AMERICAN PSYCHOLOGICAL ASSOCIATION

MOVING PSYCHOLOGICAL SCIENCE TOWARD A POPULATION HEALTH APPROACH:

UNIVERSAL SCREENING TO PREVENT MENTAL HEALTH PROBLEMS

TRANSCRIPT

[music]

Daniel Shaw, PhD: Hello. We'd like to welcome you to our video entitled Universal Screening to Prevent Mental Health Problems. I'm Daniel Shaw, professor at the University of Pittsburgh. And?

Sonia Rowley: I'm Sonia Rowley. I'm a PhD student in Clinical Psychology at the University of Pittsburgh.

Daniel: Let us walk you through what we hope to communicate today. First, we'd like to provide you with a definition, a working definition of what universal screening is and why it's so important. Secondly, we're going to tell you about some promising approaches for screening across child development, from infancy all the way to adolescents.

Number three, we're going to tell you why people have been reticent to offer universal screening over time and what gets in the way. We will then talk a bit about interventions that seem promising, and importantly seem to connect the dots between screening and interventions that are tailored to specific aspects that we screen for. Then finally, and briefly, we'll offer some recommendations for research and implementation.

Sonia: Great. I'm going to start by speaking about why universal screening is important for promoting population mental health. First, when we speak about universal screening, we mean the administration of a screen to all children in a given population with the goal of identifying risk factors or symptoms of mental or behavioral health problems. Typically, screens are parent report, teacher report, or self-report instruments. Although administrative data may also be used.

Why is this a good idea? First and foremost, universal screening creates opportunities for preventing mental health problems either before they become severe or even before they start. Such an approach is typically cost-effective in comparison to the current status quo, which is to provide reactive interventions only after a problem have become severe or a family has perceived it to be unmanageable. Additionally, when screening is conducted in early childhood, it creates opportunities to capitalize on young children's greater neuroplasticity relative to later ages.

Even small changes that you can make around a child in those early years can initiate positive developmental cascades that reverberate across their life. The second reason universal screening is a good idea is that it can promote mental health's equity by identifying kids who have challenges that might have fallen through the crack otherwise. Also provide access to care who for youth who might not otherwise have access to care.

Lastly, screening ideally informs intervention. Ideally the results of a screen will tell us whether some sort of psychosocial intervention is indicated, and then also which interventions might best meet the needs of a given family. Of course, not all screens are created equal. I'm next going to

review a few principles of effective screening. The first is that effective screens are tailored to developmental status and assess contextual risk factors and individual risk factors and symptoms.

This just means that a screen that we administer to the family of an infant is going to look different from a screen that we administer to a teenager. Also, that in addition to thinking about a child's feelings and behaviors, we need to be thinking about the environment around. That's especially important in early childhood when screens really need to be thinking about the parent's wellbeing, such as their experiences of depression or substance use, the quality of the parent-child relationship and various parenting practices. Then also things like access to healthcare, other resources and the safety of the home.

Only secondarily looking at individual attributes like temperament and behavior. Once we start getting into middle childhood and adolescence, effective screens do start to focus on anxiety and depression symptoms, externalizing behaviors, individual risk factors for substance misuse, all these kinds of individual risk factors and symptoms. Although context continues to be paramount in adolescents, especially based on the increasing salience of peer influences, and screens need to be attentive to them.

Second, effective screens demonstrate adequate predictive validity, which just means that they predict important outcomes. There are a couple of different ways to measure this. Two of them being sensitivity and specificity. Sensitivity is the proportion of true problem outcomes that are detected by a screen. Or say, for example, among all the kids who are actually going to go on to develop a substance use disorder, how many of those kids are identified at risk by a screen?

On the other hand, we have specificity, which is the proportion of true nonproblem outcomes that are accurately screened as such. Of all the kids who actually not going to go on to develop difficulties with substance use, how many of those are screened as not at risk? Adequate sensitivity and specificity values are actually going to vary based on the purpose of a screen.

Relevant factors to consider are the gravity or seriousness of the problem outcome you're trying to prevent, and then also the cost of the interventions that are provided on the basis of a positive screen. Third, effective screens are acceptable and feasible to implement in settings that facilitate population-level reach. Acceptability just means that youth, parents, and staff like the screen.

Feasibility just means that the screen is possible and practical to implement, which might mean that it's brief or that it auto scored and settings that facilitate population level reach include but are not limited to home visiting, pediatric primary care and schools. Lastly, effective screens are integrated into tiered models that offer interventions of varying intensities based on children's adolescents' level of risk.

There are several exemplary programs that already integrate screens into tiered models. These include but aren't limited to Family Connects and The Pittsburgh Study. Danny is going to speak more about integrating screens into tiered intervention models later in our presentation.

Daniel: Now we're going to talk about promising approaches for screening cross-development, the method. These vary by child's developmental status. In early childhood, zero to five years, we rely heavily on parent reports to identify children who might be at risk for mental health problem behaviors. These typically take place in primary care and more recently birthing hospitals.

An example of a measure that's commonly used is the pediatric symptom checklist, which fortunately spans all the way from infancy to adolescence and has literally been offered to millions

of parents. Another promising venue or venues are pediatrics and federally qualified health centers in addition to Women, Infants, and Children nutritional supplement centers who have not been used very often in the past but could be another promising setting to conduct screens. Sonia mentioned administrative data as another possible source.

I'm going to tell you about a project that's actually going on in Pittsburgh called Hello Baby. Hello Baby takes full advantage of administrative records that become available a few weeks after a child's born. It started because of a serious issue. Although in Allegheny County, which is rich in parenting resources, it was found that only about 15% of families take advantage of engaging in such parenting programs. However, over half of critical incidents in Allegheny County, critical incidents means a case where a child died or nearly died because of maltreatment. No child protection referral occurred prior to these events, so we were not even noticing, not identifying these cases before, how could we improve upon that?

To address this issue, the Department of Human Services in Allegheny County, which includes about a population of about two and a half million, adopted a predictive risk model that was authored by a researcher in New Zealand, in which she linked adverse events to home removal by age three. What are adverse events, whether it's about 380 in the model, but they include contact with child welfare, recent homelessness, substance dependence and abuse, mental health hospitalization, and parental incarceration, to name a few using this predictive risk model.

Whereas only 2.3% of parents in Allegheny County have a risk of having their child removed by child welfare services by age three. If you got a score of 20 on this scoring system, which goes from 0 to 20, that percentage went up to 23.2%, 10 times the greater than what would be expected on average.

A tiered system is in use for those scoring as high as 18 to 20 on this 20-point predictive risk model. Those parents few weeks after birth receive a call from Department of Human Services suggesting that they have in their disposal the ability to engage in parenting programs that are tailored to their needs, which include not only evidence-based programs like family checkup but also someone who would take care of basic needs. They're also provided with monetary and other incentives for engaging in parenting support programs like free cribs and baby sheets as well.

When we move to middle childhood to early adolescence, now we're getting into ages 6 all the way to 13, most screens rely on teacher or youth reports, and those take place primarily in school or primary care. Teachers are an exceptional informant to identify at-risk youth because of their frequent contact, the availability of brief auto-scored reports in some schools, and teachers understanding of normative behavior for children. In addition, school-based screens can be integrated into Multi-Tiered Systems of Supports. Unlike in working with parents, these tiered models have been used for many years in schools.

As an example, the social and academic behavior risk reader is commonly used in elementary and middle schools importantly, within guidelines to inform school-based supports. When it comes to using youth screens, these are often conducted in clinic waiting rooms to screen for risky behaviors such as substance use and antisocial behavior. One example is a Ty Ridenour's Youth Risk Index, which has been used in primary care with children as young as 9 and as old as 13-year-olds to determine their eligibility for interventions like the family checkup.

As an example of how Ridenour's screen has been used, one such implementation took place in waiting rooms of primary care and was administered to, again, 9 to 13-year-olds at risk for substance use. Now, Dr. Ridenour entered this scene knowing that there were some barriers to

substance use prevention in primary care. Pediatricians often don't have much time, they don't know what screen to use, they lack resources, they lack knowledge of what to do if the screen was positive, including not having an intervention to use. Importantly, the Youth Risk Index addresses many of these issues.

First of all, it takes about seven minutes for youth to complete. In terms of issues with literacy for kids, and in addition to reading words, the Youth Risk Index is cartoon and audio-based, so kids are hearing the questions as they're reading them, and they see a cartoon depicting what's being asked about it. Because it's seven minutes, because it's done on an iPad or a computer, it does not disrupt patients, though, and the 23 items are taken from a larger pool of 350 and these are the ones that most likely predicted substance use disorder a year later in early adolescence. You can see a couple of pictures of the items well.

Sonia: By now, I hope we have shared that universal screening is a good idea and that several effective screening methods already exist, but of course, it's hard to translate good ideas into the real world often. What are some things that get in the way? The first that I'll mention is the cost of delivering and scoring screens. Typically, insurance does not cover the cost of screening, and although the per-child cost of screening is typically low, it's the overall cost of administering the screen at the population level is prohibitively high. A screening program is never going to get the ground.

Related to cost is time. It can be difficult to allot sufficient time for staff like teachers, school counselors, or pediatricians to discuss the results of a screen with families and then to provide appropriate referrals. Of course, there's always the question of where are we referring these families with a positive screen? Prior to implementation, stakeholders can raise a very valid concern that positive screens will identify needs that their service system actually does not have the existing capacity to address.

We need someplace to refer these families before implementing the screens. Additionally, translation of screens and interventions into multiple languages is paramount if we're going to achieve population-level impact or population-level reach rather. Although this takes time, money, and substantial effort. The last barrier that I'll mention is that some folks might be concerned that screening could alienate youth and parents, especially when asking about things like risky behaviors or suicidality.

This barrier underscores the importance of considering acceptability prior to and during implementation. Also, the importance of providing a rationale for screening to families and providing parents and families with a choice about what to do with screening results. Including the choice of saying thank you for this information and, no thank you, we would not like to participate in a follow-up intervention.

Daniel: Now we move to discussing interventions and specifically integrating screens into intervention models that are hopefully tailored based off the results of the screen. When we think about moving from screening to intervention, we should keep in mind that screening instruments alone cannot promote child mental health. In fact, if you have a screen, it doesn't have a follow-up intervention, there's a chance of doing harm. Screens are necessary but not sufficient without being able to meet identified mental health needs.

Ideally, it is essential that interventions be culturally informed, empirically validated, and accessible to families. One such intervention is Family Connects. Family Connects is a brief newborn nursery program to prevent maltreatment using a universal home-based assessment with

targeted provision of resources. I can't overemphasize this point how the screen is used to identify what resources parents needs and essentially parents get them. Delivered by nurses, very trusted source, assessment is a semi-structured interview, assessing contextual factors that have been reliably found to predict later maltreatment.

Families are then offered services based on the presence of specific risks, increasing families' access to resources. The first contact comes right after your baby is born. Family Connects has been linked to reductions in child maltreatment and fewer emergency visits more than a year later. Second program is called the Early Childhood Collaborative of the Pittsburgh Study, which uses a tiered approach to provide parenting resources for children zero to four years following annual screens.

I know this picture is rather complicated, but if you bear with me on the far left, population segmentation is where the screen happens. If you just had a baby or you have your first visit or your child is one year old and you're having your not semi-monthly, but a regular well-child checkups at your pediatricians, you enter the study and immediately get a screen. Lasts about 25 or 30 minutes, you get paid about $30 for doing this. Make sure parents might have some motivation and engagement.

Based on the results in real-time, you are assigned to one of these four groups that you see. You can also see that these groups vary in terms of the level of resources and challenges each group has. Interventions are then offered to families based on their level of resources versus challenges. At the very top in group one, you have economically well-resourced families who are facing fewer challenges. By then we're offering them not intensive resources, but passive apps that they might take advantage of to learn about child development as well as family centers for resources they might need daily living.

When it gets to group two, you have families who are economically challenged, but again, facing lower levels of psychosocial issues. For them, we're stepping up to provide those active texting programs, but also light touch intervention such as PlayReadVIP, which addresses really early parenting, promoting cognitive stimulation in the first few years. For families that are struggling with challenges, perhaps a history of mental health problems, we're going to offer more intensive services such as PlayReadVIP and Family Check-Up.

Then finally, for those with a history of child welfare involvement, incarceration, opioid use, they might get something much more intensive, such as Healthy Families America established some visiting program or a combination of PlayReadVIP and Family Check-Up that we call Smart Beginnings. Importantly, these screenings take place every six to 12 months. If family risk status changes, they can get into different programs over time.

Also note that at each phase, no matter what group you're assigned, you still have choices about what interventions to engage in, including none as Sonia described before. So far, we have about 80% of families selecting at least one program over time, and this rate goes up to about 83% after we have annual checkups at ages one, two, and three.

Sonia: All right, lastly, we're going to offer a few next steps for research and implementation. This is not an exhaustive list of next steps. First, we propose that it's important to conduct tests of community-based implementations of programs that integrate screens with tailored interventions. We need to be testing whether these programs actually reduce mental health problems at the population level and prevent the kinds of outcomes that we're trying to prevent. Additionally, we as

psychologists need to partner with colleagues in other fields to conduct economic evaluations like benefit-cost analyses and cost-effectiveness evaluations.

This is essential to justify public investment, which is, in turn, essential for sustainment and sustainability of screening and intervention programs. Lastly, we recommend leveraging the tools of implementation science to identify and test implementation strategies that address barriers to universal screening in a variety of context and age groups. There are numerous methods already to identify context-specific barriers and match implementation strategies to those barriers.

Daniel: In closing, we'd like to thank you for watching this video and really refer you to an article that recently came up. This is mid-September in *The American Psychologist* first authored by Ken Dodge and many colleagues including ourselves over time. Also, there are many other videos in this series that you should watch, including Dr. Dodges, which will introduce you to an overview of the article. We really thank you for your attention and hope you found it helps.