OMB No. 0925-0001 and 0925-0002 (Rev. 10/15 Approved Through 10/31/2018)

BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors.
Follow this format for each person. **DO NOT EXCEED FIVE PAGES.**

NAME: Hood, Korey

eRA COMMONS USER NAME (credential, e.g., agency login): HOODKOREY

POSITION TITLE: Professor of Pediatrics, Psychiatry & Behavioral Sciences

EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)

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| --- | --- | --- | --- |
| INSTITUTION AND LOCATION | DEGREE(if applicable) | Completion Date MM/YYYY | FIELD OF STUDY |
| University of Tennessee, Chattanooga, TN | BS | 05/1997 | Psychology |
| University of Florida, Gainesville, FL | MS | 05/2000 | Clinical and Health Psychology |
| University of Florida, Gainesville, FL | PHD | 08/2003 | Clinical and Health Psychology |
| Harvard Medical School / Children's Hospital Boston, Boston, MA | Resident | 08/2003 | Clinical Psychology |
| Harvard Medical School / Joslin Diabetes Center, Boston, MA | Fellow | 06/2005 | Clinical Psychology / Behavioral Diabetes |

# A. Personal Statement

Dr. Hood directs NIH- and foundation-funded clinical research aimed at promoting health and quality of life outcomes for people with diabetes. He has expertise and experience with diabetes epidemiology and interventions, study design, methodology, data management, and advanced statistical methods. There are two content threads to his work: 1) construct prevention and treatment programs to address modifiable psychological and family factors that create barriers to optimal diabetes management, and 2) optimize the use of devices and technologies to improve health outcomes. With regard to the first thread, Dr. Hood has successfully implemented depression screening programs in tertiary diabetes and GI clinics within a Quality Improvement framework, and recently completed a large scale clinical trial on a distress prevention program for teens with type 1 diabetes. Dr. Hood manages and analyzes all the data from these studies. From a device and technology standpoint, Dr. Hood coordinates the Human Factors assessments in Drs. Maahs’ and Buckingham’s closed loop studies and is recognized as one of the experts in this area nationally and internationally. In addition, he has implemented Human Factors assessments in national (e.g., T1D Exchange) studies and registries and is the lead psychologist on 2 of the 4 UC4 grants from NIDDK (Hovorka, PI; Bergenstal, PI). These assessments focus on uptake of devices and technologies, and determining strategies to promote uptake and optimize their use. Dr. Hood and his research team have published over 100 scientific articles on these topics and are active presenters at diabetes, behavioral medicine, and advocacy conferences.

Dr. Hood also works in clinical and service settings. Dr. Hood is a licensed clinical psychologist and is part of the diabetes care team at Stanford. He is the past chair of the American Diabetes Association’s Behavioral Medicine and Psychology Interest Group and is currently a member of the Research Policy Committee. He was also a member of the ADA’s Call to Congress in March 2017. Dr. Hood is an Associate Editor for both *Diabetes Care* and *Pediatric Diabetes*, and his team includes experts in depression and distress in people with type 2 diabetes (Molly Tanenbaum, PhD and Diana Naranjo, PhD). For the proposed research in this PCORI application, Dr. Hood is well-positioned to conduct the research along with the assembled team. This team has extensive preliminary data on diabetes distress and has extensive experience collecting psychosocial and glycemic data through a large number of clinical studies being conducted at Stanford. In addition, Dr. Hood has run multiple studies and has a large team including two psychology research fellows, three full-time research coordinators, and part-time CDEs and nurses. These publications highlight our past experiences and successes:

1. 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. Diabetes Care. 2018 Jun 19. [Epub ahead of print] PMID: 29921624
2. Iturralde E, Weissberg-Benchell J, Hood KK. Avoidant coping and diabetes-related distress: pathways to adolescents’ type 1 diabetes outcomes. Health Psychol. 2016 Nov 3. [Epub ahead of print] PMID: 27808528
3. Iturralde E, Adams RN, Barley RC, Bensen R, Christofferson M, Hanes SJ, Maahs DM, Milla C, Naranjo D, Shah AC, Tanenbaum ML, Veeravalli S, Park KT, Hood KK. Implementation of Depression Screening and Global Health Assessment in Pediatric Subspecialty Clinics. J Adoles Health. 2017 Aug 19. pii: S1054-139X(17)30259-8. doi: 10.1016/j.jadohealth.2017.05.030. [Epub ahead of print] PMID: 28830798
4. Riley AR, Duke DC, Freeman KA, Hood KK, Harris MA. Depressive Symptoms in a Trial Behavioral Family Systems Therapy for Diabetes: A Post Hoc Analysis of Change. Diabetes Care. 2015 Aug;38(8):1435-40. doi: 10.2337/dc14-2519. Epub 2015 May 26.

# B. Positions and Honors

Positions and Employment

|  |  |
| --- | --- |
| 2002 - 2003 | Resident, Harvard Medical School / Children's Hospital Boston |
| 2003 - 2005 | Fellow, Harvard Medical School / Joslin Diabetes Center |
| 2005 - 2007 | Instructor / Research Associate, Harvard Medical School / Joslin Diabetes Center |
| 2007 - 2010 | Assistant Professor of Pediatrics, Cincinnati Children's Hospital Medical Center |
| 2010 - 2011 | Associate Professor of Pediatrics, Cincinnati Children's Hospital Medical Center |
| 2012 - 2014 | Associate Professor of Pediatrics, University of California San Francisco |
| 2014 - present | Professor of Pediatrics, Psychiatry & Behavioral Sciences, Stanford University |

Other Experience and Professional Memberships

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| --- | --- |
| 2003 – present | Member, American Diabetes Association |
| 2003 – present | Member, Behavioral Research in Diabetes Group Exchange |
| 2006 – 2007 | Staff Psychologist, Joslin Diabetes Center |
| 2007 – 2011 | Staff Psychologist, Cincinnati Children's Hospital Medical Center |
| 2008 – 2008 | Fellow, NIH Institute on Randomized Clinical Trials |
| 2012 – 2014 | Staff Psychologist, University of California San Francisco |
| 2014 – present | Staff Psychologist, Stanford University |

Honors

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| --- | --- |
| 1999 | Charlotte Liberty Scholarship, University of Florida |
| 2000 | Kennywood Scholarship, Pittsburgh Foundation |
| 2001 | Kennywood Scholarship, Pittsburgh Foundation |
| 2004 | Pediatric Research Loan Repayment Program, NIH |
| 2005 | Pediatric Research Loan Repayment Program, NIH |
| 2006 | Pediatric Research Loan Repayment Program, NIH |
| 2006 | Appointed Member, Task Force on Evidence-Based Practice, American Psychological Association |
| 2006 | Appointed Member, Task Force on Diabetes in the School Setting, American Association of Diabetes Educators (AADE) |
| 2007 | Appointed Member, Editorial Board, Diabetes Spectrum |
| 2009 | Nominated President, Behavioral Research in Diabetes Group Exchange |
| 2010 | Appointed Member, Committee on Youth Strategies, American Diabetes Association |
| 2011 | Honorable Mention for "Type 1 Teens: A Guide to Managing Your Life With Diabetes" Book of the Year Awards, ForeWord Reviews |
| 2011 | Appointed Member, Editorial Board, Diabetes Care |
| 2012 | Nominated Chair, Interest Group in Diabetes, Society of Behavioral Medicine |
| 2013 | Appointed Member, Scientific Sessions Planning Committee, American Diabetes Association |
| 2013201620172018 | Appointed Chair, Interest Group in Behavioral Medicine and Psychology, American Diabetes AssociationAppointed Member, ADA Research Policy CommitteeInvited Research Advocate, ADA Call to CongressNamed Associate Editor at *Diabetes Care* and *Pediatric Diabetes* |

# C. Contribution to Science

1. Significant Barriers Exist for Individuals and Families with Diabetes. My programmatic line of research focuses on modifiable psychological and family factors that create barriers to optimal disease management in type 1 diabetes. My research team has demonstrated that treatment nonadherence and psychological barriers such as depression are common and work synergistically to promote suboptimal health outcomes. Further, our work details the intersection of individual psychological factors and family variables that put up barriers to effective disease management. The research projects that have informed these findings include observational, treatment, and prevention-oriented work that utilizes face-to-face approaches and novel technologies.
2. Hood KK, Hilliard M, Piatt G, Ievers-Landis C. Effective strategies for encouraging behavior change in people with diabetes. Diabetes Management 2015. Vol 5 (6). 499-510. DOI: 10.2217/dmt.15.43
3. Mulvaney SA, Hood KK, Schlundt DG, Osborn CY, Johnson KB, Rothman RL, Wallston KA. Development and initial validation of the barriers to diabetes adherence measure for adolescents. Diabetes Res Clin Pract. 2011 Oct;94(1):77-83. PubMed PMID: [21737172](http://www.ncbi.nlm.nih.gov/pubmed/21737172/); PubMed Central PMCID: [PMC3200487](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3200487/).
4. Modi AC, Pai AL, Hommel KA, Hood KK, Cortina S, Hilliard ME, Guilfoyle SM, Gray WN, Drotar D. Pediatric self-management: a framework for research, practice, and policy. Pediatrics. 2012 Feb;129(2):e473-85. PubMed PMID: [22218838](http://www.ncbi.nlm.nih.gov/pubmed/22218838/).
5. Naranjo D, Tanenbaum ML, Iturralde E, Hood KK. Diabetes Technology: Uptake, Outcomes, Barriers, and the Intersection with Distress. J Diabetes Sci Technol. 2016 June 28; 10(4): 852-8. PubMed PMID: 27234809. PubMed Central PMCID: PMC4928242
6. Advanced Skills to Conduct Clinical Trials and Analyze Data Promote Advancements in Content Areas. My training and experiences with study design, methodology, and statistics has been a critical part of my programmatic line of research. For example, we have used advanced meditational models with longitudinal data (e.g., mixed models and time series) to examine changes in depression and diabetes distress over time. Our findings on the adherence-glycemic control link represent the first published report of this mediational model in adolescents and provide support for our conceptual framework in developing interventions for adolescents with type 1 diabetes and depressive symptoms. Further, we have published papers on the metabolic and inflammatory links between depression and diabetes. The paper noted below establishes a proof of concept about the biologic implications of depression. I have also led two meta-analyses examining effects of randomized controlled trials and the intervention’s impact on important health outcomes. I was also a fellow at the NIH Summer Institute on Randomized Clinical Trials.
	1. Hood KK, Rausch JR, Dolan LM. Depressive symptoms predict change in glycemic control in adolescents with type 1 diabetes: rates, magnitude, and moderators of change. Pediatr Diabetes. 2011 Dec;12(8):718-23. PubMed PMID: [21564454](http://www.ncbi.nlm.nih.gov/pubmed/21564454/).
	2. Hood KK, Lawrence JM, Anderson A, Bell R, Dabelea D, Daniels S, Rodriguez B, Dolan LM. Metabolic and inflammatory links to depression in youth with diabetes. Diabetes Care. 2012 Dec;35(12):2443-6. PubMed PMID: [23033243](http://www.ncbi.nlm.nih.gov/pubmed/23033243/); PubMed Central PMCID: [PMC3507554](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3507554/).
	3. Hood KK, Peterson CM, Rohan JM, Drotar D. Association between adherence and glycemic control in pediatric type 1 diabetes: a meta-analysis. Pediatrics. 2009 Dec; 124(6):e1171-9. PubMed PMID: 19884476
	4. Hood KK, Rohan JM, Peterson CM, Drotar D. Interventions with adherence-promoting components in pediatric type 1 diabetes: meta-analysis of their impact on glycemic control. Diabetes Care. 2010 Jul; 33(7):1658-64. PubMed PMID: 20587726; PubMed Central PMCID: PMC2890378
7. Human Factors Contribute to the Uptake and Sustained Use of Diabetes Devices and Technologies. In many of our investigations of human factors and their relationship to diabetes management and outcomes, we examined whether these factors were associated with use of technology (e.g., insulin pumps and CGM). We found several consistent themes – those on pumps achieved better outcomes and those already achieving better outcomes were more likely to be offered pumps (and new technologies). This work has come from collaborations with teams across the USA and UK. We have also done work to determine the degree to which online communities affect outcomes. As more automated insulin delivery systems become available, our team is at the forefront of evaluating and understanding the human side of these devices.
	1. Wong JC, Dolan LM, Yang TT, Hood KK. Insulin pump use and glycemic control in adolescents with type 1 diabetes: Predictors of change in method of insulin delivery across two years. Pediatr Diabetes. 2014 Nov 10;PubMed PMID: [25387433](http://www.ncbi.nlm.nih.gov/pubmed/25387433/); PubMed Central PMCID: [PMC4458222](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4458222/).
	2. Kumah-Crystal YA, Hood KK, Ho YX, Lybarger CK, O'Connor BH, Rothman RL, Mulvaney SA. Technology Use for Diabetes Problem Solving in Adolescents with Type 1 Diabetes: Relationship to Glycemic Control. Diabetes Technol Ther. 2015 Mar 31;PubMed PMID: [25826706](http://www.ncbi.nlm.nih.gov/pubmed/25826706/).
	3. Barnard KD, Hood KK, Weissberg-Benchell J, Aldred C, Oliver N, Laffel L. Psychosocial assessment of artificial pancreas (AP): commentary and review of existing measures and their applicability in AP research. Diabetes Technol Ther. 2015 Apr;17(4):295-300. PubMed PMID: [25549042](http://www.ncbi.nlm.nih.gov/pubmed/25549042/); PubMed Central PMCID: [PMC4365433](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4365433/).
	4. Tanenbaum ML, Hanes SJ, Miller KM, Naranjo D, Bensen R, Hood KK. Diabetes device use in adults with type 1 diabetes: barriers to uptake and potential intervention targets. Diabetes Care. 2017 Feb;40(2):181-187. doi: 10.2337/dc16-1536. PMID: 27899489

Complete List of Published Work in My Bibliography:
<http://www.ncbi.nlm.nih.gov/myncbi/korey.hood.1/bibliography/41146264/public/?sort=date&direction=ascending>

# D. Additional Information: Research Support and/or Scholastic Performance

Ongoing Research Support

At the present time, Dr. Hood commits approximately 1/3 of his effort to human factors work on multi-site clinical trials with diabetes devices and closed loop systems. Several of his PI led efforts ended in 2017 and early 2018, thus he has adequate time to commit to the proposed research.

*Psychosocial Measures for Automated Insulin Delivery Systems*

This project has the primary deliverable of questionnaires that can be used in closed loop studies. The team is using mixed methods to develop and test surveys for adults and youth with T1D, and partners and parents. Dr. Hood is the PI on the project, but shares the lead of project activities with Dr. Barnard, who conceived originally of the project. 2015/02/01-2018/07/31; The Leona M. and Harry B. Helmsley Charitable Trust; Hood, Korey (PI)

*Self-Management of Type 1 Diabetes During Adolescence*

This project follows participants who were originally enrolled in research as pre-teens. The aims are to better understand the trajectories of diabetes management and control, and the contributing factors. Dr. Hood is a co-investigator on this grant and spends time with interpretation of data.

2013/05/01-2019/04/30; R01 DK069486, NIH; Drotar, Dennis (PI)

*Using a Closed-Loop System Plus Behavioral Supports in Preschoolers with Diabetes*

This project is aimed at optimizing strategies for parents of young children with type 1 diabetes to improve diabetes management and control. Our team developed behavioral interventions to be tested in this grant. 2014/09/25-2018/09/24; DP3 DK104059-01, National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK); Buckingham, Bruce (PI)

*Initiation of continuous glucose monitoring at diagnosis of type 1 diabetes*

The major goal of this research is to understand the psychosocial and diabetes-specific impact of starting CGM early in the disease process.

6/30/16-12/31/18; IIS-2015-019 (Hood); Dexcom, Inc.

*One year day-and-night home closed loop in young people with type 1 diabetes*

Our team serves as the coordinating center for human factors assessments for this large-scale, multi-site, and multi-national trial of a closed loop system. We conduct surveys and focus groups with participants.

9/1/2015-12/31/2018; UC4 DK 108520 NIH/NIDDK; Hovorka, Roman (PI)

*An evaluation of efficacy, safety, and patient experience with the MD-Logic Automated Insulin Delivery System: an RCT*

Our team serves as the coordinating center for human factors assessments for this large-scale, multi-site, and multi-national trial of a closed loop system. We conduct surveys and focus groups with participants.

9/1/2016-8/30/2020; UC4 DK 108611; Bergenstal, Richard (PI)

*24/7 closed loop insulin delivery in older subjects with type 1 diabetes*

The major goal of this research is to investigate the human factors of older adults with type 1 diabetes who are participating in a closed loop trial run by Cambridge team.

DP3 (SPO 124113) Hovorka; 12/1/2016-11/30/2019; NIH/NIDDK

*Human Factor Analysis for the CGM Intervention in Teens and Young Adult Study*

The major goal of this research is to optimize use of CGM in this patient population.

T1D Exchange Clinic Network Agreement (Jaeb); 9/1/2017-8/31/2019; Laffel, Lori (PI)

*ECHO Type 1 Diabetes: A Feasibility and Planning Proposal*

The major goal of this research is to carry out a planning program to build a type 1 diabetes specific ECHO

11/1/2017-4/30/2019; Helmsley Charitable Trust; Maahs, David (PI)

Completed Research Support

*Human Factors: An Avenue to Increased Uptake of Diabetes Technology*

2014/09/01-2018/08/31; The Leona M. and Harry B. Helmsley Charitable Trust; Hood, Korey (PI)

*Resilience Promotion in Teens with Type 1 Diabetes: Preventing Negative Outcomes*

2011/09/19-2017/08/31; R01 DK090030-02, National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK); Hood, Korey (PI)

*Diabetes-Specific Behavioral Science Postdoctoral Training Program*

04/01/2015 – 03/31/2017; The Patterson Foundation, University of South Florida; Hood, Korey (PI)

*Improving Adherence in Pre-teens, Adolescents and Young Adults with Type 1 Diabetes*

2012/12/01-2017/11/30; DP3 DK 11-029, NIH; Mulvaney, Shelagh (PI)

*Outpatient Closed-Loop Studies-ePID Controller*

2014/09/01-2015/08/31 Buckingham, JDRF Buckingham, Bruce (PI)

*Audio Health Engagement in Diabetes: The Ahead Study*

2013/07/01-2014/06/30 29571-551067, CTSI-SOS (UCSF) Hood, Korey (PI)

*Family-based, psychosocial intervention for depressed youth with type 1 diabetes*

2009/04/01-2012/02/28 R03 DK081711-02, NIDDK HOOD, KOREY K (PI)

*Parenting & Control Among Young Children with T1 Diabetes*

2010/10/01-2011/09/30 R01 DK080102, NIH Streisand, Randi (PI)

*Depression in Children and Adolescents with Type 1 Diabetes*

2005/09/30-2011/07/31 K23 DK073340-05, NIDDK HOOD, KOREY K (PI)