

Screening for Depression in Youth with Diabetes

Maureen Dever, MSN, RN, CRNP, PPCNP-BC, CDE
Pediatric Nurse Practitioner
Children's Hospital of Philadelphia
Division of Endocrinology and Diabetes

Conflict of Interest Disclosure

- Conflict(s) of Interest
 - None
 - Maureen Dever MSN, RN, CRNP, PPCNP-BC, CDE
- A conflict of interest exists when an individual is in a position to profit directly or indirectly through application of authority, influence, or knowledge in relation to the affairs of PENS. A conflict of interest also exists if a relative benefits or when the organization is adversely affected in any way.

Objectives

- Review the need for screening adolescents with diabetes for depression and diabetes distress during diabetes clinic visits.
- Review useful screening tools to detect depression and diabetes distress in a patient with diabetes.
- Review a case study depicting the use of the PHQ9 Depression screen modified for teens.

Adolescence is a time of Change
Developmentally, Cognitively, Physically, Emotionally

Meeting developmental tasks of this transition can be daunting and confusing even for well adjusted teens

Teens naturally seek autonomy, have increased risk taking behavior, need to fit in/not differ from peers and feel the impact of hormonal changes (puberty)

Early stage adolescents have a limited interest in the future and a limited capacity for abstract thought and delayed gratification.

Diabetes Management requires intensive self care tasks and adherence

- Requires a balance of insulin dosing, diet, exercise and blood sugar monitoring on a daily basis
- Teens take on more responsibility with DM care
- Diabetes tasks are prescribed to avoid long term disease complications, fatigue from chronic care (diabetes burnout),
- Teens are impulsive risk takers, desire to be the same as peers, and experience physiological changes causing insulin resistance during puberty complicates adherence

Teens and Depression

- Teens are at a higher risk of depression (11%) than general pop and have a 10 fold increase in suicide and suicidal ideation.
- Depression is more common in adolescents with T1DM (14– 33%) and T2DM (14.8%)
- Identifying adolescents with dm and depressive symptoms is essential, due to risk of both dm and psych complications

T1DM and Depression-↓DM Self care skills

Key features of diabetes management include frequent bg monitoring, with the goal of keeping the (A1C) in the target range to avoid short and long-term dm complications

+ Depression-associated with less frequent blood glucose monitoring, higher A1C values, and increased rates of diabetes-related hospitalizations

Adolescents with T1DM and depressive symptoms may have more difficulty initiating tasks for diabetes management, carrying them out, and believing that they will be effective.

Depression in Teens with T1DM

- Swedish study looked at T1 ped pt and their sibs born 1973-2009 (n=17, 122)
 - Children with T1DM studied until 18 years of age had an ↑risk of psych. disorders and suicide risk compared to their healthy sibs
 - Within 6 months of diagnosis, the risk of psych morbidity tripled in peds w/T1DM and doubled in the total observation period.
 - Conclusion: Risk for psychiatric disorders was likely a consequence of T1DM, rather than familial cause and support the need for MH screening in T1, esp. recently diagnosed.
- Butwcka, Frisen, Almqvist, Zethelius, and Lichtenstein, (2015). **Diabetes Care**. Risks of Psychiatric Disorders and Suicide Attempts in Children and Adolescents With Type 1 Diabetes: A Population-Based Cohort Study

T2DM in Teens and Depression

- The incidence of type 2 diabetes mellitus (T2DM) in adolescents and pre-adolescents has increased dramatically by 35% since 2006, and is reflective of the obesity epidemic (Rubin, et al, 2015).
- During the last decade, however, the use of second-generation antipsychotics (SGAs) among children has grown.
- SGA antipsychotic use was associated with a 50% increase in the risk for T2DM.

Children and Teens taking Second gen antipsychotics are at risk

- Many ↑ risk for weight gain and T2DM
- The risk is even higher if concomitantly using antidepressants
- High bg warning on label: Seroquel (quetiapine), Abilify (aripiprazole), Zyprexa (olanzapine), Risperdal (risperidone), Clorazil (clozapine), Geodon (ziprasidone).
- While on tx, psychosocial functioning should be assessed during diabetes clinic visits.

Why Screen for Depressive Disorders in Diabetes Clinic?

Diabetes management during childhood and adolescence places substantial burdens on the youth and family, necessitating ongoing assessment of psychosocial status and diabetes distress in the patient and the caregiver

Early detection of depression, anxiety, eating disorders, and distress can facilitate effective treatment options and help minimize adverse effects on diabetes management and outcomes

Recommended Screening for Youth with Diabetes, American Diabetes Association (ADA)

- For youth with DM, ADA (2019) recommends screening for psychosocial and diabetes related stress starting around age 7 or 8 years.
- Screen adolescents by themselves, starting around age 12, or when developmentally appropriate
- Screen at diagnosis and at least annually, in addition to a psychosocial assessment at every clinical encounter.
- Adequate support systems need to be in place for diagnosis, treatment, and monitoring (USPSTF, 2015)

Detecting depressive symptoms in the adolescent...

- Requires establishing a rapport with the patient, utilizing skillful interviewing techniques, and knowledge of behavior at each developmental stage.
- Clinicians should be aware that other diagnoses may mimic the signs/symptoms of depression, including: Hypothyroidism, celiac disease, adrenal insufficiency, sleep apnea, and vitamin D deficiency

Tools to screen for Depression-Pediatrics

- Children's Depression Inventory (CDI)
- Center for Epidemiologic Studies, Depression Scale for Children(CES-DC),
- Kutcher Adolescent Depression Scale (KADS)
- Patient Health Questionnaire modified for teens (PHQ-9-mod)

Diabetes Distress:
Sense of burden or defeat experienced by the PWD

- Overlaps with depression, anxiety, stress
- Feel mentally and physically drained
- Some PWD feel overwhelmed with the self care tasks and "give up" and deny they have diabetes
- Efforts to intervene with problem solving skills and to build resiliency before psych symptoms develop are thought to be most successful

Diabetes-specific Family Conflict

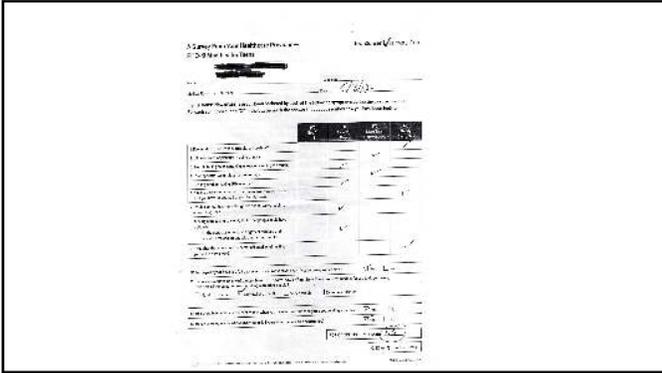
- Complexities of diabetes management require ongoing parental involvement in care throughout childhood and family teamwork between the growing child/teen and parent
- Diabetes-specific family conflict is related to poorer adherence and glycemic control
- Need to inquire about diabetes conflict during visits and to either help to negotiate a plan for resolution or refer to an appropriate mental health specialist

Scales to Assess Diabetes Distress

- Problem Areas in Diabetes- Teen (PAID-T) and Parent (P-PAID-Teen)-assesses diabetes-specific distress in youth starting at age 12 years and in their parent caregivers.
 - Parents complete the 20-item PAID-P to assess perceived parental burden associated with caring for a child with diabetes.
- Revised Diabetes Family Conflict Scale (DFCS-R)
 - Parents completed the 19-item DFCS-R to assess diabetes-specific family conflict.
- Paediatric Quality of Life Inventory-Generic Scales and Diabetes Module

The Problem Areas in Diabetes Scale (PAID-D)
20-item scale that describes common problematic situations for people with type 1 or type 2 diabetes. On a point Likert scale, rated from 1 ("no problem") to 6 ("serious problem"):

- 1. Not having clear and concrete goals for your diabetes care
- 2. Feeling discouraged with your diabetes treatment plan
- 3. Feeling scared when you think about living with diabetes
- 4. Uncomfortable social situations related to your diabetes care (eg. People telling you what to eat)
- 5. Feelings of deprivation regarding food and meals
- 6. Feeling depressed when you think about living with diabetes
- 7. Not knowing if your mood or feelings are related to your diabetes
- 8. Feeling overwhelmed by your diabetes
- 9. Worrying about a low blood sugar reaction
- 10. Feeling angry when you think about living with diabetes





**On Physical Exam-
Signs of self injury**

- Nonsuicidal self injury (NSSI) is more common in adolescent and young adult populations
- NSSI is generally used to cope with distressing negative affective states, especially anger and depression
- Important to assess the associated risk of suicidal behavior, as NSSI can lead to SSI-suicidal self injury.

The PHQ-9 Modified For Teens provides information about the presence and severity of depression and suicidal ideation in patients aged 12 to 18 years.

- Results are not diagnostic of depression nor a substitute for a clinical evaluation.
- + screened patients need eval by a mental health care specialist .
- Provider must address any past or present suicidal thoughts and attempts with all patients with a positive screen.
- For negative screens, it is recommended that the provider review symptoms marked "more than half days" or "nearly every day". Additional questions are needed to explore suicidal ideation and attempts if indicated.
- An urgent referral to a crisis center may be warranted for actively suicidal patients.

W.A. 3 month follow up

Pt began weekly counseling sessions for cutting and depression

A1C 9.8, still not always checking bg but improving. NO further DKA.

Putting Depression Screening into practice based on ADA Standards

- Screening for psychosocial distress and mental health problems is an important component of ongoing care for PWD.
- Consider the impact of diabetes on QOL, as well as the development of mental health problems related to diabetes distress, fear of hypoglycemia (and hyperglycemia), symptoms of anxiety, disordered eating behaviors, and symptoms of depression when treating youth w/DM
- Assess youth for diabetes distress, starting at 7 or 8 y.
- Assess for family conflict related to diabetes
- Screen for depression using available screening tools, such as the PHQ9, modified for teens, starting at age 12.
- Diabetes clinic team needs a clear plan and resources in place for the appropriate mental health referrals and treatment of positive depression screens and signs of distress.



References

- American Diabetes Association. (2019). Children and adolescents. Standards of Medical Care in Diabetes—2019. *Diabetes Care*. ISSN: 0149-9992, Online ISSN: 1935-5548
- Boris, J. S. and Laffel, L. (2011). Adherence challenges in the management of type 1 diabetes in adolescents: prevention and intervention. *Curr Opin Pediatr*. 22(4):405-411 Doi: 10.1097/MOP.0b013e32833a46a7
- Butwickia, A., Frisen, L., Almqvist, C., Zethelius, B., Lichtenstein, P. (2015). Risks of Psychiatric Disorders and Suicide Attempts in Children and Adolescents With Type 1 Diabetes: A Population-Based Cohort Study. *Diabetes Care*. Doi: 10.2337/dc14-0262
- Corathers, S.D., Kichler, J., Jones, N.Y., Houchen, A., Jolly, M., Morwessel, M., Crawford, P., Dolan, L.M., Hood, K.K. (2013). Improving depression screening for adolescents with type 1 diabetes. *Pediatrics*. 132(5). E1395. Doi:10.1542/peds.2013-0681
- Dever, M. (2016). Screening for Depression in Adolescents with Diabetes. *Journal of Pediatric Nursing*. Vol.31(1). January-February, 2016, Pages 117–119. Doi.org/10.1016/j.pedn.2015.11.004
- Grey, M., Whittemore, R., & Tamborlane, W. (2002). Depression in type 1 diabetes in children. Natural History and correlates. *Journal of Psychosomatic Research*. 3(4), 907-911.
- Hood KK, Iturralde E, Rausch J, Weissberg-Benchell J. Preventing diabetes distress in adolescents with type 1 diabetes: Results one year after participation in the StePS program. [Published online ahead of print June 19, 2018]. *Diabetes Care*. doi:10.2337/dc17-2556

References

- Kroenke, K, Spitzer, R.L. and Williams, J.B. (2001). The PHQ-9: Validity of a brief depression severity measure. *Journal of General Internal Medicine*. 16(9): 606-612.
- Naingolan, L. (2014). Depression and Diabetes: Mental-health advice improves outcome. *Medscape* Aug 08, 2014. Available at: www.Medscape.com
- Kovacs, M., Obrosky, D.S., Goldstein, D. & Drash, A. (1997). Major depressive disorder in youths with IDDM. *Diabetes Care*, 20(1), 45-51.
- McGrady, M.E., Laffel, L., Drotar, D., Repaske, D., & Hood, D.K., (2009) Depressive Symptoms and Glycemic Control in Adolescents With Type 1 Diabetes. Mediation role of blood glucose monitoring. *Diabetes Care*, 32(5): 804-806.
- Peterson, J., Freedenthal, S., Sheldon, C., and Anderson, R. (2008). Non suicidal self injury in adolescents. *Psychiatry (Edgemont)*, Nov, 5(11): 20-26
- Rubin, D. Kreider, A.R., Matone, M., Huang, Y., Feudtner, C., Ross, M., Localio, A.R. (2015). *JAMA Pediatrics*, 169(4), e150285, DOI:10.1001/jamapediatrics.2015.0285
- Sui, R. (2016). Screening for Depression in Children and Adolescents: USP Preventive Services Task Force Recommendation Statement. *Pediatrics*, 2016, 137 DOI: 10.1542/peds.2015-4467
- Welsh, G.W., Jacobson, A.M., and Polonsky, W.H. (1997). The Problem Areas in Diabetes Scale: An evaluation of its clinical utility. *Diabetes Care* 1997 May; 20(5): 760-766. Doi:10.2337/diacare.20.5.760
