



# Putting Developmental, Behavioral, and Mental Health PNP-PC Program Content on the Map!

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## BACKGROUND

- COVID-19 brought increased attention to the immense, and often unmet, behavioral, developmental, and mental health needs of children and adolescents nationwide<sup>1-4</sup>
- Lack of trained pediatric and adolescent clinicians to meet the needs of this population<sup>5-6</sup>
- PNPs are in a unique position to assist to fill this gap through comprehensive care that includes developmental, behavioral, and mental health screening, assessment, treatment, and referral within pediatric primary care practice<sup>7-8</sup>
- PNP students need tailored education to successfully integrate development, behavioral and mental health services into primary care<sup>8-9</sup>

## AIMS OF THE PROJECT

- To map the current PNP-PC curriculum content related to developmental, behavioral, & mental health
- Identify potential gaps, redundancies, and opportunities for enhancement of the curriculum in these key areas

## DETAILS OF THE PROJECT

- Faculty mapped all curriculum content including<sup>10</sup>:
  - diagnoses
  - screening/risk assessment tools
  - pharmacology/nonpharmacologic agents
  - therapies/interventions
- Content map developed that traced content focused on developmental, behavioral, & mental health throughout the curriculum
- Content identified as introduced or reinforced from previous content<sup>10</sup> within the context of the course focus & objectives
- Content map based on the PNCB Pediatric Primary Care Mental Health Specialist Content Outline<sup>11</sup>

	Semester 1							Semester 2							Semester 3				Semester 4			NEW COURSE	
	6010	7020	7400	7410	7420	7430	7440	7470	6040	6020	7460	7550	7450	7530	7490	7480	6050	6060	7500	7520	7510	7570	
Diagnosis <sup>11</sup>	Adv Patho	PC LA	Adv Ped Physical Assess	Inst & Family Dev	Health Promot/ Disease Prev	PC/CC	PC Adol	PC/CC	Research/ Statistics for EBP	Adv Pharm	PC Child II	Adv Ped Pharm	Adv Clin Prac	School Based Clin Prac	PC Child III/CC	PC Child III	Trans Prof Practice	Promoting Health Comm	PC Child IV	Chronic Health Conditions	PC/CC	Behav, Dev & Mental Health PC	
Attention Deficit/hyperactivity disorder (ADHD)					I	C		C								R						S	*
Anxiety		I			I		I			I		R		S	C	R							*
Autism spectrum disorders				I	I	C		C											R	R			*
Communication disorders					I																		*
Depressive disorders		I			I		I			I		R	S			R						C	*
Developmental delay				I	I														R	R		C	*
Disruptive, impulse-control, and conduct disorders																I						C	*
Learning disorders				I												R							*
Sleep disorders				I	I																	C	*
Trauma- and Stressor-related disorders (PTSD, reactive attachment disorders)				I																		C	*
Abuse and neglect		I			I											R				R			*
Bi-polar and related disorders										I												C	*
Elimination disorders	I				I					I	I												*
Feeding and eating disorders							I															C	*
Intellectual disability				I																			*
Mental and developmental disorders related to medical conditions (e.g. traumatic brain injury (TBI), concussion, obesity, diabetes)	I						I												I				*
Motor disorders	I									I													*
Seizure disorders	I									I										I			*
Suicide <sup>a</sup>							I	R					S									C	*
Self Injury							I																*
Sensory processing issues					I														R				*
Somatic symptoms & related disorders																			I				*
Body dysmorphic disorder							I																*
Gender dysphoria		I					I																*
Genetic disorders	I				I		I									R			R				*
Neonatal abstinence syndrome (NAS)			I							I													*
Neurosensory impairments					I																		*
Obsessive-compulsive and related disorders																						C	*
Other neurodevelopmental disorders (e.g., cerebral palsy, spina bifida)																							*
Substance use and addictive disorders		I	ILCE		I		I			I													*
Tic disorders																							*
Pharmacologic Agents							I					R				R			R			C	*
Screening & Assessment Tools			RL	I	I	C	I	C		I		R		C		R			R			C	*
Therapies & Interventions			RL	I	I		I									R			R			C	*
Risk-Related Tools			RL		I	C	I					R				R			R			C	*

KEY: INTRODUCED REINFORCED CLINICAL CONFERENCE SIMULATION REINFORCED IN LAB INTERPROFESSIONAL LEARNING CLINICAL EXPERIENCE CORE ^ADDED TO PNCB LIST

## OUTCOMES

- The curriculum map provided a detailed view of the current content focused on development, behavioral, and mental health content
- Current gaps in the curriculum were identified in comparison to the PNCB content outline
- It has allowed us to enhance our curriculum to better prepare PNP-PC students to meet the needs of children and adolescents in primary care and help to narrow current practice gaps
- Didactic and clinical courses added to plan of study focused on developmental, behavioral and mental health to expand curriculum content and fill existing gaps

## DISCUSSION

This project has important implications for enhancing the training of pediatric primary care providers in screening, assessment, management, and referral of developmental, behavioral, and mental disorders within the context of a PNP-PC program of study. Additionally, the curriculum map allowed us to create and add a focused didactic and clinical summative course to our curriculum which will model the integration of developmental, behavioral and mental health into primary care practice.

**References**

1. Benton, T., Njoroge, W.F.M., Ng, W. Y. K. (2022). Sounding the alarm for children's mental health during the COVID-19 pandemic. *JAMA Pediatrics*, 176(4), e216295. doi:10.1001/jamapediatrics.2021.6295
2. Loades, M. E., Chatburn, E., Hignson-Sweeney, N., Reynolds, S., Shafran, R., Brigden, A. ... & Crawley, E. (2020). Rapid systematic review: the impact of social isolation and loneliness on the mental health of children and adolescents in the context of COVID-19. *Journal of the American Academy of Child & Adolescent Psychiatry*, 59(11), 1218-1239.
3. National Alliance on Mental Illness. (2023). About mental health. <https://www.nami.org/About-Mental-Illness>.
4. Spencer, A. E., Oblath, R., Dayal, R., Loubeau, J. K., Lejeune, J., ... & Garg, A. (2021). Changes in psychosocial functioning among urban, school-age children during the COVID-19 pandemic. *Child and Adolescent Psychiatry and Mental Health*, 15(1), 73. <https://doi.org/10.1186/s13034-021-00419-w>
5. McBain, R. K., Kohner, A., Stein, B. D., Cantor, J. H., Vogt, W. B., & Yu, M. (2019). Growth and Distribution of Child Psychiatrists in the United States: 2007-2016. *Pediatrics*, 144(6), e20191576. <https://doi.org/10.1542/peds.2019-1576>
6. Thomas, C. R., & Heller, C. E. (2006). The continuing shortage of child and adolescent psychiatrists. *Journal of the American Academy of Child and Adolescent Psychiatry*, 45(9), 1029-1031. <https://doi.org/10.1097/01.chi.0000225533.16831.5d>
7. Brino, K. A. S. (2020). Pediatric mental health and the power of primary care: practical approaches and validating challenges. *Journal of Pediatric Health Care*, 34(2), e12-e20. <https://doi.org/10.1016/j.pedhc.2019.09.013>
8. NAPNAP. Developmental Behavioral Mental Health Special Interest Group (2020). NAPNAP position statement on integration of mental health care in pediatric primary care settings. *Journal of Pediatric Health Care*, 34, 514-517. <https://doi.org/10.1016/j.pedhc.2020.04.013>
9. Guise, V., Chambers, M., & Valimaki, M. (2012). What can virtual patient simulation offer mental health nursing education? *Journal of Psychiatric & Mental Health Nursing*, 19(3), 410-418
10. American Association of Colleges of Nursing. (2021). The essentials: Core competencies for professional nursing education. <https://www.aacnursing.org/Portals/0/9/9/9/Publications/Essentials-2021.pdf>
11. Pediatric Nursing certification Board. (2021). Pediatric primary care mental health specialist certification exam. [https://www.pncb.org/sites/default/files/resources/PMHS\\_Exam\\_Content\\_Outline\\_2021\\_FINAL.pdf](https://www.pncb.org/sites/default/files/resources/PMHS_Exam_Content_Outline_2021_FINAL.pdf)

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