Editorial: Dental school a key regional tool  
Thursday, February 10, 2011

In six months, a new era begins at East Carolina University as the school welcomes the inaugural class at its School of Dental Medicine. Under the direction of Dean James Hupp, the new program promises to extend the university's exemplary record of regional service to a new area, one of profound need across the whole of eastern North Carolina.

Making health care affordable and accessible represents a critical area of focus for this region, and that is as true with dentists as it is with doctors. As budget cuts have stretched resources and exacerbated the problem, emphasis on the East Carolina dental school and its commitment to outreach throughout eastern North Carolina remains a crucial area of investment for the state's future.

Last week, about 40 children from low-income families received dental care at no cost thanks to the “Give Kids a Smile” program. Launched in St. Louis in 2002, the annual event marks National Children's Dental Health Month and recognizes the benefits of preventative dental care for children. Poor dental hygiene can be the cause of numerous chronic diseases, making care so important in a child's formative years.

Two factors complicate that goal in eastern North Carolina. Poverty across the region demands strong public health programs that include dental professionals. And four counties here lack an active dentist. Several more have only a single practitioner.

The East Carolina dental school, opening in August, is the state's premier initiative to train more dental professionals. It will have an immediate impact through a plan for 10 community outreach sites located throughout the region, primarily in rural areas without adequate access to care. Funding for the school represents a sound investment in the state's future.
Pitt is one of six eastern counties to lose its public health dental hygienist, with one hygienist now assigned to a six-county region. That leaves more kids to slip through the cracks as preemptive screenings are focused only on those areas with high rates of tooth decay. And while local dentists generously donate their time to help children through programs like “Give Kids a Smile,” it simply is not enough.

A direct correlation exists between poor dental health and poor general health, making regular trips to the dentist a key to a child's well being. North Carolina should look with favor on programs and initiatives working to expand the reach of that care and ensure they are protected in a tight budget year.
Tommy Eason is one of the rare coaches who hope his players have better days when they're no longer his players.

Eason, the baseball coach at Pitt Community College and the guest speaker at the Greater Greenville Sports Club's meeting on Wednesday, described PCC as a launching pad to what he hopes is even greater future success for the players under his tutelage.

Last year's Bulldogs team was a shining example of that as Pitt not only made it to the National Junior College World Series, but also sent 11 players on to either Division I or II teams with two others signing professional contracts.

“Pitt Community College is not the ultimate in baseball,” Eason said to the crowd gathered at the Greenville Hilton. “It's not the ultimate in education. It is a great stepping stone.”

Eason enjoyed a stellar career as a catcher at East Carolina, earning first-team All-Colonial Athletic Association honors twice and finishing with a .336 career batting average.

Drafted by the Philadelphia Phillies in the sixth round in 1991, Eason had elbow surgery and was diagnosed with diabetes during four minor league seasons with four different Phillies farm clubs, including Double-A Reading (Pa.).

The Snow Hill native returned to ECU as an assistant on coach Keith LeClair's staff in 1997 and stayed in Greenville after Randy Mazey took over for LeClair in 2002 when LeClair's health began to decline. Like many people who came in contact with LeClair,
who died in 2006 from Lou Gehrig's disease, Eason remembers lessons the legendary LeClair imparted and shares them with his players today.

“We've got one rule, and it's ‘Do the right thing,’” an emotional Eason said. “That rule was set in place when Keith was at East Carolina. It's pretty simple. If you've got to ask yourself if you're doing the right thing, you might need to take a step back.”

After eight years as an assistant with the Pirates, Eason took the head coaching job at PCC in 2006 and has led the Bulldogs to a 140-59 record following Wednesday's season opener against Mount Olive's JV team.

Contact Tony Castleberry at tcastleberry@reflector.com or (252) 329-9591.
UNC-CH faces penalty

BY ERIC FERRERI - Staff Writer

CHAPEL HILL—UNC-Chapel Hill will likely get docked more than $158,000 this week for enrolling more out-of-state students than it should have last fall.

UNC-CH exceeded the UNC system's 18 percent cap on out-of-state freshmen, a ceiling installed in 1994 to ensure adequate college access for North Carolinians. It went over by 13 students in a total class of 3,960. That's three-tenths of one percent above the cap.

The result: a budget reduction of $158,225 - the amount the state will spend to educate those extra nonresidents this year.

The penalty kicks in when a public university exceeds the cap two years in a row. The prior year, UNC-CH enrolled 12 more out-of-state students than it should have.

Even with the budget reduction, the university should come out ahead on the additional out-of-state students, since their tuition rate is nearly five times higher than for in-state students.

This year, the over-enrollment came about after the state legislature ended a five-year subsidy that had allowed universities to count out-of-state scholarship athletes as in-state students. That had been a financial jackpot for booster clubs by allowing them to provide scholarships to out-of-state athletes at a far cheaper rate.

But the provision's repeal last summer meant 38 out-of-state freshman athletes would not be counted as in-state students. The change came after UNC-CH had sent out its acceptance letters.
"We didn't know that law was going to be repealed," said Stephen Farmer, UNC-CH's undergraduate admissions director. "There really wasn't anything we could do about it at that point."

A committee of UNC system's governing board will review the penalty today, and Farmer said he doesn't expect his campus to dispute it.

**Law helps schools**

Higher education officials like to say admissions is more art than science. They offer entry to far more students than they want, assuming that some will go elsewhere. Had the residency status of those 38 athletes not changed because of the change in law, the university would have had a 25-student cushion and would have been comfortably under the 18 percent limit, Farmer said.

The change in law was a blow to booster clubs but a boon to universities themselves, since they collect more revenue based on out-of-state rates. At UNC-CH this year, in-state tuition is $4,815, while the out-of-state rate is $23,430.

The 18 percent cap is serious business for a university system that prides itself on being accessible and affordable for North Carolinians. It is rare, though not unheard of, for a campus to miss the cap two years running.

"It's our way of regulating the campuses with high out-of-state demand," said Hannah Gage, chairwoman of the UNC system's Board of Governors. "You see this from time to time, and the campus suffers the consequences." No other campus violated the policy this year.

eric.ferreri@newsobserver.com or 919-932-2008
Ligon Middle School sixth-grader Javier Jones practices tying a bow tie. The male students have been mentored since last fall by the Gentlemen of Distinction, a brotherhood of students from Shaw University.

**Shaw students mentor middle-schoolers in dress, manners**

BY JANE STANCILL - Staff Writer

RALEIGH–About 20 students from Ligon Middle School already have graduated from saggy pants to snappy ties. Tonight, they'll become "Gentlemen of Excellence."

The male students have been mentored once a week since last fall by a group known as Gentlemen of Distinction, a brotherhood of students from Shaw University. Tonight, the Shaw students will hold an induction ceremony at the campus chapel for the middle-schoolers, complete with gospel music, a rose presentation and a fancy reception attended by the university president.

The attention lavished on the young students is meant to inspire them to shape up, study hard and dream big. Some of the students are from low-income families and don't have fathers in their homes. They were recommended for the program by teachers and counselors.

The Shaw gentlemen have lessons to give beyond math and social studies tutoring - lessons such as using good table manners, opening the door for a lady, saying "yes sir" and saying no to profanity.
"It's a good thing," said De'Monte Mann, a seventh-grader. "I can have someone to look up to. They're like other brothers to me."

The big event
In a classroom at Ligon on Wednesday, the mentors went over the plans for tonight's big event, which will be attended by relatives, Ligon teachers and community leaders. The Shaw students offered free haircuts for the boys.

They instructed the boys to be on time and to wear white shirts and black pants. One Shaw student took off his tie and handed it to a Ligon student who didn't have one.

"We're basically asking you to be on your best behavior and just enjoy yourselves," Garnard Wiggins, a Shaw sophomore from Fort Lauderdale, Fla., told the boys. "All the light is on you."

Preparations for the event have been extensive. The boys have been told that an unnamed recording artist will be there as a surprise. The boys will be escorted into the ceremony by Shaw sorority women. One will be named "Man of the Year."

"We didn't have this growing up," said Shaw freshman Anthony Battle of Rocky Mount. "We wanted to give them something - a big bang - to keep them motivated."

Principal grateful
Every Wednesday afternoon, the Shaw men walk several blocks to Ligon. Gretta Dula, Ligon principal, glances out the window and sees them coming. "Every time I look up, I'm surprised to see these sharp young men coming into the building," she said.

She's thankful, because sometimes well-intentioned college students agree to volunteer but quit after a visit or two. The Shaw students are committed, she said.

"They come in with a smile, and they're positive," she said. "I love the way they carry themselves."
Antonio Smith, a Shaw freshman from Greensboro, sees himself in some of the Ligon boys. He wants to help them avoid mistakes he made along the way.

"They've transformed before our eyes," said Smith, president of the Shaw group.

There is a new attitude, a new respect. The baggy pants have, for the most part, gone by the wayside. At first, the Ligon boys seemed to think the after-school program was some sort of punishment. But along the way, Smith said, they began to see that it was an opportunity for growth, maturity and change.

Only one student has dropped out of the program, after declaring it boring. Last week, the men showed the boys how to tie a tie. A few already knew how - for weeks, they had been wearing ties on Wednesday to mimic the sharp dress of their mentors.

Will grades improve?

Ligon teachers say the college men have had an impact. Though it's too soon to tell whether the students' grades have improved, their conduct has, said Jonathan Todd, a math teacher at Ligon.

A few of the students have talked about colleges they'd like to attend, colleges in Georgia and Florida.

"They're thinking outside of Ligon, outside of Raleigh, outside of North Carolina," Todd said. "They're trying to be ambitious."

Titus Hainesworth, an eighth-grader, is a little nervous, a little excited about tonight. The Gentlemen of Distinction are smart, he said, and they've been a good influence.

"They teach us how to be successful in life and how to be a man."

jane.stancill@newsobserver.com or 919-829-4559
Published Thu, Feb 10, 2011 06:16 AM

A screen grab of Holden Thorp's Wednesday tweet.

**Thorp tweet rips Duke's Krzyzewskiville students**

BY ERIC FERRERI - Staff Writer

CHAPEL HILL—University of North Carolina-Chapel Hill Chancellor Holden Thorp spiced the build-up to Wednesday night's North Carolina-Duke basketball game with a trash-talking tweet he would later delete.

During an online round table on innovation, Thorp, a semi-regular user of the social networking site Twitter, typed: "Our students are talking about the future and asking smart questions instead of wasting time sitting in a tent."

Zing!

Thorp, of course, was referring to Krzyzewskiville, the tent city near Cameron Indoor Stadium where Duke students camp out for basketball tickets for a good chunk of the winter.

Thorp's volley whipped quickly across cyberspace Wednesday, prompting a great deal of, er, high-minded intellectual debate between fans of the two teams.

Duke president Richard Brodhead isn't on Twitter. But at The News & Observer's behest, he offered up this good-spirited response: "Hey Holden, someone hacked your Twitter account to talk trash. May the best team win. From the land of TRUE Blue, Dick."

By midafternoon, UNC was apparently doing damage control. Thorp's initial tweet disappeared from his feed, and a new, apologetic tweet appeared.

"Sorry about the tent/Kville tweet," Thorp wrote. "Both U's have great students. I shouldn't have gotten carried away by our rivalry in basketball."

eric.ferreri@newsobserver.com or 919-829-4563
NCSU wins obesity grant

The Associated Press
RALEIGH–With one report saying nearly half the state's children are at risk of obesity-related ailments, the federal government on Wednesday announced a $3 million grant for N.C. State University researchers looking for ways to keep kids fit.

Kathleen Merrigan, deputy secretary of the U.S. Department of Agriculture, planned to formally announce the grant at the university during a tour to promote an agency program aimed at reconnecting people with local farmers and homegrown food sources.

The research grant will look at ways communities can work to reverse obesity and excess weight in children. While individuals have to commit to healthy eating and regular exercise, communities can play a role in everything from pedestrian-friendly architecture to attracting full-service grocery stores, Merrigan said.

"You need sidewalks to walk to school, you need bike lanes, you need restaurants to participate, you need to conquer food deserts," she said, using a term for communities where many people may get their groceries from corner stores, where things such as fresh produce are in short supply.

The proliferation of such problems leads to what initially seems like a paradoxical problem: increasing numbers of overweight children, while at the same time more than 18 million children in the U.S. are "food insecure," meaning they've gone hungry at some point during the year.

"They both stem from that same root cause, that lack of access to good, healthy food," Merrigan said.

In North Carolina, an ongoing study recently found that 43 percent of the state's elementary and middle school children may be at risk for metabolic
syndrome, a combination of risk factors including poor fitness and high body mass index that, if unchecked, can lead to conditions such as diabetes.

The In-School Prevention of Obesity and Disease study, a four-year program gradually expanding across the state, also found that low rates of physical activity and poor nutritional standards are widespread.

"This is the final wakeup call," said Ron Morrow, executive director of the North Carolina Alliance for Athletics, Health, Physical Education, Recreation and Dance. "Forty-three percent cannot be ignored."

Merrigan hopes research like the kind that NCSU will undertake will help capitalize on growing interest among young people about where their food comes from, sparking a renaissance of local food production.

"A lot of young people are largely disconnected with how their food is grown, and their knowledge is somewhat limited," she said, "And yet, they're very, very interested in agriculture. There's a fervor around food production right now."
'Tolkien Professor' brings Middle-earth to iTunes

By Daniel de Vise
Washington Post Staff Writer
Wednesday, February 9, 2011; 2:39 PM

CHESTERTOWN, MD. - Corey Olsen had a lot to say about J.R.R. Tolkien. But it seemed a pity to consign his thoughts to a scholarly journal, to be read by a few hundred fellow academics who already knew more than enough about the author of "The Lord of the Rings."

So in spring 2007, the Washington College professor took his scholarship public, with a podcast called "How to Read Tolkien and Why" and a Web site called The Tolkien Professor.

A million downloads later, Olsen is one of the most popular medievalists in America. His unusual path to success - a smartly branded Web site and a legion of iTunes listeners - marks an alternative to the publish-or-perish tradition of scholarship on the tenure track.

"Instead of spending all my time doing scholarly publishing, which we're told to do - which most people will never read - I basically decided to put myself out to the public," Olsen said.

It remains to be seen whether the academy will reward Olsen or punish him for breaking out of his scholarly track. When it comes to building résumés and courting full professorships, podcasts don't typically count.

Olsen is a new breed of public intellectual, the latest in a long line of scholars who have leveraged mass media to reach a broader audience.

Traditional public scholars - Umberto Eco, Noam Chomsky, Stephen Jay Gould - spoke mainly through books, magazines and op-ed pieces. Today's populist profs tap potent
new platforms: blogs and podcasts, tweets and Facebook fan pages. Podcast celebrities include Harvard government Professor Michael Sandel, whose Justice course explores right and wrong. Yale philosophy professor Shelly Kagan has a course called simply Death.

At 36, Olsen represents this new generation of professors who grew up around computers and know their way around an iPhone. The bookish son of a New Hampshire construction worker, Olsen read "The Hobbit" at 8 and was a self-professed expert on "The Lord of the Rings" by seventh grade.

He took up a sort of permanent spiritual residence within Tolkien's imagined Middle-earth. As an undergraduate at Williams College in Massachusetts, Olsen took "every medieval thing that they offered" and later earned a doctorate in medieval literature at Columbia.

The young medievalist proved an immediate hit at Washington College, a small liberal arts school tucked behind the Chester River in the colonial hamlet of Chestertown on Maryland's Eastern Shore. He won the school's top teaching award in 2007. Some current seniors have taken five or six of his courses.

"You go to class, and he has all these new insights that you didn't even think of," said Elizabeth Hurlbut, 21, a junior from Keller, Tex.

Olsen published an article and a review in the scholarly journal Tolkien Studies in 2008 and 2009, but he sensed an opportunity squandered. More than 100 million copies of "The Lord of the Rings" have been sold. The Peter Jackson movies of the past decade earned roughly a billion dollars each.

Tolkien is not as popular among academics. Though Tolkien was himself a language scholar at Oxford, he is not generally counted among the great fiction writers of his century, nor is "The Lord of the Rings" counted among its great books.

Yet, Tolkien scholars and Tolkien classes have multiplied over the years, and Middle-earth fanzines have evolved into academic journals.

"If something isn't going away, that tells you something," said Verlyn Flieger, a Tolkien scholar at the University of Maryland.

Olsen's Web site generated little traffic until summer 2009, when he uploaded his 28-minute introductory lecture to iTunes. He's put up 78 more podcasts since, under such titles as "On Dragons and Orcs" and "Tolkien and Food." His lectures have ranked as high as third among top university course downloads.

"Within two months, I had 5,000 subscribers," he recalled in an interview in his office on campus. "And then the people who were listening wanted to talk."
Olsen communes with his growing fan base in periodic Skype call-in sessions and on his Facebook page, answering urgent queries about Tolkien taxonomy. He hosts discussion boards on his Web site and this winter is running an online seminar on the posthumous collection "The Silmarillion" for 15 lucky followers.

"He's like a Tolkien evangelist," said John DiBartolo, a Long Island musician, graphic designer and amateur Tolkien scholar.

The questions never cease: Do elves farm? What do orcs eat? Could any living author write a worthy sequel? What does Olsen think of the upcoming "Hobbit" movie? Has he played "The Lord of the Rings" computer game online?

Naturally, Olsen knows all sorts of arcana about Tolkien and hobbits. He likes to note, for instance, that the One Ring of power and its corruptive influence were concepts totally absent from the first edition of "The Hobbit," in 1937. "Gollum and Bilbo end up shaking hands and waving," he chuckled.

The centerpiece of Olsen's podcast work is a chapter-by-chapter analysis of "The Hobbit" that Olsen hopes to repackage as a book when it is complete. His delivery is swift, affable and erudite.

"English professors as a group tend to rule Tolkien out of the literary canon without blinking," Olsen laments in the introductory lecture, "largely because fantasy stories about elves and dragons obviously cannot be serious literature."

"He is a fantastic lecturer. He's engaging. He draws you in. I would have loved to have taken a class from him in college," said Dave Kale, 29, a follower of Olsen's podcasts who lives in Los Angeles.

Tuition, fees and living expenses at Washington College run to $44,572 a year. By recording his lectures and posting them online, Olsen is effectively giving elements of that education away for free.

His overseers don't seem to mind. Olsen received tenure last year, unusual for a scholar who hasn't yet published a book. But Olsen was denied promotion from assistant to associate professor. Tenure means lifetime employment, but promotion means higher pay and stature.

Olsen the professor finds himself in much the same spot as Tolkien the author: beloved by the public, yet not entirely accepted by the intelligencia.

"I get the fact that some people don't believe that what I'm doing counts as scholarship," he said.
Christopher Ames, provost of Washington College, said he couldn't discuss Olsen's personnel file. But the school, he said, is "very supportive of people working in new media."

But within academia, there is also subtle resistance. Olsen's podcasts, after all, are not peer-reviewed or vetted by fellow scholars. That means no one has given a formal blessing to his scholarship.

At U-Md., works of that sort "wouldn't cut any ice in terms of your ability to be promoted," said Flieger, who has written three books on Tolkien and co-edits the Tolkien Journal.

"But that may change," she said. "The whole profession is changing."

© 2011 The Washington Post Company
Maricela Aguilar, a recipient of a full academic scholarship to Marquette University, was born in Mexico but has lived in the United States without legal documents since she was 3 years old.

**After a False Dawn, Anxiety for Illegal Immigrant Students**

By JULIA PRESTON

MILWAUKEE — It was exhilarating for Maricela Aguilar to stand on the steps of the federal courthouse here one day last summer and reveal for the first time in public that she is an illegal immigrant.

“It’s all about losing that shame of who you are,” Ms. Aguilar, a college student who was born in Mexico but has lived in the United States without legal documents since she was 3 years old, said of her “coming out” at a rally in June.

Those were heady times for thousands of immigrant students who declared their illegal status during a nationwide campaign for a bill in Congress that would have put them on a path to legal residence. In December that bill, known as the Dream Act, passed the House, then failed in the Senate.

President Obama insisted in his State of the Union address and in interviews that he wanted to try again on the bill this year. But with Republicans who vehemently oppose the legislation holding crucial committee positions in the new House, even optimists like Ms. Aguilar believe its chances are poor to none in the next two years.

That leaves students like her who might have benefited from the bill — an estimated 1.2 million nationwide — in a legal twilight.
The president says he supports their cause, and immigration officials say illegal immigrant students with no criminal record are not among their priorities for deportation. But federal immigration authorities removed a record number of immigrants from the country last year, nearly 393,000, while the local police are rapidly expanding their role in immigration enforcement. Students often get caught.

Illegal immigrants also face new restrictions many states are imposing on their access to public education, driver’s licenses and jobs. And for those like Ms. Aguilar who came out last year to proclaim their illegal status, there is no going back to the shadows.

Republicans who will lead their party in the House on immigration issues say illegal immigrant students should not be spared from deportation. Representative Lamar Smith of Texas, chairman of the Judiciary Committee, led the opposition to the Dream Act, calling it “an American nightmare” that would allow illegal immigrants to displace American students from public colleges.

Mr. Smith and other Republicans on the Judiciary Committee have pledged to block any legislation giving legal status to illegal immigrants, which they reject as amnesty for lawbreakers. Still, as Politico first reported on Monday, Senators Charles E. Schumer of New York, a Democrat, and Lindsey Graham of South Carolina, a Republican, have begun preliminary talks to see whether there is enough support in Congress to try to pass a comprehensive immigration overhaul in coming months.

In the weeks since the Senate vote, many young illegal immigrants are grappling with the letdown after a campaign that mobilized thousands of them for sit-in protests and text message blitzes of Congressional lawmakers.

“Many have become extremely frustrated, sad, confused and without a lot of answers as to how to move forward,” said Roberto G. Gonzales, a sociologist at the University of Washington who has surveyed young illegal immigrants. “They had a lot of hope that their activities were going to change the minds of the country. Having the door slammed in their face hit many of them really hard.”

A moment of truth, Mr. Gonzales said, comes when the students graduate from college. Many excel academically, but without work authorization, they cannot be legally employed. Some immigrants with bachelor’s degrees end up busing restaurant dishes and cleaning offices, falling back on the jobs of their less educated parents, who often struggled to put them through college.

Hostility toward illegal immigrants has grown in many states. Lawmakers in Georgia and Virginia are considering measures to ban illegal immigrants from all public colleges. Bills to deny state resident tuition rates to illegal immigrants are under consideration here in Wisconsin, as well as in Arkansas, Kansas, Nebraska and Indiana. Only a few states, like Colorado and Maryland, are going the opposite direction, debating measures to allow illegal immigrants to pay the lower in-state tuition rates.
In the absence of a student bill in Congress, Obama administration officials are doing little to assist illegal immigrants who might be eligible for legal status if it passed. Department of Homeland Security officials said they would continue to reject any broad moratorium on deportations for those students.

Immigration agents have been instructed to focus on arresting immigrants who are convicted criminals, implicitly steering away from students without criminal records. When students do get caught, officials are using executive powers to postpone or cancel their deportations, they said.

Brian P. Hale, the senior spokesman for Immigration and Customs Enforcement, said the agency “uses discretion on a case by case basis, as appropriate.”

But senior administration officials said they did not want to make wider use of those powers for fear of deepening the conflict with Mr. Smith and other Republicans, who might try to limit the authority granted by immigration law and further stiffen their opposition to measures like the Dream Act. The officials spoke anonymously, saying they could discuss policy more freely that way.

The strategizing in Washington is doing little for Ms. Aguilar, 19, a junior at Marquette University here.

“If your name is out there immediately attached with ‘undocumented,’ then there is always this fear of being deported,” she said.

But Ms. Aguilar said she was not as dispirited as many other students like her because she still felt the elation that came after she revealed her illegal status, then traveled to Washington to watch the December vote from the Senate gallery.

“I think losing the shame overshadows the fear,” she said. “I’d much rather clarify to the public that being undocumented is just a circumstance I find myself in. I’d much rather have that out in the public than just living in fear.”

Immigrant activists say that coming out may have given some protection to student leaders like Ms. Aguilar, since administration officials would prefer to avoid the furor that would follow if one of them was detained. Ms. Aguilar also admits she has not yet had to face some of the hardest consequences of her status. An honors student in her Milwaukee high school, she was accepted to Marquette, a private Jesuit university, on a full tuition scholarship.

After the Senate vote, she said, she is working with an immigrant organization here to build new support for the student bill.

“It failed and we were all like super bummed out,” she said. “So we came out of there crying, but defiant. We were like, one day we’re going to pass this, don’t even worry about it.”
That pluck is not shared by José Varible, 19, another illegal immigrant from Mexico, who was brought to the United States at age 9 by his parents. A student in business management at Gateway Technical College, a community college in Kenosha, Wis., Mr. Varible also held a formal coming out ceremony last summer.

Since he is not eligible for any financial aid, Mr. Varible struggles to pay his tuition. He cannot drive, since Wisconsin does not issue licenses without proof of legal United States residence. With a knack for technology hardware, he taught himself to repair computers. But without a Social Security number, he can take only odd jobs doing that work.

Combined with his new exposure as an illegal immigrant, he said, those limitations sometimes sink him into depression. He has even considered moving to Australia.

“You know, the thing is, I just don’t feel welcome here,” he said. “You cannot live as an undocumented immigrant.”
'Watson' could transform medicine

By Alejandro Gonzalez, USA TODAY

Starting Monday, Jeopardy will air three episodes in which "Watson," a supercomputer developed by IBM, is a contestant. Watson will challenge Ken Jennings, who holds the show's longest winning streak, and Brad Rutter, who is the show's biggest all-time money winner.

What viewers might not realize when they watch the quiz show's first man vs. machine competition is that they might be catching a glimpse of technology that could radically transform health care delivery within the next decade. The company that revolutionized the personal computer industry in the 20th century has the potential to do the same for health care in the 21st century.

Performing well on Jeopardy and diagnosing sick patients have similar prerequisites: a broad fund of knowledge, ability to process subtlety and ambiguity in natural language, efficient time management, and probabilistic assessment of different possibilities. Like Jeopardy clues, a patient's symptoms, medical history, physical exam findings and laboratory results present clues that must be synthesized into a differential diagnosis. While computer systems to assist clinical decision-making have existed for decades, adoption of legacy systems has been hindered by rigid algorithms that require translation of natural language into machine language and heavy reliance on user input.

What sets Watson apart is that it could take facts gathered in natural language from a patient exam and generate possible diagnoses ranked by levels of confidence based on its
understanding of medical knowledge in textbooks, research papers, case reports, and other sources that are used by human physicians. Watson combines what has long been a strength of computers, perfect prompted recall from an expansive volume of knowledge, with what has been considered to be the sole province of man, ability to process natural language.

Watson has the potential of addressing two pressing problems in health care today: deaths due to medical errors and shortage of physicians.

**Medical errors.** According to a report by the Institute of Medicine, as many as 98,000 deaths annually are due to medical errors in hospitals, making it the fifth leading cause of death in the U.S. Misdiagnosis can lead to unnecessary patient suffering or death and is often the result of cognitive errors committed by physicians.

In *How Doctors Think*, Jerome Groopman described three such errors — fixation on one diagnosis, settling on a diagnosis that is familiar and quickly comes to mind, and failure to come up with alternative diagnoses and incorrectly attributing symptoms to one cause — which can arise from shortcuts in thinking taken by physicians when faced with information and time constraints. Because of its superior memory and parallel processing capabilities, Watson could examine all medical evidence available in natural language, without resorting to cognitive shortcuts, and minimize bias when making diagnostic decisions.

**Physician shortage.** With a knowledge base limited only by how much medical literature is available in natural language, Watson could close the knowledge gap between physicians and non-physician health care providers. This would empower non-physician medical professionals to assume a greater role in patient care and help alleviate a shortage of physicians that the Association of American Medical Colleges projects could be as high as 150,000 in the next 15 years. The benefits of this empowerment would be felt strongly in geographical areas underserved by physicians and in the military. By having Watson provide support with the "science" of clinical medicine, health care providers would have more time and resources to devote to the "art," which remains a uniquely human endeavor.

Watson could become a significant disruptive technology that forces us to rethink how patients interact with health care providers and how the health care delivery system is organized. Compared with human health care providers who possess varying levels of clinical knowledge, personal biases and economic ties that can confound decision-making, Watson presents a number of advantages: minimization of bias and error in decision-making; consistent adherence to standard of care and implementation of evidence-based practice; and lower health care costs through robust cost/benefit analysis and elimination of economic conflicts of interest.

The prospect of using Watson in medicine also raises some difficult questions. What will be the new roles for physicians, nurses, technicians and other health care professionals when the current hierarchy, delineated by varying levels of medical knowledge, is
flattened by an intelligent machine? What will be the impact on the practice of humanistic medicine? How will patient outcomes be affected by patient-machine interactions? Who will be held accountable for medical errors that arise from decisions made by a machine?

In the Sherlock Holmes stories, Sir Arthur Conan Doyle's Dr. Watson played a secondary role in solving difficult crime cases. In 21st century health care, IBM's Dr. Watson could play the lead role in solving the toughest medical cases.

Yong Suh is a medical student at The Johns Hopkins University School of Medicine.