

## TRANSCRIPT

**What the Research Shows**

SPEAKER Kristin Swenson, Utah Education Policy Center

EVENT TITLE Every Day Counts: Increasing Attendance to Improve Student Outcomes

EVENT DATE September 26, 2013

## KARL WILSON

I'd like to introduce Dr. Kristin Swenson, who is faculty at the University of Utah in educational psychology and the lead author in a recently published study on chronic absenteeism. In this study, she not only describes chronic absenteeism in Utah, but digs deeper and looks at the relationships between absenteeism, test scores, GPA, and school dropout in our state. Please join me in welcoming Dr. Kristin Swenson.

## KRISTIN SWENSON

I'm really glad everybody came out to talk about attendance today. This is pretty awesome. Thanks for coming. I'm not faculty in the ed psych department; I'm adjunct faculty in the ed psych department. So I'll just take away one of those credentials.

Let me tell you what we did with this study. We have access to a data use agreement to the Utah State Office of Education, data that they collect normally every year. We also had access to Hedy Chang, who worked with our associate director and said, "Wouldn't it be nice if you took the data that you have access to and looked into chronic absenteeism and its effects in Utah." So, I got the call. As the statistician there at our shop, it was my job to crunch these numbers, and we decided to look at three questions using the data on enrollment and the data on the test scores. So we just merged those two sets of data that are already taken, and we looked at who the chronically absent students were. So, what color are they, what homes are they from, are they moving around a lot, just who are they? Then we looked at the short-term correlates of chronic absenteeism. If a kid's absent in third grade, what do the third grade scores look like? And then we looked at the long-term correlates of chronic absenteeism. If a kid's absent in third grade, what happens in the sixth grade, what happens in the seventh grade? And one of my pet projects is dropout, so really focused on dropout and how did chronic absenteeism affect the possibility that the child would drop out. I'm going to use two datasets. Sorry to talk about data, but it's what I do.

The cross-sectional dataset just looked at the students in the 2010/2011 school year. The longitudinal dataset looked from kids from the eighth grade in '06 up until they should have graduated in 2010, and I'll tell you when we switch from one dataset to another. We'll stay with the cross-sectional dataset for quite a while. We looked at the chronic absentee students; wanted to find out who they were. We looked at the demographic characteristics that predicted chronic absenteeism, so those characteristics that they had prior to the absenteeism.

---

We also looked at the demographic characteristics that co-occurred with the chronic absenteeism, so ... that were happening at the same time as the absenteeism. And then the last thing we did was draw up a little profile of the typical chronic absent ... chronically absent student.

Now you saw this U-shaped curve when Hedy was talking before. In the kindergarten we had very, very high levels of chronic absenteeism. Now in Utah, kindergarten isn't mandatory, right, it's not part of compulsory ed. So maybe that's positive, who knows, but high levels of chronic absenteeism drops down, and then by the tenth grade those kids are about the same level as the kindergarteners about the same time as they're able to drive. They drive away from school. And we looked at four of the typical, usual suspect demographic predictors, and we looked at them in two ways. One, we just looked at simple correlations, what was the correlation between being a racially ... racial minority student, and for that we coded Asian and White together, and anybody else together, and we found about 40% more likely to be chronically absent if they were racially ... had ... were from a racial minority background, but 20% were likely to be chronically absent if they had low English proficiency, 70% more likely if they were in special education, and about 90% more likely to be chronically absent if they were from low-income homes.

But as you probably know a little bit from your stats classes you took in your undergrad, sometimes those variables correlate together a little bit. So it could be that those kids from racial minority homes are also the kids from low English-proficient homes. So we also ran a regression, where we put all of the predictors in together, and that means every one of these bars is if the student was coded zero on the other three factors. So the racial minority, we have 20% more likely to be chronically absent. That is a kid who is not, not LEP, not special ed, and not low income, but *is* racial minority. So you notice all of those numbers come down, but those low-income kids still pretty high, about 80% more likely to be chronically absent without any of those other covariates than are the kids that aren't from low-income homes. So we really saw that there's quite a problem with the kids from low-income homes, and even with all the other factors accounted for, those kids are still more likely to be chronically absent.

Then we looked at the things that are happening during that school year, right? The kid that is from a minority home, minority background is ... minority background every year, but the kids that are mobile aren't mobile every year. Maybe they're homeless; they're not homeless every year, that's just in that particular year 2010/2011. When we looked at those rates, we saw a lot higher coefficients; we saw greater probability of being chronically absent. For the homeless kids, they were 2½ times more likely to be chronically absent, and for the mobile kids this is the highest correlation we found. They were four times more likely to be chronically absent than the kids who weren't mobile. So those kids who were coming in and out of schools—not only do they have that disadvantage of, you learn one thing in one school and you're learning another thing in another school, you run behind, but they're also much more likely to be chronically absent than their non-mobile peers.

Because we had access to this data—it's data that's collected in the database that we had, had the access to—we pulled out those kids who were homeless in 2010/2011, and we wanted to give a little finer-grained look at the relationship between homeless and chronic absenteeism.

And this is where we found some just really, really high chronic absenteeism rates. Those kids who are not living in a home, but are living in a motel or in a shelter, were ... nearly 40% of them were chronically absent. So this was a ... just huge chronic absent rate. You know, the kids living in the car, it's parked in the campground, weren't faring much better; about 30% of those were chronically absent. And so, although there's not a lot of kids that are homeless in Utah, thankfully, about 5%, it was a real big problem. This is an area where the kids were really suffering.

Then we drew out this picture of what does, what do the chronically absent kids look like? And when you start looking at those covariates, you think, oh well, the kids that are in special ed have a ... they're, they're more likely to be chronically absent. So probably that population of chronically absent kids is mostly special ed kids and mostly kids of color. It's, it's not the case. The kids who were chronically absent were mostly from the majority groups; 82% weren't in special ed, 72% of the chronically absent kids were White, 91% of the kids with chronic absenteeism were English proficient, and the only area where we saw a non-majority group, a majority in the chronic absenteeism population, was with those low-income kids. No, it was about fifty-fifty—52% of the kids who were chronically absent were from low-income homes. So I think that's an important thing to know when you're thinking about the chronic absenteeism. It's ... just because some group has a higher likelihood of being chronically absent, doesn't mean that population of chronically absentee kids is made up of that group. They're overrepresented, but often these chronically absenteeism ... chronically absenteeism kids ... chronically absent kids look just like every other kid in the class.

Then we switched the analysis from who were the chronically absent kids to what were the short-term outcomes. And instead of calling it outcomes—because we can't say this is necessarily causal—say correlates. We might call this more bad news. Every one of the outcomes that we looked at, we found that being chronically absent in that year had a correlation with some negative academic outcome. We did in the first grade the reading on grade level, first and third grade, reading on grade level. We found that the odds of being below grade level were 1.7 times higher if the kid was chronically absent in that year. So they were 70% more likely to be off grade level than the kids who weren't chronically absent. When we looked at the CRT scores—and for these CRT scores we took the third graders through the eighth graders—we found that the overall scores were lower for the kids on average who were chronically absent. That was in language, that was in math, and that was in science. When we compared the math scores against, the math and science scores against the language scores, we found that those scores were differentially impacted. Being absent hurts you more in math and science than it hurts you in language, and I think Hedy was touching on that where these are subjects that build on one another. You miss the day where you talk about fractions; you're going to be pretty hard-pressed to learn how to add the fractions when you come back the next day.

We also looked at cumulative GPA in the high school students, and we found that they were almost a full point lower, .854 points lower than their student ... than their peers that weren't chronically absent. So across the spectrum, from first grade to the twelfth grade, the kids were impacted negatively by being chronically absent in that year.

Now we switch to that longitudinal dataset, where we're looking at kids from '06 to 2010/2011, and we want to look and see what kind of impact being chronically absent in one grade has on being chronically absent in the next grade. We found that overall, if you're chronically absent in one grade, you're about 13 times more likely to be chronically absent in the next grade. This is that early warning sign, right? Kids chronically absent in the eighth grade, they are 13 ... no, kids chronically absent in the *eighth* grade, they're 17 times more likely to be chronically absent in the ninth grade.

Now it kind of goes down; I don't really know why, but that goes down, but overall it's about 12½% times more likely to be chronically absent in the subsequent grade. It's really important to get in there and address the issues when you see them happen because, as we're going to see, those things stack up, and it gets worse and worse.

Dropout—kind of the thing that I wanted to look at when I said, yeah, I would take a look at these data. Chronically absent students were more likely to drop out than chronically ... than non-chronically absent students. What we found was that if a student was chronically absent in any year starting at the eighth grade, they were more than seven times more likely to drop out than kids who weren't chronically absent in any year; *any* year, even one year. Well, this data gets a little confounded when we're looking at it like this, because part of dropping out is stopping coming to school, right? The kids don't go to school, they go to school, go to school perfectly, and then one day they decide "No, I'm not going to do that anymore" and, and they drop out. Within the year that the kids drop out, they disengage from school, stop coming to school, and we will see them become chronically absent, typically before they drop out, and sometimes they just stay absent until they get dropped out, right? So to try to account for that, we said, we don't care if they're chronically absent in the year they dropped out. Senior kid drops out in the senior year, we're going to assume that the kid was chronically absent in that year when the kid dropped out. So we didn't care about the year that they dropped out, and we looked to see if they were chronically absent in any year *before* that dropout year, right—the early warning sign? And what we found was that a student who was chronically absent in any year before the dropout was five times more likely to drop out than a non-chronically absent peer. Right? So it's that early warning sign, again. See that kid chronically absent in ninth grade—they are five times more likely to drop out of school later than the kid who wasn't chronically absent.

Kids who make it to the senior year—and our new research is really focusing on this—they went all the way. They have some hope of graduation, they don't hate school, they've made it to their senior year, but they were chronically absent at some point before their senior year—25% of those seniors dropped out during their senior year. This is really a problem. I think when the kids are making it to their senior year and persisting in their education that far to the twelfth grade, they have some hope and some expectation, but they're still dropping out. And they've given that warning sign that some year before that year, they were chronically absent. We're the educators, at some ... we have some responsibility to touch those kids and help them graduate, if they're going to persist and come to school until their twelfth grade.

We looked at the odds of dropping out if they were only absent one year and no other year. We found it about two times more likely on average to drop out. So if the kid was chronically

absent in eighth grade, and never chronically absent again, they were still two times more likely to drop out. Same for the ninth grade, tenth grade, eleventh grade. Twelfth grade dropped down a little bit. If the kids had never been chronically absent all the way along, twelfth grade they were chronically absent, a little lower coefficient, but they were still 70% more likely to drop out than their non-chronically absent peers.

This is the slide that Hedy has on her ... that became national. This is the famous slide. We're so proud of the Policy Center. Yeah, thank you. And here we looked at the cumulative effects of chronic absenteeism on dropping out. Those kids who were never chronically absent at all, 10% of them still dropped out of school. Kids that were chronically absent one year, 36% of them dropped out of school. Chronically absent for two years, now we have more than half of the kids dropping out of school, and it only gets worse. Once you hit 50%, you're more likely than not to drop out. So you get a kid that's been chronically absent for two years, that kid's already, just by virtue of having missed ... been chronically absent for two years, the kid is more likely to drop out of school than to graduate. We need to touch those kids. By the time it was fifth, five years of chronic absence, they're chronically absent eighth, ninth, tenth, eleventh, and twelfth grade, there weren't even enough of them to count. They had all dropped out already.

One of the things that's interesting to look at here is the relationship between chronic absenteeism, grade point average, and dropping out. And so, we ran a fancy little regression called a mediation model. I won't make you sit through the stats on that, but the idea was that these kids are missing school, they're getting bad grades because they're not in school to get the good grades, and then they don't have the grades to graduate, and so they drop out. So we were able to use the data, we were able to run a regression model and find out just how true is this scenario. We know that the kids who are chronically absent are more likely to drop out. There's a high correlation there, a .44, real solid. We ran a model just to look at that path that we assumed—that they're chronically absent, they get bad grades, and now they can't graduate. And what we found was, that accounted for about 70% of the relationship between chronic absenteeism and dropping out. So most of the relationship is actually this path, or we have evidence that suggests that most of the relationship between chronic absenteeism and dropping out is that they're getting the low grades, and then the low grades are actually what's precipitating the dropout.

So we tried to look at running some different models for predicting who's going to drop out, and it was pretty cool, I thought. Of course I'm a nerd. If we just look at the demographic information on the kids—who are their parents, what are their homes like, what color are they—those classic demographics, we found that we could identify a whopping 6.8% of the dropouts. That's something, but probably not going to set a lot of policies on predicting 6.8% of dropouts. If we just use chronic absenteeism, we bounce that up quite a bit, but we're still only predicting 20% of the dropouts. If we used a combination of chronic absenteeism and GPA, we would be able to predict 49% of the kids who are going to drop out. If we know what their grades are, and we know if they've been chronically absent or not, we have a pretty solid idea about what that kid's going to do as far as persisting in school or dropping out of school. And what was kind of funny with that model is, if we add back in the demographics, we actually

lose some of our predictive ability. We end up over-predicting for the kids who don't drop out. I can't remember which direction it was, but we over-predicted one group and, and our, and our model was wrong. So really the best, the best tool we have at a data level to predict dropouts would be use chronic absenteeism and the GPA together. We'll be able to predict about 60%, and really target a population of students to help—certainly target that population better than what color is the student.

#### PARTICIPANT

... looking at grades eight through twelve.

#### KRISTIN SWENSON

Eighth through twelfth, yes. Yeah, our longitudinal database started in '06 where we had solid data, so we couldn't, we couldn't get much further back than that, but we've got two more years of data now. So what we concluded overall, from looking at the state's data, was that we have a problem in Utah—13.5% of all students are chronically absent. And you notice gender was missing from those demographic predictors? Gender was perfect: 13.5% of boys were chronically absent, 13.5% of girls were chronically absent, so we just didn't use it. But 13.5% of all Utah students, on average, chronically absent—one out of seven students. We also concluded that chronic absenteeism is associated with less ... low test scores, low grades, low graduation rates, and also low reading-on-grade-level rates, and that chronic absenteeism serves as an early warning sign of future academic problems, particularly dropping out of school. Therefore, early identification of chronic absent students is essential and that's, I think, the whistle that Hedy's been blowing for a few years.

Finally, I want to talk to you a little bit about the research that we're doing, currently doing, and I think it's pretty exciting. Been pulling all the attendance policies from the schools and districts, and trying to correlate the district and school-level policies with chronic ab ... or, with attendance. That hasn't been going so well. The state is now giving ACT-scored tests to all eleventh grade students, so we would like to look at the effects of chronic absenteeism on the ACT scores, not just on the tested subjects in the schools or in, on GPA. And the project I'm most excited about, because we've just pulled the data for, is the long-term outcomes of chronic absenteeism are for the *good* students. We have the Utah Data Alliance data system online. We've just completed our first analysis on dropout with those data, and we've pulled the data for this next analysis. We've got 450 students who graduated with 3.0 GPAs or higher, on time, and went to college. So, they were chronically absent in either their junior or senior year— didn't really seem to hurt them. They got good grades and they went off to college. I'd like to propensity-match those students with kids just like them, or as just like them as we can get, who weren't chronically absent, and see what kind of long-term effects chronic absenteeism has once the students get to college. So those are our next steps for research at the University of Utah, and we've got the data pulled; very excited to look at those long-term correlates.

That's what I've got for you today on the analysis of the data at the United ... the USOE data from the University of Utah. Am I going to take some questions?

MODERATOR

You are going to take some questions. I understand you want me to say, “Kristin can now take some questions.” So if you’ll raise your hand if you’ve got some questions, and we’ll bring you a mic.

[Question from participant not audible]

KRISTIN SWENSON

Well, we just ... she’d like to know when we’ll be able to look at this—what’s, what are the long-term effects for the good students, and we’ll have an answer internally before the end of the year. As far as having that answer externally, I would say in the springtime. We’ve found the kids, we’ve pulled them, we’re propensity-matching them right now, and I need to get a little time cleared, I’m thinking November looks pretty good.

PARTICIPANT

And what kind of outcomes are ... what are you looking at?

KRISTIN SWENSON

Looking at their grades in college, their credits in their first and second year, and graduation on time.

PARTICIPANT

So recently the Utah State Office of Education and the Department of Human Services completed a study evaluating outcomes for those youth in both of those populations, and they found that children or students who were highly mobile, when they looked at their CRT scores, they had lower CRT scores. But a high number of them also were never tested, and I’m wondering if you were able to look at that with children who are chronically absent, whether ... when you look at their CRT scores, whether or not they were even there for the test and being tested?

KRISTIN SWENSON

No, we just have ... if they took the test, they were in our dataset as, as having taken the test. So actually, we’re probably representing a best case scenario with the data that we have. So best case scenario, you’re three points to six points lower during that one year.

PARTICIPANT

So I’m just wondering, are you also ... right here.

KRISTIN SWENSON

Thanks.

PARTICIPANT

Are you also including unexcused and excused absences together?

KRISTIN SWENSON

Yes. We're using the chronic absenteeism definition that Hedy talked about, so that would be missing 10% or more of the days for any reason, and we limited our dataset to kids who were enrolled for 20 days or more.

PARTICIPANT

And that would include, like, extracurricular activities like sports?

KRISTIN SWENSON

Yeah. If they are not in the seat, they are not in the class.

PARTICIPANT

Excellent, thank you.

PARTICIPANT

When you talk about kids that have dropped out of school, what about kids that have gone to alternative programs where they go to the ... we have to drop them before they can go into those programs. It doesn't mean they've failed ... or charter schools, or home school. Has that been figured in at all ... to the study?

KRISTIN SWENSON

No, the ... the dropout that we used for this was the federal code, so even the kids who dropped out to get their GEDs were still considered as having dropped out in this study.

PARTICIPANT

What about if they went to an alternative program, was that considered?

KRISTIN SWENSON

If they graduated from an alternative *school*, but it's still those federal dropout codes; so again, this probably represents the best ... or maybe this doesn't represent the best, because there are plenty of ways to graduate other than ... or to stay engaged other than the traditional trajectory, so this, we're looking at that traditional trajectory of a graduation diploma, high school diploma.

PARTICIPANT

I have a question over here. I was wondering on your slide where you talked about the rates of chronic absence, and how it relates to demographics and GPA, and those correlations. Did you look at just GPA and that rate—the effect on dropout just for GPA?

KRISTIN SWENSON

Just for GPA. We looked at the effect of dropout ... oh, sorry ...

PARTICIPANT

So when you compare, like, the Model 2, it's on the third to the last slide, I think ...

KRISTIN SWENSON

Yes.

PARTICIPANT

I was just wondering if you looked at *just* GPA, you looked at *just* demographics, and the rate on dropout?

KRISTIN SWENSON

Yeah, just GPA predicted about 35% of dropouts, and it's not on there. We didn't model just GPA, but we did run just GPA, and it was about 35% of dropouts could be predicted by just GPA.

PARTICIPANT

Thank you.

PARTICIPANT

So this is a question and, and perhaps Hedy might, I don't know ... the question is, it relates to the eighth grade through graduation versus, you know, more longitudinal data. So is there an example nationwide where someone *has* been able to predict number of years chronically absent and your, you know, the percentage of students dropping out, but going all the way back to preK or K?

KRISTIN SWENSON

Well, Hedy can answer what's been able to be done here.

HEDY CHANG

Just so you know, I mean, in terms of any kind of national statistics, they don't exist. No one's been calculating chronic ab ... so if we're then looking at national examples, I don't think we have that yet. Longitudinal databases just haven't been that around for that year. I think Baltimore may possibly have the data, but even then you get so much mobility out of a single school district, I actually worry about the local district analyses, because you're losing too many kids. You really need a state database. I don't think there's a state database that has existed for, whatever, 12 years.

KRISTIN SWENSON

We're pretty state-of-the-art as far as our longitudinal data system. There aren't many states that have more years with trustable data than what we have. And so to follow a kid from kindergarten to senior; it's just ... that availability doesn't exist. A lot of the states are a lot of smaller ... not smaller studies, studies that looked at smaller populations, like district level or school level, have done a longitudinal analysis looking at the younger grades, and they find the same thing. The more you're absent, the worse off you are by the sixth grade, but no big ones exist yet.

HEDY CHANG

I just also want to comment just a couple things on it, sort of, research and then what do you do? First of all, we can do more research. I've yet to get anyone who's got research that contradicts the basic point. You don't show up, you're like, you're, you're scoring worse; you're, I mean, I don't know, I, there is a piece of me that goes, "Yeah, we can keep doing research," and some of the questions, like the long term, which is a different kind of question, I think there are variations, but we can *act* without any more research. I just want to put that out there. But the one ... [laughter] ... that did not, I mean, this has been really critical research. The other thing, though, there is something about that we've learned around messaging, this is the Ad Council. It is hard when you're talking to parents to say, "You know, if your kid doesn't show up to kindergarten regularly, they might drop out from high school." It's too long of a trajectory. Parents don't believe it. "What do you mean? My kid's five years old; that's not going to determine their fate." So there is something even though we don't have the research, it's also true that's not how you may want to message to parents. You need to move it to increments they can believe it. Your kid doesn't show up to kindergarten, they're probably not going to read at the end of third grade. By the way, if you can't read by the end of third grade, you can't read to learn in fourth grade and then, you know, and so you have to, you know, so when you're talking, you also have to think about how do you make the message work so someone believes and understands you. So there's both data questions, and then there's what you do.

LOUJEANIA BOST

And I hate following Hedy Chang, because ... [Laughter]

KRISTIN SWENSON

*You* hate following Hedy Chang?

LOUJEANIA BOST

... she took those words right away from me. But as a prime example, whenever I begin to look at—in the Utah data, which is very contextual in that, what do we do now? We've got this data; so what? And one of the things that we need to bear in mind that goes back to our theme today—that every day counts—is when you begin to look at the number of the impact upon dropout with the number of years of chronically absent; whenever you've got no years

chronically absent and there's a 10.3% dropout rate, only goes back to confirm that, you know, 90% does not equal an A.

KRISTIN SWENSON

True.

LOUJEANIA BOST

And that incrementally, whenever we look at those youth that are absent more than five days, when we slice that data again and not look at the tip of the iceberg, that we need to produce some actions well before the situation is chronic.

PARTICIPANT

Kristen, I have a question about the first bullet on the slide. And you said that the research on looking ... correlating policies with attendance isn't going so well?

KRISTEN SWENSON

Yes.

PARTICIPANT

What's the challenge?

KRISTIN SWENSON

Um, trying ...

PARTICIPANT

Or, what are the challenges?

KRISTIN SWENSON

I'll tell you. So we, we pulled all the district-level policies, and then we sent out a survey, and we did this with Dawn [Stevenson] a couple of years—last year was it, beginning of, two years ago—to the schools and asked them about their school-level policies. And we thought, “Oh, this will be great.” We got a grad student, we said, “Well, let's, we have the school-level chronic absenteeism rates; we'll correlate that with the attendance policy.” But that means that you have to quantify the attendance policy somehow. And we found about four dimensions that you could quantify it, like how many days count, because everybody falls within the compulsory ed law, but that's the most liberal. Other schools have, or schools districts can have, much more conservative laws. I think Granite ... if you miss three days you're in trouble, right; you have somebody knock on your door. So we thought, well, we could use how liberal or conservative are the policies, how many days count. Not all of those schools fall neatly into any of those boxes, and so it's just been really hard to try to quantify an attendance policy. It's hard to say, well, this attendance policy is a ten, and that attendance policy is a two, and let's use those numbers to predict outcomes. And the things that we looked at as far as doing a lit review,

which are mainly unpublished dissertations, and the reason that those are unpublished is because nobody's been able to find any correlations, largely because of these problems that we're finding. And so, yeah, we can poke around at the numbers, but we're, we're really just not finding anything, and we don't have a good system for quantifying a policy.