'Touch DNA' found on clothing helps police find gropers after breakthrough Utah case

PROVO — The image of a detective pulling a fingerprint from a desk or door knob might be the first that comes to mind when thinking of DNA evidence collection, but did you know a fingerprint left on clothing can now help law enforcement identifies suspects?

That means victims of crimes such as groping — which often leave few clues leading to perpetrators — have a better chance of finding justice, according to a nursing professor at Brigham Young University on the forefront of making the new investigative tool a standard practice in Utah and throughout the country.

It's called touch DNA, and it's developed from skin cells. The method of collecting the DNA carries the same scientific standard of evidence as any other form of collection.

"With the advancement of DNA analysis methods, we don't need as many cells to be able to create or develop a DNA profile," said Julie Valentine, BYU nursing professor and certified sexual assault examiner.

According to research Valentine published with other researchers recently in the Journal of Forensic Nursing, men between the ages of 18 and 45 are considered "high shedders" of DNA through touch. Those with dry, sweaty or unclean hands also shed a higher amount of skin cells. Touch DNA yields better results when collected from porous or rough surfaces like wood or fabric, according to the research.

Before 2011, touch DNA was mainly an experimental tool used in laboratory settings — until a Utah case.

A woman was "very violently" groped and attacked by someone who had already assaulted several other women at the University of Utah the same day. Law enforcement needed to identify the perpetrator to stop the assaults — but they lacked any apparent evidence, Valentine recalled.

"And the only thing that could be collected was where the women had been touched, there weren't any bodily fluids," she said.

Without knowing whether anything would come of it, a forensic nurse collected evidentiary swabs from spots where the victim had been touched by the groper, including on her clothing.

"This was not standard practice at all, this was merely: 'This is all we've got, so can we develop any kind of meaningful information?'" Valentine said.

When the evidence got sent to the state crime lab, the forensic nurse told those at the lab: "You're going to think I'm nuts, but this is what I had," according to Valentine.

It worked.

The victim was unable to identify her assailant in a photo lineup of potential suspects found by police, but the crime lab developed a DNA profile that matched one of the suspects using the skin cells that had been gathered on the woman.

"And this really was the whole reason this case was prosecuted," Valentine said. "We really thought, 'Wow, this works with real cases, this works in real life. This is not a simulated situation.'"

The nursing professor since then has worked with other forensic nurses and scientists to develop a touch DNA form to be used in sexual assault cases. Utah is now the first and only state that Valentine is aware of that includes touch DNA on its standard sexual assault exam form. She also works with law enforcement officers, prosecutors and other stakeholders to increase awareness about the new investigative tool. Valentine has even shared her work with international audiences.

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A series of gropings at BYU recently made headlines. Over two days in March, at least five people reported they were groped by the same man. Jacob Scott Hansen, 26, faces two charges of sexual battery, a class A misdemeanor, in connection to those cases. Police have not said how they identified Hansen. When asked whether touch DNA was used in recent groping cases at the university, Valentine said she could not comment on pending criminal cases.

While the method doesn't always lead to a suspect being found — it has been shown to lead to a DNA profile for 6 out of 42 cases — Valentine calls it "a new tool in the toolbox" to help survivors.

"Because the final goal is reducing sexual violence in our state," Valentine said.

As with any form of evidence, the presence of someone's DNA profile found through touch DNA doesn't always mean they committed a crime, or that there will be enough evidence to hold up in court. For example, if a man and woman hold hands on a date, his DNA will likely be found on her hand. But if a woman says she was nonconsensually groped and DNA is found on her chest or genital area, that will likely be more meaningful as evidence, Valentine said.

Touch DNA can also be helpful in protective order violations, as the presence of the perpetrator's DNA on a victim's body can prove the order was violated, according to the professor.

"So any time we find DNA, we really have to look at the context and also the background information about what happened in that case to be able to say if it is meaningful," Valentine said.

Now, she wants the public to know that touch DNA is available for survivors.

"We want the general public to know that they can request to be seen, to have evidence collected, to receive resources if they are a victim of a groping or fondling assault. We don't need to have bodily fluids to collect evidence, so now it really is somewhat a general public awareness campaign," Valentine said.

She hopes the tool might bring more survivors in to get help, allowing them to start a "pathway of healing." When victims and survivors hear: "I'm sorry this has happened to you, and we're going to work to collect evidence that might be helpful in your case," it's validating and helps them to feel like they have a voice, Valentine said.

It's also important to try to identify gropers, as they can then be given the help they need to prevent continued victimization and violence, according to the professor.

"And so it really helps our society, in general, because we hopefully can intercede early and help the perpetrators as well as survivors," she said.