Beyond

You've heard it from your parents and your instructors, the path to college and a bright future as a health professional is hard work. But the hard work is not measured only in test scores and grade point averages. Take the following steps to expand your skills and experiences, and you'll be heading in the right direction.

1) Start to challenge yourself early – Begin by taking college prep / advanced placement courses in high school level math, english, and science. Consider taking advanced placement exams, which can help you earn college credits if you score well.

2) Take practice exams – Take any and all practice exams for the SAT and the MCATs in order to become a better test-taker and to pinpoint your weakest areas. Then work to boost your scores in your areas of weakness. You will find that these tests in particular require a different set of skills from traditional course testing. Free resources and commercial review courses are available.

3) Find extra-curricular activities that interest you – Showcase your talents by becoming active in school tutoring programs or student organizations. Take a leadership role! This will demonstrate your maturity and interpersonal skills.

4) Gain clinical experience – Look to your local area hospitals, clinics, or wellness centers for volunteer opportunities or research-intensive positions available.

Performing this work can be a strong indicator of your determination to make a difference in your community and your ability to work as part of a team.

5) Develop good relationships with your teachers or professors – These are the individuals who have much to say regarding your future. Become an active front-row participant in your classroom discussions. The instructor will notice and respect your abilities, perhaps enough to write you a letter of recommendation in the future.

6) Stand out in the crowd – Spend time exploring who you are and what jobs interest you. Look at challenges within your own community to answer the question, “What makes me different from all the others?”

For more information on advanced placement courses and exams, please visit:

<http://www.collegeboard.com/student/testing/ap/about.html>

For more information on SAT and MCAT practice tests, please visit:

<http://www.aamc.org/students/mcat/preparing/prepfaq.htm>

<http://www.princetonreview.com/college/sat-psat-practice.aspx>

<http://www.kaptest.com/College/Learn-and-Discuss/Tools/sat-quizbank.html>

Tony Hansberry II - Medical Inventor *Continued...*

“I love medicine and surgery and believe you can do all things you set your mind to. Push yourself and have persistence. If you have a passion for it – it's probably for you,” Tony stated during a recent interview.



Tony Hansberry II and Dr. Brent Siebel simulate laparoscopic surgery.

Tony recently presented his research at the February 2009 regional science fair in the medical category, and came in second place. A short three months later, he was demonstrating the technique to a large assembly of doctors and surgeons as part of the University of Florida's medical education week. “I was not nervous at all,” said Tony, “There were many doctors and nurses also presenting and judging. The simulations and studies were interesting to look at.”

Tony's determination and skills have impressed many and his achievements are well-deserved. He plans to continue his education in neurosurgery at the University of Florida after graduating high school. Tony says of his future, “I am interested in the nervous system and brain functions - where just a small amount of damage can cause detrimental effects. I can help people while figuring out problems.”

Learning from the Inside – COPE Health Solutions' Clinical Care Extender Program

In Southern California, students have a unique opportunity to gain valuable direct patient care experience and prepare for a successful career in medicine. COPE Health Solutions coordinates the Clinical Care Extender internship program which recruits students to learn alongside healthcare professionals inside community clinics and local hospitals. Interns learn from the inside by viewing surgeries, assisting with basic patient care, and interacting with the various members of the healthcare team.

The Clinical Care Extender Program operates in eight hospitals in southern California. These community/hospital partnerships are located throughout the greater Los Angeles area including: Covina, West Covina, Long Beach, Van Nuys, Newport Beach, Lynwood, Riverside, and Oxnard. Students apply for year-long clinical internships at one of the hospitals to gain hands-on experience serving alongside healthcare staff and working professionals.

The program selects top healthcare professional students from local colleges and universities as well as graduates and seasoned professionals re-entering health professions. More than 1,780 students are currently participating in the program throughout southern California.

One of the program's successes is Talin Arslanian, a senior at the University of California, Los Angeles studying physiology. She became involved in the program 2 years ago as a sophomore. She felt it was a great fit and the training at Valley Presbyterian Acute Care Hospital in Van Nuys was close to home.

“I liked medicine, but through the COPE program and the supportive staff, I now know what it really means to be a doctor.”

At the hospital, Talin interacted with patients and patient-care teams on every floor. She has observed CAT and MRI scans, heart pacemaker inserts, and assisted with EKG tests.

“The OR (operating room) was amazing. I was taking physiology and anatomy classes at the same time and integrating the learning.”

Talin now works as the Clinical Extender Program's Recruitment and Training Team Director, coordinating outreach efforts to college pre-medical organizations and students interested in a health career. She encourages students to recognize the many jobs available including working as a nurse, a physical therapist, or a physical assistant and to apply to the program.



Students from the Clinical Care Extender internship program.



COPE Health Solutions students.

“The interaction with patients and staff helps you learn about yourself and find the path you can be sure about.”

Students in the program commit to serving a minimum of one four-hour shift each week until accumulating 240 hours of volunteer service. Many hospital departments, including nursing units, Emergency Departments, Labor and Delivery Departments, and operating rooms are open to Clinical Care Extender program participants. Most departments allow interns to serve shifts seven days a week from 7 a.m. to 11 p.m. Students rotate into a different hospital department every three months and are able to learn basic day-to-day patient care and observe professionals in action.

If you are looking for real hospital experience, the COPE Health Solutions Clinical Care Extender Program recruits a new class of interns every three months! Get more information today by visiting:
<http://copehealthsolutions.org/hwt/cce.html>

In Search of 'Health' Informatics

What is Health Informatics?

Health Informatics is Computer Science applied to the storage, retrieval, and analysis of health related information. It essentially provides the technological tools necessary for health professionals to successfully address today's health related issues.

Why Health Informatics?

Health Informatics is one of the fastest growing fields and holds the potential to revolutionize the healthcare industry. It reduces the time needed per patient and increases access to healthcare. Quality of care is also increased as a result of information being more readily available, in real-time, to health professionals. Electronic Health Records [EHR] is one of the latest technologies currently being used to help deliver patient information.

Is Health Informatics right for you?

If this career sounds like something you might be interested in, the following chart may be helpful:

Career	Minimum Education	Description	Salary
Health Information Analysts/Technicians	Health Information Technology [AA]	Manages patient information and healthcare data to ensure privacy and security of protected health information.	\$27,664 to \$46,659
Pharmacy Systems Analyst	Pharmacy [BS]	Performs routine and complex analysis, design, testing, implementation and support of application systems and projects.	\$30,000 to \$48,000
Healthcare Webmaster	Computer Science [BS], Management Information Systems [BS]	Manages the technical end of healthcare organizations Internet presence (Internet/intranet).	\$62,247 to \$103,785
Clinical Data Manager	Computer Science [BS], Management Information Systems [BS]	Performs tasks associated with the full life cycle of data management including start-up through data cleaning and database security.	\$85,857 to \$104,176
Software Engineer	Computer Science [BS]	Develops and maintains Health Informatics Systems using various relational database, client/server, object-oriented tools, and programming languages.	\$76,058 to \$121,064
Medical and Health Services Managers	Health Services Administration [MHA]	Performs tasks associated with integration of health care delivery systems, technological innovations, regulatory environment, restructuring of work, and preventive care.	\$95,168 to \$125,946

Data provided by the Employment Development Department, Labor Market Information Division for the State of California, September 2009.

For more information please visit: <http://www.labormarketinfo.edd.ca.gov/>



Health 'IT' Hero

Rigoberto "Rigo" Meza, Health IT Professional

Courage and inspiration can't be summed up any better than through the story of Rigoberto "Rigo" Meza. His professional demeanor and quiet personality help hide the struggle and hardship he's had to overcome on his journey towards success. Growing up in Los Angeles, Rigo saw the effects that poverty, drugs, and gangs have on young people.

While still in high school, Rigo started attending the Cedars-Sinai Center Youth Employment and Development Program. While in the program, he received mentoring and the many skills to help him pursue a college education. Though he struggled early in college, Rigo became the hero of his own life and graduated from ITT Tech with a degree in Computer Technology.

As a college graduate, Rigo continued to keep in touch with the Cedars-Sinai Center Youth Employment and Development Program, reaching out to those that helped him along the way. As fate would have it, an IT position opened up two years later, helping Rigo establish his career as an IT professional. Rigo now finds himself having gone full circle. As a Senior Systems Analyst at Cedars-Sinai, he mentors and inspires the next generation of health IT professionals. He's living proof that you should never give up no matter how hard it gets.

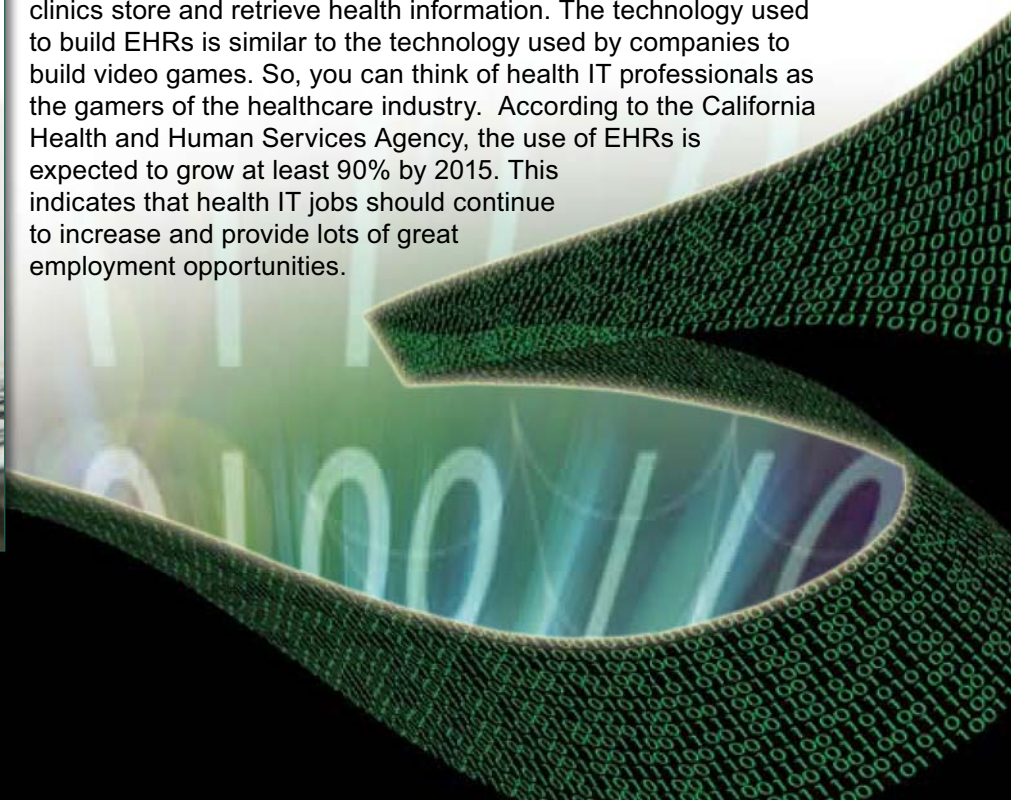
"Don't ever give up, no matter how hard it gets"

— Rigoberto "Rigo" Meza

What are Electronic Health Records?



Electronic Health Records (EHR), are the new way hospitals and clinics store and retrieve health information. The technology used to build EHRs is similar to the technology used by companies to build video games. So, you can think of health IT professionals as the gamers of the healthcare industry. According to the California Health and Human Services Agency, the use of EHRs is expected to grow at least 90% by 2015. This indicates that health IT jobs should continue to increase and provide lots of great employment opportunities.



DNA Tests, X-Rays, and Broken Bones – Reach-Out West End’s Student Health Careers Program, “Exploring Health Careers”



Healthcare professionals visit Reach-Out students.

Exploring Health Careers brings together middle and high school students from Pomona and Rancho Cucamonga to learn from health professionals in public health, medical, and mental health fields. The program exposes local at-risk youth to the wide variety of health careers and the responsibilities of health professionals in the community.

The students meet once a week at local community centers in Rancho Cucamonga and Pomona to hear from health professionals in the community. They also participate in hands-on activities such as the casting of limbs, DNA experiments and training in basic medical procedures. Volunteers in the past have included nutritionists, doctors and nurses, hearing aid specialists, ultrasound and x-ray technicians, dentists and dental assistants, and paramedics.



Demonstration of emergency care.

The program is coordinated by Reach-Out West End, which provides nonprofit services to youth and families in Upland, Pomona, Rancho Cucamonga and other surrounding communities. Reach-Out West End also recruits graduate student interns to coordinate volunteers, student activities and learning sites.

The program is now in its third year and runs a summer session, which lasts for six weeks, and a winter session, lasting for seventeen weeks. Program partners in past years have included Arrowhead Regional Hospital and the San Antonio Community Hospital. Most recently, the program has partnered with Pomona Valley Medical Center.

Students are recruited at local high schools through presentations outlining the program. Students also enter the program through local community centers, including the Rancho Cucamonga Family Resource Center and the Renacimiento Center in Pomona.



Reach-Out students participate in DNA experiments.

At the end of each program session, students, parents, health professionals, and volunteers participate in a graduation ceremony. This year, 30 middle and high school students participated in the graduation events, which were held at Pomona Valley Hospital’s Urgent Care Center. A tour of the facility was given and health professionals spoke about the hard work the students recently completed.

If you are interested in learning more about the Exploring Health Careers program in the greater Rancho Cucamonga, Upland, and Pomona area, please visit:

<http://www.reachout-westend.org/>

“Without this outreach effort, many students would not be presented with the choice to pursue a health career.” —Richard Hernandez, Special Projects Director, Reach-Out West End

Taking a Closer Look – Fastest Growing Health Careers in Central California

Interested in helping others and pursuing a career in one of the allied health professions in Central California? Many of the state's fastest growing careers are also opportunities that don't require an advanced college degree. Allied health professionals perform direct patient care services and support services, assisting patients in every type of care setting. Many jobs include entry-level positions which require only a certificate. Depending on the job, licensing and certification requirements can be met in one or two years.

Fastest Growing Allied Health Careers in the Central California Region (Amador, Calaveras, Fresno, Inyo, Kern, Kings, Madera, Mariposa, Merced, Mono, Monterey, San Benito, San Joaquin, San Luis Obispo, Santa Cruz, Stanislaus, Tulare, and Tuolumne counties)

Health Occupation	Education	2007 Average Annual Salary for Region
Dental Assistant	Certificate (1-2 yr)	\$25,230 – \$35,714
Medical Assistant	Certificate (1-2 yr)	\$24,253 – \$31,803
Home Health Aide	Certificate (<1 yr)	\$17,555 – \$21,362
Nursing Assistant/Aide	Certificate (<1 yr)	\$20,405 – \$27,789
Licensed Vocational Nurse	Certificate (1-2 yr)	\$37,232 – \$49,546
EMT/Paramedic	Certificate (1-2 yr)	\$31,720 – \$58,906

Data from the January 2009 Report, *Allied Health Regional Workforce Analysis Central California*, prepared by the UCSF Center for the Health Professions and supported by The California Endowment.

In Central California, the highest projected employment opportunities will occur in Fresno, Kern, San Joaquin, Stanislaus, and Tulare counties. The overall population is expected to grow by roughly three million people over the next two decades, particularly in the region's largest counties: Fresno, Kern, and San Joaquin. Local healthcare needs will also undergo major changes by 2030, when the over-65 age group is projected to represent more than half of the population.

Regional changes in healthcare needs over the next few decades will provide many opportunities for careers in health. Explore allied health career training offered at your local community college or training facility, and find your future in helping others locally!

For more information on allied health career licensing requirements and educational resources, please visit:

<http://www.cdph.ca.gov/programs/Pages/LnC.aspx>

http://www.careersinthevalley.com/Train_Search.php

https://misweb.cccco.edu/webproginv/prod/toptitlelist_n.cfm

Tips for Getting Your “ZZZZZs”



Spent too many energy drink-fueled nights cramming for the big test? Be aware that one of the most important elements of good health is often the most overlooked – getting enough sleep. Without rest for the mind and body, we are not as productive in our daily activities, our mood can change often, and our energy level runs low.

More and more scientific studies are uncovering a close relationship between poor or insufficient sleep habits with a variety of chronic illnesses and diseases, including high blood pressure, obesity, and mental well being.

Too little sleep may impair the body's natural ability to use insulin and maintain glucose levels, a key element of diabetes. Your body's natural immunity to colds and flu is also tightly linked to sleep duration.

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Loan Repayment Program News: Application Process Now Faster and Easier!

Significant changes have been made to reduce the complexity and required documentation in the application process for the National Health Service Corps (NHSC) Loan Repayment Program. The American Recovery and Reinvestment Act / NHSC awards up to \$50,000 toward repayment of qualifying, outstanding, educational loans for primary medical, dental and mental health clinicians. Updated requirements, online assistance, and easy-to-use instructions are now available from the NHSC at: <http://nhsc.hrsa.gov/loanrepayment/>

For additional resources and information on the applications process, please visit:
<http://www.oshpd.ca.gov/HWDD/SLRP.html>

Tips for Getting Your “ZZZZZZs” Continued...

Sleep is also vital to maintaining your proper weight by balancing cellular and gastrointestinal hormone secretions, which can assist in lowering your risk of obesity. Many experts recommend including proper sleep habits in any weight management plan. Hypertension, or high blood pressure, has also been shown to improve with proper amounts of sleep.

The average adult needs a total of seven to nine hours of sleep each night. Teens require slightly more sleep than adults, an average of 9 hours. If you sleep fewer hours occasionally, sleep experts recommend replenishing your resting hours in the next few nights. As we grow older, we may awake more often, but still require the same amount of sleep.

Keep yourself healthy and happy by developing good sleep habits. You may never eliminate long nights of study, but

Are You Getting Enough?

“The average adult needs a total of seven to nine hours of sleep each night. Teens require slightly more sleep than adults, an average of 9 hours.”

keep in mind that sleep can improve your memory, boost your immune system, and keep thoughts of depression at bay. Get your ZZZZZZs! It may be the most important part of your overall good health.

For more information on improving sleep habits and the risks of sleep deprivation, please visit:

<http://www.nhlbi.nih.gov/health/public/sleep/>

<http://www.health24.com/news/Sleep/1-1249.asp>

Healthcare Pathways

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