Your editorial “Last place” (July 5) was right on target. Step aside, Mississippi! Missouri is ready to take your place in all those jokes about how poorly educated its citizens are. For the last 10 years, Missouri has remained solidly in the bottom five states for per-capita funding of higher education.

After more than a decade of seeing the higher education budget slashed, all of our state colleges and universities need more support from the state, not less. But, where will that money come from? Based on history, not from the state. Regrettably, increasing tuition appears to be the only way to offset this chronic shortage.

This year, the University of Missouri system will receive less state funding than it did in 2001, even though enrollment at the University of Missouri's four campuses has grown by over 25,000 students since that time. In addition, faculty salaries have not increased in years, and many of the university's buildings are in desperate need of repair, maintenance and renovation. Moreover, the University of Missouri provides over $23 million in unreimbursed health care each year to Missouri citizens and at the same time has a deferred maintenance backlog exceeding $1 million.

Of course, all Missourians can be proud that we have the lowest cigarette tax in the nation at 17 cents per pack. As the best and brightest of our students leave our state to never return, smokers looking for cheap cigarettes can take their place. That will really promote our state's economy and attract new businesses!

Higher education in Missouri has taken a back seat for decades; our state universities (and our citizens) are suffering from the consequences. When will our elected officials understand this and do something about it?

W. Dudley McCarter • Creve Coeur
University seeks input on chancellor

Sunday, July 14, 2013 at 2:00 am

The University of Missouri will have two public forums this month to gather input on what to seek in the next chancellor of the Columbia campus.

MU Chancellor Brady Deaton said last month that he will retire in November. A search committee to find his replacement is expected to be announced soon.

UM System President Tim Wolfe will be at the open forums, scheduled from 10 to 11 a.m. July 22 at Jesse Auditorium in Jesse Hall, and from 10 to 11 a.m. July 25 at Jesse Wrench Auditorium in Memorial Union.

The forums are being sponsored by the MU Faculty Council, Staff Advisory Council, Missouri Students Association and Graduate Professional Council. The public is also invited to submit input on the chancellor search online at www.umsystem.edu/muchancellor_search or via Twitter by using the hashtag #musearch.

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Posted in Education on Sunday, July 14, 2013 2:00 am.
UM System to hold public forums for chancellor search

Friday, July 12, 2013 | 4:48 p.m. CDT; updated 4:46 p.m. CDT, Saturday, July 13, 2013

BY Claire Boston

COLUMBIA — MU students, staff, faculty and other members of the public can provide input on what qualities they would like to see in a new chancellor in one of two, hour-long public forums.

The input will be used to create a profile of the ideal candidate to succeed Chancellor Brady Deaton, who is retiring in November.

The first forum will be at 10 a.m. July 22 at Jesse Auditorium in Jesse Hall. The second will be at 10 a.m. July 25 at Jesse Wrench Auditorium in Memorial Union.

University of Missouri System President Tim Wolfe will be in attendance. The events are sponsored by the Faculty Council, Staff Advisory Council, Missouri Students Association and Graduate Professional Council.

Stakeholders can also submit feedback on Twitter using the hashtag #musearch or tweeting to @umprez. The system also set up an online form for submissions.
Search committee formed to find Deaton’s successor

With the search for a new MU chancellor underway, members of the MU Faculty Council are working to make sure the decision is made with great care.

Faculty Council Chairman Harry W. Tyrer Jr. explained that the process is being implemented through two different channels.

“A couple of things are going to go on at the same time,” Tyrer said. “The process being used is begun by the UM System because the chancellor reports to the president.”

The UM System will use a search firm, which has been used before to hire other high-level faculty on MU’s campus.

Tyrer said the council believes it is important that members of the community have input in the selection process. To facilitate this, an MU-based search committee will be created.

“There will be a search committee formed consisting of faculty, students, staff, alumni, retirees and whoever the stakeholders are at the university,” Tyrer said.

The search committee will host town hall meetings for students and faculty to express what they would like to see in a new chancellor. Faculty Council will use this feedback, along with other criteria, to shape the search process.

According to councilman Craig Roberts, the new chancellor needs to be able to address the needs of all academic disciplines offered at MU.

“We need a chancellor who values the multifaceted strengths of MU … but who also continues to offer strong support to the core educational disciplines housed in the College of Arts and Sciences,” Roberts said.

Councilman Sudarshan Loyalka said the council hopes the new chancellor will work well with the faculty and staff, as well.

“We have already emphasized that the new chancellor must be a strong advocate of shared governance in both theory and practice,” Loyalka said.

The search process has just begun, but with Chancellor Brady Deaton officially retiring Nov. 15, Tyrer said the council hopes to complete its search as soon as possible. He said the council wants to announce its decision in early November.
Tyrer said the search committee members have had concerns about the short search schedule. But the UM system believes finding a new chancellor soon will give MU an edge.

“Several (Association of American Universities) schools are looking for high-level administrators,” Tyrer said. “The longer we take, the more difficult it is to get those high-quality people.”

The search committee will review credentials of all the applicants for the position and present its top three choices to Tim Wolfe. The UM president will then select his top choice for chancellorship based on interviews and evaluations.

The UM Board of Curators has to approve Wolfe’s choice before the new chancellor is announced, Loyalka said.

He said as long as the search starts out with strong candidates, things should go as planned.

“The initial focus must be on having a large pool of excellent candidates,” Loyalka said. “I believe everything else is secondary if the president remains committed to quality and works well with a broad based search committee.”
Deaton Institute to make impact on international development research

When Chancellor Brady Deaton announced his retirement in June, he subsequently unveiled a plan at the June 15 Board of Curators meeting to head the new Brady and Anne Deaton Institute for University Leadership and International Development.

The goal of the proposed institute will be to “ground the University of Missouri’s international programs in solid philosophical and ethical principles,” according to Deaton’s presentation at the meeting.

With the objective of shaping international development, the institute will specifically target issues of food security, water quality, healthcare and other areas of social and economic well-being.

The institute, which is not staffed beyond Deaton’s appointment, will also focus on helping developing nations since World War II and earlier, Anne Deaton, the chancellor’s wife and MU adjunct professor, said.

“What is needed today is a fresh look to the future,” Anne Deaton said in an email.

The chancellor is additionally interested in how universities’ international commitments, beyond study abroad programs, can lead to qualitative change and transformation, Anne Deaton said.

Students will be able to take advantage of the institute’s innovative plans.

“Mizzou has a lot of international centers, and there’s already thousands of students per year that do study abroad trips, so basically this is going to be another opportunity for us to increase partnerships with other countries,” Amy Johnson, Board of Curators student representative and UMKC student, said. “By partnering with all these institutes, we can solve huge global problems and involve students.”

The chancellor’s interests concerning the institute also encompass a questioning of ways that comprehensive curricula and student and faculty world views can be influenced in turn to “enrich the university experience.” Brady Deaton has dubbed this “the boomerang effect.”

MU’s current global legacy has existed for more than 100 years, and includes various departmental international partnerships, including institutions in China, India, Thailand, Ghent University in Belgium and the University of Western Cape in South Africa.
Other MU opportunities include international degrees, five popular service-learning programs and the Iraqi Linkage Program.

The chancellor is also chair of the Board for International Food and Agricultural Development, a position for which President Barack Obama nominated him. The chancellor’s work with BIFAD includes working on food security issues on a national level.

“In a time of unprecedented technological, cultural and political change, nothing less than the future of global development, environmental sustainability and world peace is at stake,” Brady Deaton said in his presentation to the Board of Curators.

The Board expressed enthusiasm for the chancellor’s proposed project.

“The Brady and Anne Deaton Institute will allow the university to continue to benefit from the leadership of Chancellor Deaton, after his being a integral part of the overall leadership team at MU for nearly a quarter century,” UM System spokesman John Fougere said.

Johnson said the institute would be an opportunity to keep the Deatons involved with MU after they leave the Residence on the Francis Quadrangle.

“We were looking at one of our finest chancellors, who’s been at Mizzou for 25 years, retiring,” Johnson said. "When someone like that retires, who has had such a huge impact on the university, we want to keep him around as long as possible."

The ways the institute will be run are still not fully developed.

The institute has no set timeline but will see further development as the chancellor eases out of his duties by Nov. 15.
About 500 UM part-time workers will not receive health care until 2015

Monday, July 15, 2013 | 6:00 a.m. CDT

BY Scott Delhommer

COLUMBIA — About 500 part-time employees of the University of Missouri System who were supposed to be offered health-care coverage starting in 2014 will have to wait another year.

Last month, Betsy Rodriguez, system vice president for human resources, told the UM System Board of Curators that the employees would gain the coverage to comply with the Affordable Care Act.

But the Obama administration announced on July 2 it was pushing back the date for that requirement to 2015. That means the UM System will wait.

"We do not intend to offer medical benefits to part-time employees of the system at this time," system spokesman John Fougere said in an email. "Going forward, we will use the coming year to put processes into effect to ensure that the UM system is in full compliance with the Affordable Care Act."

The affected employees are those who work at least 30 hours a week, according to a PowerPoint presentation on the curators' Web site.

The expected cost of the expansion of health care benefits was about $2.4 million for 2014, the presentation said. If the UM System didn’t comply with the law, it would face a penalty of about $39 million.

The extension allows the system to save the money it would have spent on the coverage this year, Fougere said.

He said the system doesn’t expect many of the employees to accept the health care.

"Employees who are eligible would have to choose the coverage and, of course, pay the employee share of the premium," he said in an email. "Given employees' part-time wages, it is unlikely that many of the potentially eligible employees would do so."
MU engineers look to export low-cost toilets

July 13

COLUMBIA, Mo. — University of Missouri engineers are teaming up with colleagues at Duke University to create a low-cost toilet for developing countries with water shortages.

MU’s Carbon Recycling Center is participating in the Reinvent the Toilet Challenge sponsored by the Bill and Melinda Gates Foundation. The challenge is how to develop a device that can conserve water for use in areas where clean drinking water is scarce.

The center’s research project heats and pressurizes the waste water at extremely high temperatures in an effort to produce sterile water that can be reused.

“The big idea is that when it’s done, you’re going to be able be able to recover all the water,” said Brook Remington, an undergraduate student who works in the lab. “You’re going to end up with clean, sterile water at the end.”

The water is heated to about 1,100 degrees Fahrenheit and 250 times the normal atmospheric pressure, said lab worker Nikolas Wilkinson. Those temperatures would normally convert liquid into gas, but the high pressure prevents that reaction, creating what is known as supercritical water.

Like a gas, the water spreads out to take up as much space as possible, but it also can dissolve solids— as it would in liquid form.

“If you had a giant wood log, it would only burn at the surface,” Wilkinson said. “Since we can dissolve it in there, we have a lot more surface area per mass, and so we can get really high reaction rates.”

To test the low-cost waste disposal system, researchers have created developed fake poop made of soybean paste, cellulose, yeast and other chemicals. The fecal substitute resembles hummus in appearance and texture.
As the waste is consumed, the water cools, leaving only clean water, carbon dioxide and a few solids. The excess heat can be used to preheat water for the next “flush,” while, the solids byproducts, such as nitrogen and phosphorus, could be used for fertilizer.

Still, significant hurdles remain before the device could be used widely.

Supercritical water is highly corrosive, meaning the device’s metal pipes and joints must be replaced often. The waste tube also tends to clog, Wilkinson said.

A recent Missouri graduate who is now a postdoctoral researcher at Duke will work on enlarging the prototypes created in Columbia in hopes of having the product ready for use by March 2014.

The private school in Durham, N.C. – Melinda Gates’ alma mater – received a $1.2 million grant from the charitable foundation created by the Microsoft co-founder and his wife. Missouri will use $200,000 of that award for its research.
Columbia bars weigh in on 'soft closing' plan

Pitch made at mayor's request.

By Jacob Barker

Saturday, July 13, 2013 at 2:00 am

City officials and downtown leaders are looking at the idea of extending the time bars can keep their doors open by 30 minutes, hoping that letting patrons linger a little longer will reduce the flood of exiting revelers at 1:30 a.m.

At the request of Mayor Bob McDavid, The Downtown Community Improvement District surveyed bar owners on the concept last month. While there is no concrete proposal yet, the idea being contemplated would let bars keep their doors open until 2 a.m.

"The whole idea is: Is that a way to reduce crowding at taxi stands? Crowding at sidewalks?" CID Director Carrie Gartner said.

Currently, city ordinance requires businesses with liquor licenses to close by 1:30 a.m. Most bars generally stop serving by about 1 a.m. in order to usher patrons out in time.

The idea of "soft bar closings" would still prohibit liquor sales after 1:30 a.m., but they would be allowed to keep their doors open until 2 a.m.

The idea was pitched to McDavid by Missouri Students Association President Nick Droge. Droge said he asked the mayor to consider it after a conference among Southeastern Conference student governments where he heard other cities with SEC universities were looking into the concept. Droge said he hopes the extra flexibility would give students, and other patrons for that matter, a chance to sober up a little bit and nail down how they plan to get home safely.

"The overall push is to increase safety and that's the reason I wanted this to happen in Columbia," Droge said.

Of 48 downtown bar owners surveyed, 37 said it would prevent crowding outside the bar. However, 36 said the biggest disadvantage would be keeping staff longer. Responses on the overall concept, though, were mixed.
"I don't see any upside to letting people hang out in the bar any longer," Ryan Walsh, a co-owner of The Shot Bar at Ninth and Cherry Streets, said in an interview. "If they know it's last call, they might try to order two drinks or three drinks so they can sit there and try to nurse those until it's time to go ... but I don't think it would really alleviate the flood into the streets."

Some of the responses sent in for the survey were supportive. "This would greatly help with the level of animosity with intoxicated patrons being asked to leave when they're not ready," wrote a representative from Room 38. "It would alleviate conflict between staff and patrons and allow our patrons to exit patiently rather than be 'pushed' to the door for fear of legal ramification."

Richard King, who owns the Blue Note and Mojo's, said he didn't think it would affect his establishments as much, because when the music ends, people typically leave. Still, he had some concerns.

"You still have to stop" serving "at 1:30," King said. "There's gonna be that guy: 'Come on, let me have another beer.' No one wants that."

Gartner said the survey and report will be given to the Columbia City Council for informational purposes only. The council will decide whether to draft a concrete policy.

"If they have extended hours, like a soft closing, how do they secure the alcohol?" she asked. "Can they still finish what they're drinking" after 1:30 a.m.?

This article was published in the Saturday, July 13, 2013 edition of the Columbia Daily Tribune with the headline "Bars weigh in on 'soft closing' plan: Pitch made at mayor's request."

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Posted in Local on Saturday, July 13, 2013 2:00 am.
MU smoke-free policy receives mixed feedback

Two days after MU's smoke-free campus policy went into effect, Wellness Resource Center coordinator Tiffany Bowman noticed a difference.

"I used to see people on campus smoking pretty frequently," Bowman said. "(On Wednesday,) I drove around to see if I found anyone (smoking), and I just didn’t see anyone. And I went over the lunch hour thinking that would be a key time."

The smoke-free policy, which went into effect July 1, bans smoking anywhere on campus.

The smoke-free policy includes the use of electronic cigarettes, which are battery-powered and emit vapor instead of smoke. E-cigarettes are tobacco-less options that allow the smoker to still get nicotine without the other harmful ingredients included in cigarettes, according to Green Smoke's website. Green Smoke is a manufacturer of electronic cigarettes.

Since electronic cigarettes don't give off harmful second-hand smoke, some students were confused as to why they were banned in the smoke-free policy.

The reason for including e-cigarettes in the policy is two-fold, Bowman said.

"They do emit a vapor, and I think science still needs to catch up with if, in fact, that is safe or not safe at all," Bowman said.

Allowing students to use electronic cigarettes would confuse others, she said.

"It creates a difficulty with trying to enforce a policy like this when you can't tell what it is," Bowman said.

An overarching policy, Bowman said, will be easier to enforce and implement.

Until the campus-wide smoking ban went into effect, students, faculty and staff could smoke at designated outdoor areas and on top of parking structures. These areas were equipped with receptacles for cigarette waste which have since been removed, Bowman said.

She said she would frequently see people smoking right outside the Student Center near the parking lot, but hasn't seen any smokers there since July 1.

"They aren't out there any more, and the urn that used to stand there is gone," Bowman said.
Student response to the policy has been both positive and negative.

“I'm not against the ban, however, I don’t think it will be enforced at all,” said junior Steven Twidwell in a comment on The Maneater's Facebook page. “The past two phases were jokes when it came to violations. This is no different.”

Incoming freshman Ashley Miles took to Twitter to express her support for the policy.

“I'm really excited that MU went smoke free today. No more putting up with annoying smokers when I go to college,” Miles tweeted on July 1.

On June 28, three days before the policy took effect, the MU Sustainability Office hosted the “Big Butt Recycling” litter pick-up to clear the campus grounds of cigarette waste.

Twenty volunteers spent Friday morning collecting what amounted to 12 pounds of litter in the form of cigarette butts, filters and tobacco pouches. The Sustainability Office will recycle the waste through recycling company TerraCycle.
MU students get down to funny business with comedies

By Kelsey Haugen

Sunday, July 14, 2013 at 2:00 am

Comedies-in-Concert exists to benefit playwrights, but it is also a learning experience for actors, who take on the challenge of rehearsing and performing a play in just one day.

"It's crazy — nobody should do this. You should be checked into a mental clinic if you do," said David Crespy, artistic director of the Missouri Playwrights Workshop.

COMEDIES-IN-CONCERT

When: "Mostly Sweet" runs at 7:30 p.m. Tuesday; "Truffles and Nougat" by Bradley Stephenson, 7:30 p.m. July 23

Where: Corner Playhouse on the MU campus

Tickets: $5

Website: summerrep.missouri.edu

For 12 years, this chaotically comedic event has been held at the Corner Playhouse, showcasing the talents of University of Missouri theater students. Each summer, Crespy chooses comedies written by student playwrights, then student actors make those scripts come to life. On Tuesday, "Mostly Sweet" by Meg Phillips will be performed. Bradley Stephenson’s "Truffles and Nougat" will run July 23.

Comedies-in-Concert allows playwrights to see their work acted out for the first time. This helps them see what works and what doesn't, so that revisions can be made for potential future performances.

"We're trying to give our students a taste of what commercial professional theater is like," Crespy said. "The energy of the experience really pushes the playhouse, and the actors have just enough rehearsal time to connect with each other and kind of jump into it."
On each date, there is a process of reading through the script, putting together partial costumes and a few props, rehearsing and, finally, performing in the evening. Although an extensive amount of work goes into each show, it is relatively inexpensive. The main focus is on the play itself. After a performance, Crespy invites the audience to stick around for discussion. This is a time for viewers to share their reactions and ask questions, which is usually very useful to the playwright.

This summer, Crespy chose two comedies that he describes as gentle and frothy. Phillips' "Mostly Sweet" is a heartfelt piece about an Iowa woman running away from love because of her fear of entering a second marriage. She goes home to help her gay sister prepare for her wedding. Comedy ensues, but Crespy said it's definitely a play for the new millennium.

"Gay rights are really important to me, so I wanted to have a play where there's a gay wedding, but it's not a big deal," Phillips said. "It's just some normalcy there."

Phillips didn't become interested in playwriting until recently but has been involved with theater before. Inspired by a class taught by Crespy, also a professor at MU, Phillips wrote "Mostly Sweet."

"It's about what we do when love comes into our lives — whether we accept it or not," she said. Although happy with the script so far, Phillips said she looks forward to audience feedback that might help her perfect it.

"If it's a good script, it's kind of like the skeleton. What the actors bring to it is a lot of meat — they bring it alive," she said. "If you get the right actors for the parts, they bring wonderful things to it that I would've never imagined, and that's really rewarding."

"Truffles and Nougat" by Stephenson is a French empire farce with a rather clueless head of the household and a persevering spouse. But perhaps the most unique part of the play is that it involves chocolate — a lot of chocolate.

"It's a French play — you have to involve food of some sort," Stephenson joked.

He is also relatively new to playwriting, only starting about two years ago. Usually, Stephenson prefers writing dark comedies, but "Truffles and Nougat" is more lighthearted. To him, both types of work involve a similar process.

"I like to explore the more interesting and dangerous sides of our personalities and the way we interact with other people," he said.

Stephenson is also excited to receive comments from audience members, one of the most important parts of the process.
"I'm looking forward to learning what parts of the play they find amusing, which relationships they don't understand and what they got out of it," he said. "I don't want it to just be a silly comedy; I want there to be some truth that's going to stick with the audience in some way."

Although this isn't his first time having one of his plays performed, Stephenson is thrilled by the opportunity.

"It's humbling because it's your words onstage," he said. "It's truly an honor to be selected and for others to think there's potential for this piece."

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Posted in Ovation on Sunday, July 14, 2013 2:00 am.
Former MU chemistry department chair Herman Schlundt looks up from his work in this 1926 photo. Schlundt’s work with extracting and refining radioactive metals involved bringing thousands of pounds of ore and industrial waste to Pickard Hall, the former chemistry building. Schlundt died of uremic poisoning, a result of kidney failure, in 1937.  | Courtesy of University Archives

BY Brendan Gibbons

COLUMBIA — In its early days as a chemistry building, Pickard Hall was home to a man whose ambition blinded him to the risks he posed to himself and students who trusted him.

Almost 80 years after his death, the university is still cleaning up after him.
Herman Schlundt was an MU researcher who made significant contributions to science by extracting and refining radioactive metals from low-grade ore and industrial waste. The reckless way he conducted his work reflected ignorance of the dangers of radiation in the early 1900s.

Schlundt was also a clever and resourceful businessman who became a source of the world's most expensive materials, dealing with companies that wanted to profit from the promise of radioactive elements.

Two campus buildings and an endowed professorship in chemistry still bear his name. In his 35 years at MU, he influenced hundreds of careers.

He also left a big mess.

Pickard Hall and its hot spots

Schlundt conducted research on radium and its isotopes from 1913 through the mid-1930s, bringing thousands of pounds of radioactive sludge to MU from factories in New Jersey and Chicago that have since become EPA Superfund sites.

Along with the sludge, he shipped several tons of radioactive ore mined in Utah and Colorado to campus from corporate donors eager to learn how to refine it. At least one ton of the ore arrived at Pickard Hall as dust.

The sludge, dust and other radioactive gunk eventually made their way into Pickard's pipes, ducts and floor cracks, leaving behind hot spots of radiation that remain today.

Since discovering these deposits in the 1970s, the university administration has undertaken a number of efforts to clean the building with some success. But Pickard Hall continues to harbor radioactive material in its walls, floors and attic, although MU's Environmental Health and Safety Office says the sections where people work are safe.

Next spring, the Nuclear Regulatory Commission wants a new round of testing done so it can take the building off its list of sites to monitor. The official term is "decommissioning."

The university has made an agreement with the commission to evacuate Pickard Hall by the end of December so further tests can be conducted to determine the extent of the radiation.

Meanwhile, the art history and archeology department must leave the building and move two miles north to the former Ellis Fischel Cancer Center on Business Loop 70. The move includes dismantling the Museum of Anthropology and the Museum of Art and Archeology to relocate their collections in the old cancer center.

Once Pickard is empty, the testing will help clear up any lingering concerns and determine its future as an academic building. Meanwhile, its history can be found in the correspondence Schlundt left behind.

A man of letters
Schlundt kept his own research records and often wrote several letters a day. Much of that can still be found in the MU Archives and the Missouri State Historical Society where hundreds of folders store evidence of his work.

Throughout his career, he spooled out threads of correspondence that stretched from Columbia to points all over the U.S. and Europe where researchers and industrialists were dabbling in the science and business of radioactive elements.

From the 1910s through the 1930s, he had mail going back and forth to almost every major player in what he called the "radium game." He even corresponded with Marie Curie, the Nobel-Prize-winning Polish-French scientist who helped discover radioactivity.

The letters reveal that his laboratory in Pickard Hall did double duty as research center and industrial refinery. Schlundt thoroughly mixed the role of public researcher and educator with private-sector industrial chemist.

When he could not get as much money as he wanted from the university, he turned to private industry to finance his research.

Industrial processors of radioactive ores and waste products would donate nearly worthless raw materials to Schlundt in hopes of extracting valuable metal from them. Schlundt would use his chemistry skills to fine-tune the refining process before sending back tiny amounts of radioactive metal that, in today's dollars, would be worth billions.

Schlundt's life paralleled the early arc of global interest and study of radioactive elements. His research, his death and his legacy demonstrate how ambitious tinkering with poorly understood materials can have long-lasting, unforeseen consequences.

The making of a physical chemist

Schlundt was born in 1869 in Two Rivers, Wis., and completed his undergraduate work at the University of Wisconsin.

In 1899, he traveled to the University of Leipzig in Germany to work in the laboratory of Wilhelm Ostwald, a pioneering physical chemist. According to science historian John W. Servos, Ostwald is often listed with Swedish physicist-turned-chemist Svante Arrhenius and Dutch chemist Jacobus Henricus van 't Hoff, Jr. as a father of physical chemistry.

In his lab, Ostwald taught his students to apply the principles of physics, such as energy, to basic units of matter. In addition to Schlundt, more than 40 Americans were drawn to his lab from the 1890s to the early 1900s.

As a German-American from a Midwestern town, Schlundt differed from most of these chemists, who came from English families in the Northeast and Middle Atlantic.

After studying in Leipzig, most of this elite group went on to become chemistry professors at top private universities in the U.S. Others became leading government and industrial chemists.
Schlundt was one of the few who decided to teach at a public, land-grant university.

After earning his Ph.D. from the University of Leipzig in 1901, Schlundt came to MU. At that time, radioactivity was emerging as a subject for intense scientific study, as well as a popular science fad.

Schlundt kept a collection of pamphlets and newspaper articles throughout his career that advertised pseudo-scientific gimmicks to those seeking miracle cures. The collection provides a glimpse into the radiation hype of the early 20th Century.

'Miracle cure'

Radium, for example, was touted as a marvel of modern science, able to heal everything from cancer to eczema. "Radium - The Magic Element!" trumpeted one pamphlet that advertised a device called the Revironerator that was hyped as a way to irradiate drinking water.

An ad for a similar product, the Georadium Drinking Apparatus, proclaimed: "To-day it is universally conceded that the field of radium therapy at once is the most intriguing, the most mysterious and potentially the most valuable scientific development in the history of human achievement."

A news item declared that radium was capable, if properly employed, of preventing people from growing old.

Schlundt became fascinated with radioactive metals, which appear ordinary on the surface but do emit powerful and mysterious energy. In 1904, he began meeting with another chemistry professor twice a week to discuss the emerging study of radioactive elements. They read all the papers on the subject they could get their hands on.

"Scarcely two months passed by before we found ourselves building electrosopes," Schlundt wrote in a 1930 letter to university president Walter Williams.

One of Schlundt's early experiments was testing water from one of the university's deep wells for radioactivity. It tested positive (and still does, though at a level below the Missouri Department of Natural Resource's maximum contaminant level).

Schlundt then expanded his search for radiation to hot springs and aquifers all across the country. From 1906 to 1908, he tested the springs in Yellowstone National Park for the U.S. Geological Survey.

In fact, throughout his long tenure at MU, he received water samples from people still looking to score a scientist's endorsement of the healing power of their springs and wells.

Eventually, Schlundt turned his attention to radioactive metals.

Radium from ore

He had gotten an introduction to radium refining in the summer of 1913 at the U.S. Bureau of Mines station in Denver.
The bureau was working on refining carnotite ore, a sandstone streaked with neon yellow crust mined in western Colorado and eastern Utah. This ore was a vital source of radium for researchers all across the world.

"I spent last summer in Colorado in the U.S. Bureau of Mines and came in touch with the experiments in progress there on the separation of radium from the low grade ores of western Colorado," Schlundt wrote in a letter dated 1914.

The method he learned used a series of messy, labor-intensive steps to convert a lot of ore into tiny crystals of radium bromide salts.

"Although a large quantity of ore must be worked upon to get a very small quantity of radium at present, still this ore to-day is the principal source of radium," he wrote.

During Schlundt's summer in Denver, he spent time with Samuel Colville Lind, who became a lifelong friend and colleague. Lind was a decade younger than Schlundt, Tennessee-born and also an alumnus of Ostwald's laboratory in Leipzig.

According to a biography of Lind by the National Academies Press, the work they did was laborious and dangerous. Lind ended up burning away half of his right thumb and index finger after years of holding radium in his bare hands.

The summer they spent together provided the social connection that enabled Schlundt to get into the refining business later.

Golden partnership

In 1914, Schlundt took the work back with him to the university, partnering with a researcher named Howard H. Barker, who had once processed ore commercially.

Schlundt persuaded several corporations and individuals to send him donations of radium ore. Altogether, he received more than four tons of raw ore.

Radium was spread so thin throughout the ore that a ton might only yield a couple hundred milligrams, the weight of a small pill. That meant radium and other radioactive metals were more valuable than gold or diamonds in the late 1910s and early 1920s.

According to "New International Yearbook: A Compendium of the World's Progress," published in 1921, radium sold for $115 to $120 per milligram that year. Gold cost about $21 per troy ounce — roughly 1.09 ounces — that year, according to the National Mining Association. A milligram of gold would have been worth just 0.0007 cents.

Schlundt and Barker developed techniques to improve the efficiency and reduce the cost of extracting radium. They finished their work in 1922, the year American carnotite mining stopped. A new source of cheap radium — $70 per milligram, according to Schlundt — had been discovered in the Belgian Congo, and American mines couldn't compete.

This development generated interest in alternative sources of radiation.
Mantles for lanterns

While Schlundt and Barker were working on their radium refining method, Schlundt made contact with a man whose influence would shape the rest of his own career — Harlan S. Miner with the Welsbach Co. in New Jersey.

The company made mantles for gas lanterns, a crucial item before the rise of electricity. Miner was one of the chemists who perfected the use of another radioactive metal, thorium, which glows in a gas flame.

The process of extracting thorium from its source material, monazite sand, left tons of radioactive sludge. Miner wanted to find a way to turn this waste product into cash, and he needed a radium-refining expert to help the company profit from its waste materials. In 1917, the U.S. Bureau of Mines helped Miner locate Schlundt, most likely through Schlundt’s friend Lind.

Schlundt soon realized that the process he used to extract radium from ores could easily be modified to extract an isotope of radium, radium-228, from Welsbach’s industrial waste. He called this isotope "mesothorium." In one of his many letters to Miner, Schlundt described them both as "mesothorium rooters."

His radium-228 research probably contributed most to the lasting radioactivity in Pickard Hall because of the huge amount of radioactive waste he needed to synthesize it.

While the radium-228 refinery was in operation, he was receiving shipments of thousands of pounds of radioactive sludge from Welsbach and the Lindsay Light Co. in Chicago. This radioactive waste ultimately contaminated the grounds of both companies, leading to their eventual listing as EPA Superfund sites.

An excerpt from Schlundt’s report on refining radium-228 from the waste materials shows how much was required to produce a tiny amount of the radioactive substance.

"Up to the present time, about sixteen hundred (1,600) pounds of the original material have been processed," Schlundt wrote. This yielded only 86 milligrams of radium-228 — or about .003 ounces, less than the weight of a sewing needle.

Schlundt ended up writing a pamphlet on radium-228 that the U.S. Bureau of Mines published in 1921. It explained in detail how the material could be extracted and used. He continued the produce the isotope for at least nine years after that, honing the technique and sending the finished product back to Miner.

"The laboratory for refining of mesothorium has now been in operation for twelve years," Schlundt wrote around 1930. "More than 3,600 milligrams of high grade mesothorium...have been produced mainly by graduate students working under the direction of Dr. G.F. Breckenridge and the writer."
These 3,600 milligrams had a market price of between $216,000 and $360,000 at the time, according to prices Schlundt quoted in his letters. In today's dollars, this would be about $3 billion to $4 billion, depending on the years for which inflation is calculated.

Most of the radium-228 returned to Welsbach, sent in increments spread out over years. When Schlundt left MU in 1921 to study for a year at the Cavendish Laboratory in England, his students kept up his work under Breckenridge's supervision. Breckenridge, another MU chemistry professor, left the university shortly before Schlundt returned in 1922.

Schlundt the businessman

Throughout the 1920s, the refinery in Pickard Hall churned out radium-228. Schlundt's letters indicate that Welsbach paid him as a consultant during that time.

In a letter he wrote in 1922 to a company that wanted to enlist his services, he said, "At the present time I am serving in a consulting capacity for the Welsbach Company on Mesothorium. Since the process for treating mesothorium and radium are nearly identical, it seems to me that I should not accept any other consulting work with a competing firm unless I obtained consent of the Welsbach Company."

But in a few months, he wrote, he might be able to work something out with the second company.

"My contract with Welsbach expires early in July, Schlundt wrote. "I shall then be free I hope and will stand ready to cooperate with you and your firm to the best of my ability."

This kind of arrangement seems to have been against the chemistry department's rules at the time. A set of university policies the department recommended to the university's executive boards in 1916 forbade faculty from using university laboratories, equipment or materials for commercial activities without the consent of the dean or department chair.

It could have helped that Schlundt was chair of the chemistry department from 1910 until his death in 1937, according to a history of the chemistry department by former MU chemistry professor Dorothy Nightingale.

Plus, he doled out favors with the same enthusiasm as he doled out radium. He was constantly finding someone a job, answering those who wrote to him with chemistry questions and offering advice on how to improve chemistry education at rural high schools and colleges. He was, in many ways, a model citizen.

Schlundt's business arrangements also earned the chemistry department free equipment and supplies. When he wrote in the early 1930s to then-president Walter Williams asking for equipment, Schlundt mentioned he had sought financial support from private industry for most of his work.

"For nearly twenty five years the Chemistry department has conducted research work in the new field of science, which has revolutionized the theories of the structure of matter," Schlundt
wrote. "By far the major parts of the expensive material needed for these investigations has been loaned or donated by private individuals or firms."

Friendship pays off

His friendship with Harlan Miner of Welsbach also allowed Schlundt to make high-profile donations of thorium-228 to prestigious laboratories in the U.S. and Europe. He had discovered that he could draw this bonus material, then called radiothorium, from the same lantern mantle sludge he used to refine radium-228.

"To secure the radiothorium we must have the good will of Dr. Miner of the Welsbach Company, as it is through his firm that we get our supply of mesothorium," he wrote to the would-be sponsor in 1922.

One of his donations was sent to the Paris laboratory of Marie Curie, who won a Nobel Prize in physics and chemistry for her work on radioactivity. Curie wrote a thank you letter to Schlundt through Miner.

"I will soon receive the preparation of Radiothorium, which Mr. Pr. Schlundt offered to prepare in his laboratory," Curie wrote to Miner in French. "I would ask you to thank Mr. Pr. Schlundt on my behalf."

Curie's letter came in 1930 and marks the height of Schlundt's prominence in his field. But like many researchers who dealt too carelessly with radioactive materials, his work took a deadly toll on his health.

In the decades of research and industrial refining at MU, Schlundt, his colleagues and his students had all been exposed to to dangerous levels of radiation.

From cure to killer

Radiation poisoning became a national health scare in the early 1930s, when press coverage of a lawsuit against a chemical company by factory workers who had been exposed to radium developed into the "Radium Girls" scandal. One of radium's uses was in painting watch dials and gun sights — the radioactivity would make paint glow in the dark.

The women had worked at the United States Radium Corp.'s factory in East Orange, N.J., in the late 1910s and early 1920s, where they painted watch dials. Many of them would lick the tips of their tiny brushes into fine points, ingesting toxic levels of radium, according to a report Schlundt wrote for the U.S. Public Health Service.

About 12 years after some of them were exposed, they became deathly ill. The radium they had accidentally eaten had lodged in their bones. For some of them, it caused their jaws to rot away.

According to environmental historians Bill Kovarik and Mark Neuzil, five of the dial plant workers sued Radium Corp. for $250,000 each in 1927. Newspapers went from trumpeting the health benefits of radium to playing up the pain and suffering of the dying women.
"Most of the news media dove in with a mixture of sensationalism and muckraking that accelerated and expanded the controversy," Kovarik and Neuzil noted.

The publicity put pressure on Radium Corp. to settle. Later that year, the company agreed to pay each woman $10,000 and $600 every year for the rest of their short lives. The company would also pay their future medical expenses.

Radium Corp. had a marked connection to Schlundt. The company had loaned him ore during his early experiments with Barker. By the time of the scandal, Barker had become a vice president of the company.

Before the factory workers' case went to trial, Barker and Schlundt were writing back and forth, with Schlundt offering his opinion on dosage levels.

In 1928, the Surgeon General convened a meeting with officials from the Public Health Service and the National Consumers League. Those at the conference agreed that two committees should be set up to investigate workplace practices with radium.

Schlundt was placed on one of the committees to do research on some of the women. He traveled to New York about 1931 to test two women who had worked at the Radium Corp. factory in the late 1910s, and he published a report of his work there.

"The two girls, who after a lapse of nearly 12 years, are still radioactive, present cases of more than passing interest, inasmuch as they stand as striking examples of the tolerance of living persons for radium," he wrote.

Declining health

Schlundt proved he was willing to subject himself to the same risks he had exposed others to. He drank water spiked with a known dose of radium to find out how quickly it would stop showing up in his urine. "As high as 91 per cent of the radium taken was eliminated during the first four days after drinking the radioactive water," he wrote in his report to the Public Health Service.

When he returned to Columbia, he turned his attention to health hazards. In his letter to Walter Williams, he described some of his health studies in the early 1930s. He published a paper in the Journal of Industrial Hygiene in 1931 titled, "Dangers in Refining Radioactive Substances."

"Our first study of this problem indicates that the refining operations may be conducted without hazard when proper safety measures which we have introduced are followed by the workers in the refining laboratory," he wrote.

By then, Schlundt had begun to suffer health problems probably related to his research. In a 1933 letter, he complained of recurring bouts of sleeping sickness. He developed severe encephalitis that year and spent much of the 1933-1934 school year in the hospital, according to Nightingale's history. When he returned in 1934, he had to cut his hours.

He died of uremic poisoning, a result of kidney failure, in 1937. He was 68.
Schlundt's radioactive legacy

No mention of Schlundt's industrial refinery appeared in a two-part obituary published in the Missourian in 1937. It referred to him as an authority on radioactivity who also found time to be involved in scientific fraternities, professional chemistry societies, the Columbia Kiwanis Club and the Columbia Red Cross. It noted his connection to Curie.

It would be years before the university understood the radioactive mess he left behind. Peter Ashbrook, former director of the university's Environmental Health and Safety department, explained the situation to the Nuclear Regulatory Commission in a hearing in June 2011.

Ashbrook told the commission the university has known about Pickard's radiation since the late 1970s, when staff surveyed the building and removed contaminants "where it was easy to do so."

Some of the radioactive leftovers were behind walls and under floors, making them hard to reach. They placed metal shields over some spots and restricted access to the attic and basement. They placed dosimeters, which calculate the dose of radiation a person receives when exposed.

"We are not aware of anyone having been harmed by radiation in Pickard Hall," Ashbrook said.

Questions still remain about what if any harm might have come to Schlundt's students, the ones who faced direct exposure to more concentrated radioactive materials. These men would have been in their 20s in the 1920s. Their lives were not nearly as well-documented as Schlundt's.

Despite the danger he unwittingly posed to his students, he won the admiration of MU's student body. "The University freshman in need of a firmer grasp on the life about him found homesickness or discouragement considerable lessened through the words of Dr. Schlundt," the obituary stated.

The final paragraphs of Schlundt's obituary reveal his greatest talent, the reason he was able to accomplish everything he was in his life.

"He possessed an unusually retentive memory for names and faces. His greatest hobby was people."
Wal-Mart Campus Store in works near MU

By Jacob Barker

Saturday, July 13, 2013 at 2:00 am

Wal-Mart plans to squeeze a new store into Downtown Columbia.

Don't worry. It's not that big.

Plans submitted to the city show the retail giant plans to open a 3,700-square-foot store in the ground floor of the under-construction Lofts at 308 Ninth, just across the street from the University of Missouri campus in downtown Columbia.

Travis McGee, a partner in the mixed-use project, confirmed that Wal-Mart would be a tenant but referred further questions to Wal-Mart. Wal-Mart did not respond to requests for comment yesterday.

Wal-Mart’s small store will join Varsity Nails, restaurant Thai Express, St. Louis bar International Tap House, local smoothie joint Blenders and Tigers Credit Union beneath the 64 apartments in the five-story building. Tenants are slated to move in Aug. 15, and the commercial tenants are expected to be operating before Sept. 1.

Wal-Mart, known for its big-box supercenters that are generally around 180,000 square feet, has tried smaller stores before. But its Wal-Mart "Neighborhood Market" stores, launched in 1998, still occupy about 38,000 square feet. In 2011, it launched Wal-Mart Express, and while even smaller, they are still generally about 15,000 square feet.

In March, the company announced a 5,000-square-foot Wal-Mart on Campus near Arizona State University, and in January, NBC News reported Wal-Mart was planning a 2,500-square-foot store near the Georgia Institute of Technology in Atlanta. The Wal-Mart on Campus concept was pioneered at the University of Arkansas in Fayetteville, near the company's corporate headquarters in Bentonville, Ark. That store opened in January 2011.

The Arizona store offers groceries, convenience items, a pharmacy and financial services like check cashing, according to the company.
Among the investors in the Lofts at 308 Ninth is WD8 LLC, which lists Richard C. Thomas as a member. Thomas is an attorney for Wal-Mart heiress Nancy Walton Laurie.

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NOT ENOUGH DOCTORS, SO MISSOURI LAW PAVES WAY FOR PHYSICIAN ASSISTANTS TO PROVIDE CARE

23 hours ago • By Michele Munz mmunz@post-dispatch.com 314-340-8263

Supporting the theme parks and attractions in the tourism hub of Branson, Mo., are thousands of hourly workers manning the ticket counters, cleaning hotel rooms and waiting on tables.

These residents, living among the Ozark Mountains in Taney and Stone counties, often lack health insurance. Three years ago, a group of volunteers opened a clinic in a donated building with donated medical equipment to care for them.

“It was just a matter of us saying we wanted to provide this for our community because we thought it was the right thing to do,” said Rick Tallon, who volunteers as a dentist at the clinic.

But for the past two months, the Faith Community Health clinic has been idle. Trying to provide care with busy physician volunteers has been unreliable and sporadic, Tallon said. “We have 500-plus patients on the waiting list.”

A new Missouri law providing more freedom for physician assistants to care for patients could change that. Advocates hope the change will alleviate the shortage of primary care doctors in Branson and across the state — a shortage expected to worsen as the Affordable Care Act expands health care benefits to millions more Americans.

Currently, physician assistants must be supervised by a doctor located within 30 miles of where they practice, and a doctor must be present 66 percent of the time they are caring for patients — the second-most restrictive state law in the country.

That will change Aug. 28 when the supervising doctor will be allowed to be up to 50 miles away and will have to spend only half of a day on site for every 14 days the physician assistant practices.

Easing restrictions on physician assistants, who have more than two years of postgraduate study, is lauded as an affordable way to improve care for residents who are geographically isolated or see long waits at understaffed clinics.

“Allowing physician-PA teams to tailor medical care according to the needs of their patients and communities can only lead to better access to care in rural and underserved areas,” said Paul
Winter, a physician assistant at Missouri Baptist Hospital and president of the Missouri Academy of Physician Assistants.

The legislation is breathing life into the struggling Faith clinic in Branson, which plans to use grants from the Missouri Foundation for Health and the CoxHealth Foundation to pay a physician assistant to staff the clinic full time.

“This is going to give us the opportunity to have someone in there who can take care of a high number of patients without having to have a physician there” two-thirds of the time, said Tallon, who also serves as the clinic’s board chairman.

BROAD SCOPE

Physician assistants can perform physical examinations, diagnose and treat illnesses, order and interpret lab tests, prescribe most medications, perform procedures, assist in surgery, and provide patient education and counseling. The supervising doctor outlines their duties based on experience and skills. They are nationally certified and state-licensed.

Physician assistants have a bachelor’s degree and complete a physician assistant training program, which averages 27 months and includes 2,000 hours of clinical work in different specialties such as pediatrics and psychiatry. Primary care doctors have more than 15,000 hours of clinical training.

The Missouri State Medical Association, along with other state doctors’ groups, supported easing supervision on physician assistants.

“We need to be able to get high quality medical care to these remote areas with a low volume of patients and no doctors.” said Dr. Stevan Whitt, chief medical officer for the University of Missouri Health System, who testified in favor of the law. Physician assistants can staff satellite clinics, make house calls, visit nursing homes or make hospital rounds.

By 2015, the Association of American Medical Colleges predicts a national shortage of 33,100 primary care physicians because medical students are choosing other specialties with better pay and hours, and older primary care physicians are retiring.

“PAs are incredible lifelines to patients who might not have regular access to other health care providers. So, it’s vital to do everything we can to bolster the work done by PAs,” U.S. Health and Human Services Secretary Kathleen Sebelius said last month at the annual conference of the American Academy of Physician Assistants.

These much-needed providers, however, leave Missouri in droves. The state has two physicians assistant training programs: at St. Louis University and Missouri State University in Springfield. Half of the graduates go to states with fewer restrictions and more jobs, university officials say.

Missouri has only 11 physician assistants per 100,000 residents, compared to the U.S. rate of 24, according to a recent report by the Missouri Foundation for Health, an independent philanthropy working to improve access to health care. Only three states have lower rates.
"That's just fewer providers overall to take care of Missouri residents," said Caroline Chang, an assistant professor in SLU's department of physician assistant education. "We're hoping that this new legislation is going to vastly improve that problem in our state."

CLINICS SEE HELP

In urban areas, clinics serving the uninsured and Medicaid patients have a hard time attracting primary care doctors because of the pay.

Dr. Robert Taxman works with two physician assistants at an urgent care center on Delmar Boulevard operated by St. Louis ConnectCare, a network of specialty providers serving those lacking insurance. He sees hiring more physician assistants as an affordable solution to treating a patient population that has doubled over the past few months.

"We see the trend as only likely to increase over time. The more patients you have, the more caregivers you need to take care of them, and when the physician is overloaded, the quality of care drops," Taxman said.

A study released last month showed patients are more accepting of working with primary care providers who are not medical doctors. While half of patients preferred to receive primary care from a physician, most would opt for seeing another health care professional over waiting.

Physician groups, however, have not always been supportive of easing restrictions on physician assistants. Doctors are feeling pressure from the Affordable Care Act, which stresses prevention and better management of chronic diseases such as diabetes and heart disease through a team approach. Reimbursements to hospitals will be based on health outcomes.

"Our regional health care system will be penalized for not doing things to keep people healthier...," said Whitt with the University of Missouri Health System. "Your job is also to take care of them before getting sick, which most people think is ideal, but it is hard. So you must take care of people at their site, at their home or in their town... as opposed to our current system, where you come to us in our urban centers."

Physician assistants are ideal for that, he said, especially with the latest advancements in telecommunication. Doctors can easily collaborate with physician assistants and advance practice nurses in remote areas from their office.

Advanced practice registered nurses — who have nursing graduate degrees and are considered "mid-level providers" like physician assistants — have also been pushing for more autonomy in Missouri. Physician groups have opposed their efforts, however, because the nurses want to remove the doctor supervision requirement. In Missouri, there are more than 6,000 advance practice nurses, whose ranks include nurse practitioners, compared with more than 800 physician assistants.

"One of the reasons PAs are attractive to physicians is the cooperation that has always been present between the two professions," said Missouri State Medical Association government...
relations director Jeff Howell. “Both physicians and PAs believe that health care is best delivered as a team, where the physician is the leader of the team.”

Nurses did win a small victory this year: They can see patients further than 50 miles from their supervising physician in a shortage area if they provide care while using electronic communication with the doctor. This comes two years after many advanced practice nurses were frustrated over not being able to respond to an appeal for medical providers after the Joplin tornado.

Missouri has one of the most restrictive practice environments for advanced practice nurses, with only six states ranking lower, according to a report last year. Only one other state, Mississippi, has a mileage restriction.

Missouri Foundation for Health policy analyst Thomas McAuliffe said mid-level providers like physician assistants and advanced practice nurses are key to a system shifting focus to access and prevention. “Without all the levels of nurses and health professionals practicing to their full scope, our health care system will not work,” he said. “This Affordable Care Act will not work.”
MIZZOU, SEC TAKE CAUTIOUS APPROACH TO CONCUSSIONS

July 14, 2013 12:00 am • By Dave Matter dmatter@post-dispatch.com 314-340-8508

COLUMBIA, Mo. • Missouri quarterback James Franklin’s injury-ravaged 2012 season ended for good in the third quarter Nov. 17 when Syracuse defenders sacked him, then knocked him backward on a short-yardage keeper on Faurot Field.

After coaches and teammates noticed Franklin staring into the crowd in a daze, trainers put him through a quick series of tests on the sideline, where he stayed for the rest of the game.

Diagnosed with a concussion, Franklin couldn’t practice the next week in preparation for Mizzou’s season finale at Texas A&M. Sunlight bothered his eyes so much that he stayed indoors most of the week.

“It was disappointing not being able to play,” he later said. “But I didn’t try to push it because I had to be careful with my head.”

By game day in College Station, Texas — in a contest the decided underdog Tigers needed to win to secure bowl eligibility — Franklin was feeling better. But Missouri’s medical and training staff made a decision.

“He just wasn’t ready,” Mizzou athletic trainer Rex Sharp said recently. “Forget football. There’s a lot more to this than football. We’d love for him to play, but why?”

Franklin’s injury and Missouri’s cautious approach underscore an issue that’s gaining notice across college football, particularly in the Southeastern Conference.

Three years ago the NCAA required its member schools to adopt a concussion management plan that mandates all athletes be removed from practices or games if showing concussion symptoms.

Doing more

The SEC since has taken further steps to address one of college sport’s most pressing subjects. Last year, the conference assigned a working group of team doctors, trainers and professors to study head injuries for college athletes. At May’s SEC meetings in Destin, Fla., the league urged the NCAA to do more.
“There is much work to be done, and while the conference has a role to play, prevention and treatment of concussion injuries is a national concern that needs and deserves a coordinated national effort,” SEC Commissioner Mike Slive said in a statement. “For this reason, the presidents and chancellors will make a formal request that the NCAA take the lead in organizing and spearheading a national research effort and examining possible revisions to playing rules in football and other sports.”

With heightened awareness surrounding concussions in the NFL — a concussion is brain trauma caused by a direct or indirect blow to the skull — the issue has trickled down to the college ranks, where studies and rule changes continue to tackle the concerns.

In September, the NCAA’s Injury Surveillance Program released a study showing that after decades of escalating incidents the number of concussions suffered by football players had stabilized between 2004-2012.

In March, the NCAA passed a rule allowing officials to eject players who target and contact defenseless players above the shoulders — though such ejections are subject to instant replay reviews.

The SEC was aggressive in penalizing illegal hits last season as two players, South Carolina’s D.J. Swearinger and Mississippi’s Trae Elston, were suspended for a game each.

At Missouri, the training staff has followed protocols that have been in place since Sharp arrived in 1996. Sharp said Missouri has had a slight increase in football concussions in recent years, but he attributes that to enhanced awareness and players being more honest about their symptoms.

“The biggest thing for me is educating our players and making them understand that this is not a sprained ankle,” he said. “We can’t just put a bag of ice on this and make it better.”

Staying informed

Last summer, the SEC produced posters that explained concussion symptoms and required each school to hang them in their locker rooms.

In a recent interview, Sharp pointed to a stack of concussion pamphlets piled on a table in his office as further proof that players are regularly exposed to information on the topic.

Still, Sharp takes away a player’s helmet if he shows signs of a concussion during a game or practice.

“They want to go play,” he said. “We have to look out for their best interest, so I figure if they run out there without a helmet, I’ll notice.”
In 1996, Missouri linebacker Barry Odom suffered a mild concussion covering a kickoff at Southern Methodist. He, too, was stubborn about being sent to the sideline.

“I felt guilty for being out because I had a headache,” said Odom, who later joined Gary Pinkel’s Mizzou coaching staff and now serves as Memphis’ defensive coordinator. “Most competitive people would probably agree.”

Odom gradually recovered and returned to action — only to suffer a more severe concussion a month later against Colorado.

Now, after working alongside Sharp on Pinkel’s staff, Odom can appreciate the process that determined his recovery.

“There weren’t a lot of studies done at that time, but they sat me out of practice and did all the things you would think you were supposed to do,” Odom said. “Looking back, with all the information we have (on concussions) now, that’s what Rex was doing back then.”

Along with the help of Tom Martin, the director of MU’s adult neuropsychology department, Sharp put together Mizzou’s concussion plan three years ago, detailing the training staff’s graded policy for testing athletes after they’ve suffered concussions.

Players who have a concussion are monitored daily and must remain symptom-free for 24 hours before being cleared to resume a gradual return to activity. While they recover, players are held out of practices, weightlifting sessions and, in some cases, prohibited from attending class.

Some schools are developing advanced methods to detect and treat concussions. This month, the University of Nebraska will open its Center for Brain, Biology and Behavior inside the football stadium, featuring a $3 million on-site magnetic resonance imaging machine, The Associated Press reported.

Nebraska’s medical staff also is developing an electrode-covered cap that can read a player’s brain activity on the sideline and immediately diagnose a concussion.

Sharp said he’s intrigued by the technology but also wondered, “How much is too much?”

High school connection

Two years ago, Martin helped write a sports concussion state bill for high school athletes, requiring concussion education for high school coaches among other provisions for athletes with a concussion. Last year, the Missouri State High School Activities Association released its first study since the bill became law.

Among the findings, 653 high school football players were diagnosed with concussions during the 2011 season and missed an average of six days of activity while recovering.
With the increased education around the state, the law has been "a huge success" at the high school level, Martin said.

"The one thing we don't want is for someone's who recovering from a concussion to be put into a situation of having another one," he said. "And if you return too soon, what would have lasted days or weeks now turns into months or years and in some cases indefinitely."