New App Tells Deaf Parents When and *Why* Their Baby is Crying

The ChatterBaby app uses machine learning to analyze babies' cries

Ronald Reagan UCLA Medical Center

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NEWS PACKAGE

SUGGESTED TEASE	MANY PARENTS SAY THEY CAN TELL WHAT THEIR BABY NEEDS JUST BY THE SOUND OF THEIR CRY, BUT WHAT IF YOU COULDN'T HEAR IT? COMING UP, A NEW APP HELPING DEAF PARENTS OVERCOME THAT CHALLENGE.
ANCHOR LEAD	BABIES COMMUNICATE THEIR NEEDS THROUGH CRYING, BUT WHAT IF YOU COULDN'T HEAR THEM? BEING DEAF OR HEARING IMPAIRED PRESENTS UNIQUE CHALLENGES WHEN IT COMES TO CARING FOR CHILDREN, BUT A NEW APP IS HELPING THOSE PARENTS TO KNOW NOT ONLY *WHEN* THEIR BABY IS CRYING - BUT *WHY*. CLARK POWELL SHOWS US HOW IT WORKS.
(PACKAGE START) ---------------------- **CG: Courtesy: Ronald Reagan UCLA Medical Center** **:00 - :03** Shots of family in living room Shot of camera Shots of mom watching kid on monitor	(Nats - Sound) :02 DELBERT AND SANAZ (suh-NAZ) WHETTER HAVE EQUIPPED THEIR HOME WITH CAMERAS AND SOUND MONITORS. AS THE DEAF PARENTS OF TWO YOUNG CHILDREN, THEY RELY ON THE TECHNOLOGY TO ALERT THEM TO NOISES THEY CAN'T HEAR, ALTHOUGH IT OFTEN CAUSES FALSE ALARMS. :12
CG: Delbert Whetter **Deaf father of two** **:12 - :24**	"We can only tell if there is something loud happening in the room. And we have a child that is very talkative. He would babble. So we can't distinguish between loud noises and crying.":12
Shots of team working on app Close up of screen	BUT THANKS TO A NEW APP, THAT'S CHANGING. IT'S CALLED CHATTERBABY AND NOT ONLY TELLS PARENTS *WHEN* A BABY IS CRYING - BUT *WHY*. :07

CG: Ariana Anderson, PhD **UCLA's Semel Institute for Neuroscience** **and Human Behavior** **:31 - :38** Wide shot of group working on app Shots of Anderson with her baby	"It looks at the types of frequencies that are in the cry, and it looks at the different patterns of sound and silence. :06 DOCTOR ARIANA (AIR-ee-AH-na) ANDERSON DEVELOPED THE APP AT RONALD REAGAN UCLA MEDICAL CENTER AND SEMEL INSTITUTE. AFTER HAVING HER THIRD CHILD, SHE BEGAN NOTICING SIMILARITIES IN THE CRIES OF ALL THREE. :10
Ariana Anderson (CG'd earlier)	"As a statistician I see the world in terms of numbers and patterns, and so the first thought was whether or not I could train a computer algorithm to do what my ears as a parent could automatically do." :09
Shot of team working on app **Graphic:** *2,000 Infant Cries* Shots of voice recordings on screen Shots of Anderson's baby getting shot	SO THAT'S JUST WHAT SHE DID. USING A DATABASE OF MORE THAN TWO THOUSAND INFANT CRIES, SHE USED MACHINE LEARNING TO DECIPHER WHAT EACH CRY MEANS - IS A BABY FUSSY, HUNGRY OR IN PAIN? EVEN TESTING THE PROGRAM ON HER OWN BABY DURING HIS VACCINATIONS. :15
Ariana Anderson (CG'd earlier)	"Between fussy and hungry it's a little bit hard to tell, but pain we could identify with nearly 90 percent accuracy." :04
Shot of Delbert putting baby down for nap Shots of team working on app Shots of Whetters with their kids	WHICH COULD NOT ONLY HELP THE DEAF OR HEARING IMPAIRED, BUT FIRST TIME PARENTS AND EVEN WOMEN WITH POSTPARTUM DEPRESSION. STUDIES SHOW COMMUNICATION OFTEN LAGS IN THOSE MOTHERS AND CAN LEAD TO DELAYS IN SPEECH DEVELOPMENT. BUT THIS COULD CONNECT KIDS AND PARENTS LIKE NEVER BEFORE. :14
CG: Sanaz Whetter *(Voice of translator)* **Deaf mother of two** **1:32 - 1:36**	*"Well, it would help a lot I'm really excited about the app. It would help the children be safe. Just not such a struggle to identify what's going on." :06*
Shot of family playing in living room **PACKAGE END ---------------------------**	AT U-C-L-A, THIS IS CLARK POWELL REPORTING. :02
ANCHOR TAG	THE APP IS AVAILABLE FOR DOWNLOAD FOR APPLE AND ANDROID PHONES AND IS FREE OF CHARGE. IF YOU WOULD LIKE TO HELP DEVELOP THE

	APP FURTHER, YOU CAN UPLOAD SOUNDS AND DESCRIPTIONS OF YOUR BABY'S CRIES BY LOGGING ONTO CHATTERBABY.ORG

SOCIAL MEDIA

Share it! Suggested tweet:	Researchers **@UCLAHealth** develop an app to tell deaf parents when and *why* their baby is crying. http://bit.ly/2pp3Zfa
Suggested post:	A mother can tell a what their baby needs simply by listening to their cry. But what if you couldn't hear their cries? That's a challenge deaf and hearing impaired parents face every day, but a new app developed by researchers at Ronald Reagan UCLA Medical Center is helping. Using a database of more than 1,400 infant cries, experts developed an app that monitors babies and not only tells parents *when* their baby is crying but *why*. Check it out here: http://bit.ly/2pp3Zfa

EXTRA BITES

CG: Ariana Anderson, PhD **UCLA's Semel Institute for Neuroscience and Human Behavior**	Anderson explains what the app does: *"We wanted to make sure that for a new infant we would have some sort of ability to predict whether or not the infant was crying, why the infant was crying, and what the likelihood was that the baby is in pain, which for us is probably the most important thing to know as parents is whether or not our baby is in pain."* :13 Anderson explains how the app analyzes cries: *"It looks at the types of frequencies that are in the cry, and it looks at the different pattern of sound and silence. So, for example if you see a cry that has a long period of silence inside it, it's more likely that the baby is fussy."* :12 Anderson explains how the app can help all parents: *"Research shows that the earlier and the more we engage our children, the better their language development is. And so anything that encourages both hearing and deaf to respond to their babies is going to be able to prevent any language delays that you would experience otherwise."* :13 Anderson talks about feedback from the Whetters: *"Getting the advice from a family who not only would be using the app but really had the superior ability to interpret the visual information was invaluable for us so that we could direct the app to something that they would be able to use and that*

	would hopefully be something that would be able to benefit the entire deaf community and hearing community as well." :17
	Delbert says he wants to know if his baby is hurt: *"The very first question often a deaf parent has when a baby is crying is whether the baby is hurting or not. And the app will help being able to resolve that question quickly." :12*
CG: Delbert Whetter **Deaf father of two**	Delbert talks about monitors they currently use: *"We can't tell the difference between just noises, babbling, or crying. So, being able to distinguish between that and crying is really important." :08*
	Delbert talks about the usefulness of the app: *"We can't have eyes everywhere. So, that would be really nice to have." :04*
	Sanaz says the cameras they use have limitations: *"They can be crying a long time and you can't hear, they'll be upstairs, you have to run up and check, run up and check everything's okay." :06*
CG: Sanaz Whetter *(Voice of translator)* **Deaf mother of two**	Sanaz says with both children there were few monitors: *"There's more variety of technology now but with the first one it was really difficult. It's limited." :07*
	Sanaz shares her hopes for the ChatterBaby app: *"I hope the app will help more than just the deaf community but hearing people too." :05*