

**Prevalence of Course Content on Developmental Disabilities in the Top-Ranked Graduate
Health Programs**

Camryn A. Chitty

Department of Human Development and Family Science, Oklahoma State University

Prevalence of Course Content on Developmental Disabilities in the Top-Ranked Graduate Health Programs

People with developmental disabilities report having poor health more often than people without developmental disabilities (Havercamp et al., 2004). It has also been found that people with developmental disabilities are likely to experience difficulties gaining access to the care they need and having their required medical treatments deferred (Prokup et al., 2017). This likely contributes to individuals with intellectual disabilities, developmental disabilities, and chronic illnesses experiencing disproportionately high rates of chronic disease, obesity, and other health risk factors (Krahn et al., 2015).

Disability Terminology

While this disparity in healthcare provided to people with developmental disabilities is the overarching topic of this paper, explanations, and definitions of relevant disability terms must first be established. The Center for Disease Control (CDC) reports that one in six children from the ages of three to seventeen are diagnosed with having a developmental disability (CDC, 2019) and that intellectual disability is prevalent in every 12 out of 1,000 children the same ages (CDC, 2013). Intellectual disabilities are defined by the International Classification of Diseases, or the ICD-10, as a variety of disorders that impair an individual's intelligence. These impairments are diagnosed by the age of eighteen and may be the result of birth complications, physiological trauma, or disease (ICD-10, 2021). The ICD-10 defines developmental disabilities as disorders where there is a delay in development based on that expected for a given age level or stage of development (ICD-10, 2021). These impairments or disabilities originate before age 18, may be expected to continue indefinitely, and constitute a substantial impairment. Biological and nonbiological factors are also involved in these disorders (ICD-10, 2021). Some examples of

developmental disabilities are autism spectrum disorder, cerebral palsy, Down syndrome, and attention deficit hyperactive disorder (CDC, 2019). While intellectual disabilities and developmental disabilities may have two separate classifications in the ICD-10, it is important to recognize intellectual disabilities commonly coexist with developmental disabilities, so intellectual disabilities are therefore considered developmental disabilities as well (CDC, 2019), and the terms are often combined to intellectual and developmental disabilities. An example of a developmental disability that may coexist with an intellectual disability is cerebral palsy (CDC, 2019).

The focus of this paper will be the negative experiences of people with developmental disabilities in healthcare settings, why their experiences can be extremely determinantal, if there is coursework present in graduate health programs about and with this population, and why these educational opportunities need to be available if they are not already. The primary research focus of this paper is the prevalence of course content on developmental disabilities as they include the largest variety of people with disabilities, and the prevalence of these disabilities in children three to seventeen years old has been on a steady increase since 2009 (Zablotsky et al., 2019).

Historical Treatment of Individuals with Intellectual and Developmental Disabilities

People with intellectual and developmental disabilities have historically been treated unjustly by society and the professionals who provide care to individuals with intellectual and developmental disabilities, including healthcare providers. In the early 19th century, institutions were created as places where people with intellectual and developmental disabilities were sent to be educated as it was believed their disability was due to a failure of will (Friedman, 2019). These institutions began to grow exponentially as it became common for businesses not to hire anyone with an intellectual and developmental disability as a result of an economic downturn.

With large numbers of people with intellectual and developmental disabilities to care for and educate, institutions made a shift where they then resembled psychiatric hospitals (Friedman, 2019). The individuals with intellectual and developmental disabilities in these institutions then stopped receiving any kind of education and began to undergo nonconsensual medical intervention from the institutions (Friedman, 2019). In the early 20th century, the idea of eugenics, an effort to organize reproduction within the human population to increase what was seen as being desirable, began to gain following. Characteristics such as being white, able-bodied, wealthy, and heterosexual made a person ideal and worth reproducing in the mind of eugenicists (Friedman, 2019). Therefore, people with any type of disability were seen as having undesirable traits and were forcefully sterilized, often in the institutions (Friedman, 2019). The majority of institutions in the mid to late 20th century were abysmal places to live as the individuals living there were not provided with any social interaction or educational opportunities, proper health or psychiatric care, and were often experiencing less than poor living conditions (Friedman, 2019).

It is important to mention that individuals with intellectual and developmental disabilities were often placed in these institutions by the direction of a healthcare professional and these professionals were also the people who would later perform and/or order the nonconsensual sterilizations of people with intellectual and developmental disabilities (Friedman, 2019). Many, but not all, of these institutions have since been either reformed or shut down, but the trauma inflicted is still ever-present in individuals with disabilities (Friedman, 2019). The trauma endured in these institutions, often at the hands of healthcare professionals, has created a long-standing distrust and a gap in the relationships people with disabilities have with their healthcare providers (Krahn et al., 2015). This distrust often causes individuals with intellectual and

developmental disabilities to have negative feelings towards their healthcare professionals which may lead them to completely skipping their medical appointments to avoid a possibly negative experience (Hall et al., 2019). Many people with intellectual and developmental disabilities have also reported experiencing feeling they are not being respected or listened to thoroughly by their providers when they do attend their medical appointments (Hall et al., 2019).

Healthcare Providers' Suppositions

Not only are some people with intellectual and developmental disabilities untrusting of their healthcare providers, but it has also been shown that healthcare providers may be less likely to have positive attitudes towards their patients with individuals with intellectual disabilities (Morin et al., 2018). When asked outright whether they were prejudiced against people with disabilities, the majority of a group of healthcare providers reported they were not (VanPuymbrouck et al., 2020). While the results of the study did illustrate these healthcare providers having low levels of explicit prejudice based on their answers, the results also revealed the same providers simultaneously had high levels of implicit prejudice towards individuals with disabilities (VanPuymbrouck et al., 2020). Having low explicit prejudice and high implicit prejudice is defined as being an aversive ableist (VanPuymbrouck et al., 2020). Healthcare providers having aversive ableism can be harmful to people with intellectual and developmental disabilities as these providers may rationalize their implicit prejudice because they do not actively realize they have these thoughts, and ultimately may not be able to treat their patients with disabilities with the level of respect and care that they deserve because they are not able to view them in an unbiased manner. This lack of quality care can cause people with disabilities' overall health status to decrease as the care is insufficient and may cause them to stop attending their medical appointments (VanPuymbrouck et al., 2020).

Individuals with intellectual and developmental disabilities and their family members have reported healthcare professionals seemingly having low knowledge of disability and no training to care for people with disabilities (Nichols et al., 2008). Holder, Waldman, & Hood found that 58% of medical school deans reported their schools do not make curriculum on disabilities a high priority at their school, and the majority of graduating students from these same medical schools reported feeling insufficiently trained care for patients with disabilities (Holder et al., 2009). In another study, 93% of upper-level medical students reported they believe increased curriculum and interactions with people with intellectual disabilities is necessary to prepare themselves for their career as a medical doctor (Burge et al., 2008). It has also been found in audits of medical schools' courses that even when there is education present on individuals with intellectual disabilities, the courses between different medical schools proved to be incongruous (Trollor et al., 2016; Trollor et al., 2018). For example, the different disciplines of intellectual disability (i.e., sexual health, emergency medicine, psychiatry, human rights issues) provided at each school varied (Trollor et al., 2016). The methods taken by medical schools to instruct their students on intellectual disability were also assorted (Trollor et al., 2018).

Review of Relevant Literature

This disparity in people with intellectual and developmental disabilities' quality of healthcare, individuals with intellectual and developmental disabilities distrust of healthcare professionals, the biased care healthcare professionals may provide, and many other factors can lead to people with intellectual and developmental disabilities experiencing worse health than people without disabilities (National Council on Disability, 2009). People with intellectual and developmental disabilities having consistently poor health is extremely harmful as having good

health can help people feel better psychologically, prevent the development or progression of chronic illnesses, extend their life, and increase their quality of life (SANE, 2020).

People with intellectual and developmental disabilities have also reported having trouble recognizing and self-reporting their health needs to their provider (Ervin et al., 2014), and can experience difficulty understanding the information their provider is giving them during a health appointment (Williamson et al., 2017). These communication barriers can result in patients with intellectual and developmental disabilities not clearly understanding what their healthcare plan is and feeling disrespected as the provider may speak to their caregiver, guardian, or staff member instead of the patient themselves (Williamson et al., 2017). People with intellectual and developmental disabilities also report not feeling as if they have a say in their healthcare (Williamson et al., 2017). There is also a history of some people with intellectual and developmental disabilities being unnecessarily sedated when a provider felt the patient was ‘too out of control’ (Williamson et al., 2017).

This problem of healthcare providers harboring ableist ideas and not being able to properly communicate with people with intellectual and developmental disabilities is vital to work towards solving. This is because people with intellectual and developmental disabilities experience high rates of mortality, chronic illnesses, and comorbidities; are given fewer breast, cervical, and testicular screenings for cancer; and are less likely to be cared for at mental and oral health services because of their disabilities (Ervin et al., 2014). These gaps in healthcare can lead to unnecessarily early deaths, cancers that could have been prevented, and mental health struggles that go untreated in people with intellectual and developmental disabilities (Ervin et al., 2014). Overall, this disparity in the quality of healthcare provided to people with intellectual and

developmental disabilities is costing individuals with intellectual and developmental disabilities their quality of lives, health, mental wellness, and ultimately, their lives.

The problems with the healthcare, or lack of, provided to people with intellectual and developmental disabilities previously discussed may occur because it is very uncommon for curriculum to be present in graduate health programs that educate healthcare students on intellectual and developmental disabilities (National Council on Disability, 2009). When family physicians were asked if they felt prepared by their schooling to care for people with intellectual disabilities, if they felt they had proper access to resources for their patients of this population, and if their office was set up properly to care for these individuals, the answers were overwhelmingly no (Wilkinson et al., 2012). In 2015, 75 medical schools were asked by Seidel and Crowe about whether they had a disability awareness program, a program that educates on the medical and psychosocial aspects of living with a disability, at their school (2017). Fifty-two percent of the schools reported that they did; however, students at these schools only spent an average of seven hours in said disability awareness program during the four years they spent at school (Seidel & Crowe, 2017). Only 59% of these schools had someone with a disability aid in the creation of these programs; the most common format of said programs was a person with a disability coming once to speak with the medical students on how to communicate with people with disabilities (Seidel & Crowe, 2017).

While it is important to know the status of courses covering intellectual and developmental disabilities in medical schools, it is also essential to have the same information about other graduate health programs, such as physician assistant and master's in nursing programs; physicians are not the only healthcare providers who will have direct contact with patients with intellectual and developmental disabilities. To the author's knowledge, there is not any current

research over the opinions that physician assistant or master's in nursing program students have towards people with intellectual and developmental disabilities. Therefore, studies must be completed to provide this information on these other programs, and more.

Healthcare providers may also struggle to deliver adequate healthcare to people with intellectual and developmental disabilities because they do not have clinical experiences with this population during their time in their graduate health programs. For instance, medical students have been reported completing four years of medical with almost no exposure to anyone with an intellectual or developmental disability (Long-Bellil et al., 2011). Thus, making it likely that a healthcare providers' first interaction with a person with an intellectual or developmental disability might be when they are a practicing provider and the individual is in their office to receive care (Long-Bellil et al., 2011).

As it has previously been discussed, it is rare for graduate health programs to educate their students on how to care for and interact with patients with intellectual and developmental disabilities. The lack of instruction on people with intellectual and developmental disabilities in a classroom or clinic setting is likely contributing to the poor healthcare persons with intellectual and developmental disabilities receive (Iezzoni & Long-Bellil, 2012). Implementing opportunities in graduate health programs for students to learn about and work with people with intellectual and developmental disabilities has been suspected to have the potential to positively impact the opinions that healthcare providers hold towards people with intellectual and developmental disabilities; therefore, increasing the quality of care they provide (Iezzoni & Long-Bellil, 2012). Healthcare providers who hold more knowledge about intellectual disabilities scored lower on a scale of sensitivity and tenderness, meaning they are less likely to experience pity when caring for people with intellectual disabilities (Morin et al., 2018). While

healthcare providers need to show concern towards all their patients, pity is an undesirable trait for a healthcare provider to have as said feelings have the potential to minimize acceptance, inclusion, and autonomy of people with intellectual disabilities (Phillips, et al., 2019).

Symons and colleagues performed a study that exhibits how implementing a disability-based curriculum has the potential to improve graduate health program students' opinions on people with intellectual and developmental disabilities and enhance their ability to care for people with intellectual and developmental disabilities in the future (Symons et al., 2014). A disability-based curriculum was introduced to first-year medical students at a medical school in New York, while a group of first-year medical students at another medical school nearby did not receive this curriculum (Symons et al., 2014). These students participated in lectures delivered by professionals who work with people with intellectual and developmental disabilities and small group conversations with families of a person with an intellectual or developmental disability to discuss their experiences with healthcare (Symons et al., 2014). This curriculum continued through their second and third years as medical students, while the control group of medical students was not receiving any additional curriculum dedicated to educating them on intellectual and developmental disabilities (Symons et al., 2014).

All students were given a Likert-scaled questionnaire assessing their attitudes and comfort levels working with people with intellectual and developmental disabilities in their first year as medical students and at the end of their third year (Symons et al., 2014). During the second questionnaire, the group of students provided with the disability-based curriculum for their first three years of medical school self-reported a higher rate of positive attitudes towards people with disabilities than the control group of students (Symons et al., 2014). The students in the intervention group also self-reported a higher rate of comfortability and confidence in their

care while working with patients with intellectual or developmental disabilities when compared to the control group of medical students (Symons et al., 2014). These results indicate that a curriculum covering intellectual and developmental disabilities has the potential to increase healthcare providers' attitudes towards patients with intellectual and developmental disabilities, ultimately leading to an increase in the care they can provide.

Whilst it is vital for there to be course present in graduate health programs that educate on intellectual and developmental disabilities, the author highly recommends there should be a common structure for all graduate health programs' courses for the sake of consistency and establishing the best practices. Kirschner and Curry created six core learning objectives they suggest should be present in every graduate health program with a disability-based curriculum (Kirschner & Curry, 2009). The learning objectives are as follows: (a) intellectual and developmental disabilities should be framed in the context of human diversity, lifespan, and their sociocultural environment; (b) students should be instructed on the skills of assessing disability, how to treat and manage intellectual and developmental disabilities, etc.; (c) general etiquette for working with patients with intellectual and developmental disabilities; (d) knowledge on the health care system and the requirements of the Americans with Disabilities Act; and (e) students should be instructed on how to provide patient-centered care as this can provide them with a better understanding of their patients with intellectual and developmental disabilities (Kirschner & Curry, 2009).

Gaps in the Literature

While there is pre-existing research on healthcare professionals' attitudes towards people with intellectual and developmental disabilities, and why the implication of curriculum covering developmental disabilities has the potential to improve these attitudes, there is limited research

on whether graduate health programs currently have a disability-based curriculum which instructs their students on how to care for people with intellectual and developmental disabilities.

Whereas there are a limited number of studies over the presence of courses instructing on intellectual and developmental disabilities in medical schools, there are still missing areas of research in this field. To the author's knowledge, there are little to no studies about clinical experiences present in graduate health programs for students to work with people with intellectual and developmental disabilities. This missing area of research is important as clinical experiences have the potential to provide students with opportunities to work with people with intellectual and developmental disabilities, which can increase the quality of care they can deliver as they will be more comfortable with working with people with intellectual and developmental disabilities. As previously mentioned, there is minimal research over the presence of courses covering intellectual and developmental disabilities in medical schools, but this research appears to be even more significantly lacking in other health-related graduate programs (i.e., Physician Assistant and master's in nursing). This is troublesome because medical doctors are not the only healthcare professionals who care for people with intellectual and developmental disabilities, and all healthcare professionals need training while they are in school to ensure they are caring for their patients with intellectual and developmental disabilities properly.

To the author's knowledge, there is also insufficient research on whether there are any required follow-up exams or continuing courses covering intellectual and developmental for practicing health professionals who have completed their graduate health programs. This missing knowledge is needed to understand whether healthcare professionals are consistently working towards improving the care they can provide for people with intellectual and developmental

disabilities, or if their level of care is no longer evaluated once they have begun practicing medicine.

The Current Study

The current study was created to determine whether the top twenty-five ranked medical schools, physician assistant programs, and master's in nursing programs, respectively, have a course covering intellectual and developmental disabilities, and clinical experiences present in their programs.

Methodology

The current study includes self-reported data from faculty or staff members at graduate health programs in the United States. Surveys were sent to personnel at 75 top-ranked medical schools, physician assistant programs, and master's in nursing programs. Twenty-five programs were selected from U.S. News' lists for the best medical schools, physician's assistant programs, and master's in nursing programs, respectively (U.S. News, 2019; U.S. News, 2021a; U.S. News, 2021b). U.S. News ranked these programs using indicators from the medical school research model and primary care rankings (U.S. News, 2019; U.S. News, 2021a; U.S. News, 2021b).

Recruitment Procedures

For this project, a survey (see Appendix A) was distributed by email (see Appendix B) to staff and faculty members from the top-ranked medical schools, physician assistant programs, and master's in nursing programs. After a month, a follow-up email was sent to the staff and faculty members who had not yet responded to the survey (see Appendix C).

Participants

Data was collected from the programs between December 2020 and March 2021, giving the staff and faculty members three months to complete the survey. Out of the 75 surveys

emailed, six were completed and returned. Of the six respondents, three are from master's in nursing programs, two are from physician assistant programs, and one is from a medical school. Five respondents identified themselves as faculty members at their respective universities and one identified themselves as the director of education.

Measures

A draft of survey questions was created upon reviewing other research studies that considered similar topics. The survey was then piloted to three personal contacts from each of the three program types: a medical school, physician assistant program, and master's in nursing program, to ensure the survey had the potential to result in quality findings. Once the survey was piloted and the contacts' feedback was used to adjust the survey, it was finalized.

The survey was distributed through email to staff and faculty at each of the 75 schools; six of the faculty and staff members who received the survey completed it. In the survey, participants were asked to list the type of program, the name of the program, and their job title. They also were asked if their program offers a course that covers developmental disabilities, and if so, information about the course as well as whether their program provides clinical experiences with people with developmental disabilities. If they do provide opportunities for clinical experiences with individuals with developmental disabilities to their students, which clinical settings the experiences are in. Lastly, participants were given an open response question to report if they have any current plans for changing their program's curriculum related to developmental disabilities or other vulnerable populations.

Results

The purpose of the current project was to determine whether the top twenty-five ranked medical schools, physician assistant programs, and master's in nursing programs, respectively,

have courses to educate their students on developmental disabilities and whether clinical experiences with individuals with developmental disabilities are available in their programs.

Five of the six participating schools reported providing a course that covers developmental disabilities to their students, but that developmental disabilities are covered as a topic in a broader course and there is not a course primarily about developmental disabilities. Only four of the six participating programs offer clinical experiences working with individuals with developmental disabilities for their students. (See Appendix D). Out of the four schools that offer clinical experiences with individuals with developmental disabilities, the most common clinical experiences to work with developmental disabilities in are inpatient clinics, outpatient clinics, and pediatric clinics. (See Appendix D).

The faculty member from the program that does not provide any courses covering developmental disabilities reported their school has a plan to “expand multiple areas of curriculum to include vulnerable population/developmental disabilities”. Only one other respondent reported having plans to change their program’s curriculum, they reported that their program plans to “increase focus on structural racism and intersection of race and other identities/social determinants of health”.

Discussion

This project aimed to establish if the top 25 ranked medical schools, physician assistant programs, and master’s in nursing programs, respectively, have courses covering developmental disabilities and if they provide clinical experiences for their students to work with individuals with developmental disabilities in their programs. The results indicate that of those programs represented in the current study a good number of graduate health programs discuss developmental disabilities at some point in their courses, but the author believes that these results

indicate education for graduate health students on developmental disabilities is not a very high priority, if a priority at all, in most programs.

These results support the findings of Seidel and Crowe who found that roughly half of the 75 medical schools they surveyed had a course present in their schools that educated their students on individuals with disabilities (Seidel & Crowe, 2017). The results of both the Seidel & Crowe (2017) study and the current study are troubling as it has been suggested that a lack of education is a large reason why healthcare professionals have ableist biases and an inability to provide adequate care for people with intellectual and developmental disabilities (Nichols et al., 2008).

Limitations of Current Study

The current study was conducted throughout the COVID-19 pandemic, and the medical field has been very overwhelmed during the pandemic with taking care of ill patients, adjusting to new protocols and performing research on the novel virus. Therefore, it is likely that the contacts at the 75 graduate health programs had trouble finding the time to complete this survey, resulting in the small number of responses received. Since this study was completed during a pandemic, it is also possible that the number of responses was limited by the route of online survey delivery.

The respondents of the current study almost all hold the same position at their programs which can be troublesome as there is no perspective being provided from other faculty/staff members who may know more about the questions being asked. Lastly, the survey was self-reported by the faculty and staff of these programs, meaning the researcher did not audit the schools' courses or their courses' syllabi.

The small sample size of this study, the lack of diversity in the positions the respondents hold in their programs, the online format of the survey, the fact that the survey was self-reported, and the low response rate are all limitations of the current study.

Implications for Future Research

The purpose of understanding whether graduate health programs are providing course(s) that cover developmental disabilities and/or opportunities to work with individuals with developmental disabilities in clinical settings is an important concept that needs to continue to be researched. Future scholars looking to research similar topics should consider contacting the graduate health programs and interviewing them by phone as this method may help them receive a larger number of responses, and it can allow the respondents to elaborate on their answers. Future researchers should also contemplate examining graduate health programs' course catalogs and course syllabi to aid their search in whether the programs have a course covering developmental disabilities or not.

When taking into consideration the findings of the current study and the prevalent literature covering people with intellectual and developmental disabilities, it is clear there is a need for change. The first step towards this change should be continuing the efforts of researching course content and clinical experiences with individuals with intellectual and developmental disabilities present in graduate health programs (i.e., the prevalence, best execution, rates of success, and more of said course content and clinical experiences). Research needs to continue being completed because a policy is informed through research results, and policy is what governs how healthcare professionals can practice (Clancy et al., 2012). Clancy and colleagues have determined that research on existing health services can identify the problems of the current services, determine the potential benefits and consequences of health

policies, and assess what implementing a policy may cost (Clancy et al., 2012). So, to implement policies that can help ensure people with intellectual and developmental disabilities are being cared for properly by healthcare professionals, proper research must be completed to educate policymakers on which policies should be created.

Implications for Policy

As mentioned previously, policy is what guides practice. Therefore, policies need to be created involving how graduate health programs should be educating their students on developmental disabilities; this will allow all graduate health programs to implement corresponding courses. In the United States of America, there is a program called the Liaison Committee of Medical Education (LCME), they are the committee that awards accreditation to medical schools in America, and the accreditation is based on 12 standards (LCME, 2021). As of the report created in March 2021 for the 2022-2023 academic year, the LCME has not included any policies for the education of medical students on disability (LCME, 2021). Also, there are currently no rotations required by the American Association of Medical Colleges that explicitly include experiences with people with intellectual and developmental disabilities (AAMC, 2021).

The National Council of Disability (NCD) wrote to the LCME in 2018 requesting that they integrate the specific needs of individuals with intellectual and developmental disabilities into one of their 12 standards so medical schools will have to include course(s) and clinical experiences with individuals with intellectual and developmental disabilities to be accredited (NCD, 2018). The LCME did consider the suggested revisions in 2019, with the ultimate decision being to implement a policy that states medical schools cannot discriminate based on disability and to rewrite one of the standards to state schools should recognize the impact of healthcare disparities on all populations (NCD, 2019). The NCD responded to this decision by

writing the LCME again and stating this change was not impactful at all to address their requests as the language is too vague, and that changes still need to be made (NCD, 2019).

For the disparity of health care provided to individuals with intellectual and developmental disabilities to change, the author believes policies need to be implemented by the associations in charge of creating the basis for every graduate health program's courses concerning individuals with developmental disabilities.

Implications for Practice

As it has been discussed throughout this paper, the lack of education healthcare professionals receive on developmental disabilities in their graduate health programs is likely contributing to the large disparity in healthcare provided to individuals with developmental disabilities (Iezzoni & Long-Bellil, 2012; National Council on Disability, 2009). Therefore, once a policy is in place from institutions like the LCME and AAMA on the inclusion of developmental disability in the courses of graduate health programs, implementation of said courses and clinical experiences with individuals with developmental disabilities, is likely to follow. This is because graduate health programs must stay in accordance with the LCME to keep their accreditation (LCME, 2021).

The author suggests that upon this change in policy and implementation of this practice, graduate health programs should create courses that closely resemble the curriculum used in the Symons et al. study (2014) and follow Kirschner and Curry's (2009) learning objectives.

Implications for the Author

Now that the implications for the policies, research, and practices surrounding people with disabilities have been laid out, it is time to lay out the implications of this paper for the author's future work. The author's goals are to attend a physician assistant program and become

a certified physician assistant; then, she will open a clinic that will work to care for individuals who are underserved in the health field (i.e., people with intellectual and developmental disabilities, the LGBTQ+ community, racial minorities, and more). The findings of the current study imply that the author needs to advocate for the inclusion of courses and clinical experiences with people with disabilities at the program they attend. Not only should the author be an active advocate for the implementation of a course and clinical experiences that covers intellectual and developmental disabilities at their program, but the author needs to advocate for a nationwide implementation of standardized course content and set of clinical experiences for all graduate health programs. She sees this as being a step to ensure all graduate health students are receiving adequate education to care for people with disabilities.

The author will also use the experience and process of writing this paper in their future work as a physician assistant and advocate. While the author already had a plan for this paper when starting, the COVID-19 pandemic, unfortunately, kept the author from executing many of her plans for the paper. However, the author developed the skill to adjust to the changes caused by the pandemic and to problem-solve any barriers that arose to keep working towards completing the paper. As previously mentioned in the discussion, the pandemic likely hindered the number of responses the author received which was disappointing at first because there was a lot of work that went into the creation and distribution of the survey. Although it would have been easy for the lack of responses to discourage the author from continuing the paper and the research, the author received lots of support from their advisor and ultimately realized that barriers, such as low response rates, are normal when conducting research and that low response rates may be another indicator of the need for the research topic. Overall, the author is pleased

with the work she has done and plans to continue working to improve the healthcare provided to people with intellectual and developmental disabilities.

References

- American Association of Medical Colleges. (2021) *Clerkship Requirements by Discipline*.
American Association of Medical Colleges. <https://www.aamc.org/data-reports/curriculum-reports/interactive-data/clerkship-requirements-discipline>
- Burge, P., Ouellette-Kuntz, H., Isaacs, B., & Lunsky, Y. (2008). Medical students' views on training in intellectual disabilities. *Canada Family Physician*, 54(4), 568-571.
- Centers for Disease Control and Prevention. (2013). *Frequently Asked Questions: 2011–2012 National Survey of Children's Health*. Hyattsville, MD: National Center for Health Statistics. https://www.childhealthdata.org/docs/nsch-docs/sas-codebook_-2011-2012-nsch-v1_05-10-13.pdf
- Centers for Disease Control and Prevention. (2019). *Increase in Developmental Disabilities*.
Centers for Disease Control and Prevention.
<https://www.cdc.gov/ncbddd/developmentaldisabilities/features/increase-in-developmental-disabilities.html>
- Clancy, C. M., Glied, S. A., & Lurie, N. (2012). From Research to Health Policy Impact. *PubMed*, 47(1 Pt 2), 337-343. <https://doi.org/10.1111/j.1475-6773.2011.01374.x>
- Ervin, D. A., Hennen, B., Merrick, J., & Morad, M. (2014). Healthcare for Persons with Intellectual and Developmental Disability in the Community. *Frontiers in Public Health* 2(83), 1-8. <https://doi.org/10.3389/fpubh.2014.00083>
- Friedman, C. (2019). The Relationship Between Disability Prejudice and Institutionalization of People With Intellectual and Developmental Disabilities. *Intellectual and Developmental Disabilities*, 57(4), 263-273.
<https://doi-org.argo.library.okstate.edu/10.1352/1934-9556-57.4.263>

- Hall, J. P., Kurth, N. K., Gimm, G., & Smith, S. (2019). Perspectives of adults with disabilities on access to health care after the ACA: Qualitative findings. *Disability and Health Journal*, 12(3), 350-358. <https://doi.org/10.1016/j.dhjo.2019.01.014>
- Havercamp, S. M., Scandlin, D., & Roth, M. (2004). Health Disparities Among Adults with Developmental Disabilities, Adults with Other Disabilities, and Adults Not Reporting Disability in North Carolina. *Public Health Reports*, 119, 418-426. <https://doi.org/10.1016/j.phr.2004.05.006>
- Holder, M., Waldman, H.B., & Hood, H. (2009). Preparing Health Professionals to Provide Care to Individuals with Disabilities. *International Journal of Oral Science*, 1, 66-71.
- Iezzoni, L. I., & Long-Bellil, L. M. (2012). Training physicians about caring for persons with disabilities: “Nothing about us without us!” *Disability and Health Journal*, 5(3), 136-139. <https://doi.org/10.1016/j.dhjo.2012.03.003>
- Kirschner, K. L., & Curry, R. H. (2009). Educating Health Care Professionals to Care for Patients with Disabilities. *American Medical Association*, 302(12), 1334-1335. <https://doi.org/10.1001/jama.2009.1398>
- Krahn, G. L., Walker, D. K., & Correa-De-Araujo, R. (2015). Persons with Disabilities as an Unrecognized Health Disparity Population. *Framing Health Matters*, 2(105), 199-206. <https://doi.org/10.2105/AJPH.2014.302182>
- Liaison Committee on Medical Education. (2021). *Functions and Structure of a Medical School: Standards for Accreditation of Medical Education Programs Leading to the MD Degree*. Association of American Medical College and American Medical Association.
- Long-Bellil, L. M., Robey, K. L., Graham, C. L., Minihan, P. M., Smeltzer, S. C., Kahn, P. (2011). Teaching Medical Students About Disability: The Use of Standardized Patients.

Disabilities Medicine Education, 86(9), 1163-1170.

<https://doi.org/10.1097/ACM.0b013e318226b5dc>

Morin, D., Valois, P., Crocker, A. G., Robitaille, C., & Lopes, T. (2018). Attitudes of health care professionals toward people with intellectual disability: a comparison with the general population. *Journal of Intellectual Disability Research*, 62(9), 746-758.

<https://doi.org/10.1111/jir.12510>

National Council on Disability. (2009). *The Current State of Health Care for People with Disabilities*. National Council on Disability.

<https://files.eric.ed.gov/fulltext/ED507726.pdf>

National Council on Disability. (2018, October 19). *NCD Letter regarding adding disability curriculum requirements into medical education*. National Council on Disability.

<https://ncd.gov/publications/2018/NCD-letter-disability-curriculum-requirements-into-medical-education>

National Council on Disability. (2019, December 12). *NCD LCME 2nd Response Letter*.

National Council on Disability. <https://ncd.gov/publications/2019/ncd-lcme-2nd-response-letter>

Nichols, A. D., Ward, R. L., Freedman, R. I., & Sarkissian, L. V. (2008). *Left Out in the Cold: Health Care Experiences of Adults with Intellectual and Developmental Disabilities in Massachusetts*. The Arc of Massachusetts.

<http://citeseerx.ist.psu.edu/viewdoc/download;jsessionid=236D89A6244CD51C4B5ACC F3A6AE62F3?doi=10.1.1.554.5480&rep=rep1&type=pdf>

Phillips, B. A., Fortney, A., Swafford, L. (2019). College Students' Social Perceptions Toward Individuals With Intellectual Disability. *Journal of Disability Policy Studies*, 30(1), 3-10.

<https://doi.org/10.1177/1044207318788891>

Prokup, J. A., Andridge, R., Havercamp, S. M., & Yang, E. A. (2017). Health Care Disparities of Ohioans With Developmental Disabilities Across the Lifespan. *The Annals of Family Medicine*, 15(5), 471-474. <https://doi.org/10.1370/afm.2108>

SANE. (2020). Healthy Living. SANE Australia. Retrieved March 30, 2021, from <https://www.sane.org/information-stories/facts-and-guides/healthy-living>

Seidel, E., & Crowe, S. (2017). The State of Disability Awareness in American Medical Schools. *American Journal of Physical Medicine & Rehabilitation*, 96(9), 673-676. <https://doi.org/10.1097/PHM.0000000000000719>

Symons, A. B., Morley, C. P., McGuigan, D., & Akl, E. A. (2014). A curriculum on care for people with disabilities: Effects on medical student self-reported attitudes and comfort level. *Disability and Health Journal*, 7(1), 88-95. <https://doi.org/10.1016/j.dhjo.2013.08.006>

Trollor, J. N., Ruffell, B., Tracy, J., Torr, J. J., Durvasula, S., Iacono, T., Eagleson, C., & Lennox, N. (2016). Intellectual disability health content within medical curriculum: an audit of what our future doctors are taught. *BMC medical education*, 16, 105. <https://doi.org/10.1186/s12909-016-0625-1>

Trollor, J.N., Eagleson, C., Turner, B., Tracy, J., Torr, J.J., Durvasula, S., Iacono, T., Cvejic, R.C., & Lennox, N. (2018). Intellectual disability content within tertiary medical curriculum: how is it taught and by whom? *BMC Medical Education*, 18(182), 1-10. 18:182 <https://doi.org/10.1186/s12909-018-1286-z>

U.S. News. (2019). *Best Physician Assistant Programs*. U.S. News & World Report. <https://www.usnews.com/best-graduate-schools/top-health-schools/physician-assistant->

[rankings](#)

U.S. News. (2021a). *Find the Best Medical Schools*. U.S. News & World Report.

<https://www.usnews.com/best-graduate-schools/top-medical-schools>

U.S. News. (2021b). *Find the Best Nursing Schools*. U.S. News & World Report.

<https://www.usnews.com/best-graduate-schools/top-nursing-schools>

VanPuymbrouck, L., Friedman, C., & Feldner, H. (2020). Explicit and implicit disability attitudes of healthcare providers. *Rehabilitation Psychology, 65*(2), 101-112.

<https://doi.org/10.1037/rep0000317>

Wilkinson, J., Dreyfus, D., Cerreto, M., & Bokhour, B. (2012). "Sometimes I Feel Overwhelmed": Educational Needs of Family Physicians Caring for People with Intellectual Disability. *Intellectual and Developmental Disabilities, 50*(3), 243-250.

<https://doi.org/10.1352/1934-9556-50.3.243>

Williamson, H. J., Contreras, G. M., Rodriguez, E. S., Smith, J. M., & Perkins, E. A. (2017). Health Care Access for Adults with Intellectual and Developmental Disabilities: A Scoping Review. *Occupational Therapy and Public Health, 37*(4), 227-236.

<https://doi.org/10.1177/1539449217714148>

Zablotsky, B., Black, L. I., Maenner, M. J., Schieve, L. A., Danielson, M. L., Bitsko, R. H., Blumberg, S. J., Kogan, M. D., & Boyle, C. A. (2019). Prevalence and Trends of Developmental Disabilities among Children in the United States: 2009-2017. *Pediatrics, 144*(4), 1-11.

<https://doi-org.argo.library.okstate.edu/10.1542/peds.2019-0811>

2021 ICD-10-CM Diagnosis Code F79. (2021). ICD10Data. Retrieved January 15, 2021, from

<https://www.icd10data.com/ICD10CM/Codes/F01-F99/F70-F79/F79-/F79>

Appendix A
Survey Questions

Q1. What is your name?

Q2. Which of the following best describes your program?

- A. Medical school
- B. Physician Assistant program
- C. Master's in Nursing program

Q3. Please list your university name.

Q4. What is the title of your position?

- A. Program director
- B. Program coordinator
- C. Director of admissions
- D. Director of education
- E. Staff member
- F. Faculty member

Q5. Does your program offer a course that covers the topic of developmental disabilities?

- A. Yes
- B. No
- C. Prefer not to answer

Q6. If you answered yes, is the content of this course primarily about developmental disabilities, or is developmental disabilities covered as a topic in a broader course?

- A. Specifically designed course for topic

- B. Covered in a broader course
- C. Not applicable
- D. Prefer not to answer

Q7. What is the title of the course in which developmental disabilities is covered?

Q8. Does your program offer clinical experiences with individuals with developmental disabilities?

- A. Yes
- B. No
- C. Prefer not to answer

Q9. If you answered yes, what kind of clinical experiences are offered? Select all that apply.

- A. Inpatient clinic
- B. Outpatient clinic
- C. Family practice clinic
- D. Rehabilitation clinic
- E. Pediatrics
- F. Adults
- G. Not applicable
- H. Prefer not to answer
- I. Other _____

Q10. Are there any plan changes to your curriculum related to developmental disabilities or other vulnerable populations?

- A. Yes
- B. No

C. Prefer not to answer

Q11. If you answered yes, please include a brief summary of the plans.

Q12. Is there anything else you think it is important for me to know about the curricula at your program regarding individual with developmental disabilities?

Appendix B

Original Email Sent to Sample

Hello,

I hope this email finds you well. My name is Camryn Chitty, I am a senior at Oklahoma State University, and I am conducting research for my honors thesis. I am surveying medical school/physician assistant /master's in nursing programs around the country on the presence of developmental disabilities in their classroom and clinical curricula. The survey is attached below and should only take five to ten minutes to complete. Your response is greatly appreciated, and I look forward to learning more about your program.

Insert survey link

Please reach out if you have any further questions. Thank you for your time!

Best,

Camryn Chitty

Appendix C

Follow-up Email Sent to Sample

Hello!

Thank you for taking the time to fill out my survey and assist in my research. Your completed response will help me better create a thesis that can lead to an implementation of this education in graduate health programs countrywide.

Finish your survey now

OR

Begin a new response

Insert survey link

Thank you so much for your time.

Best,

Camryn Chitty

Appendix D

Program type	University name	Title of position	Does your program offer a course that covers developmental disabilities?	If yes, is the content of this class primarily about developmental disabilities (DD) or is DD a topic in a broader course?	What is the title of the course in which developmental disabilities is covered?	Does your program offer clinical experiences with individual with developmental disabilities?	If yes, what kind of clinical experiences are offered?	Are there any plans to change your curriculum related to developmental disabilities?
Master's in Nursing program	University of Virginia	Faculty member	Yes	Covered in a broader course	NP Seminar	Yes	Inpatient clinic, outpatient clinic, family practice clinic, & pediatrics	No
Physician Assistant program	Northeastern University	Faculty member	No	N/A	N/A	Yes	Inpatient clinic, outpatient clinic, family practice clinic, & pediatrics	Yes
Master's in Nursing program	University of Maryland	Faculty member	Yes	Covered in a broader course	Adult Health, Pediatrics & Psych	Yes	Inpatient clinic, outpatient clinic, & pediatrics	No
Master's in Nursing program	N/A	Faculty member	Yes	Covered in a broader course	N/A	Yes	Inpatient clinic, outpatient clinic, family practice clinic, rehabilitation center, & pediatrics	Yes
Medical school	University of Pittsburgh	Director of education	Yes	Covered in a broader course	Introduction to Psychiatry	Yes	Inpatient clinic, outpatient clinic, pediatrics, & adults	No
Physician Assistant program	Oklahoma City University	Faculty member	Yes	Covered in a broader course	Pediatrics	No	N/A	No