Assignment 3 – Journal & Annotated Bibliography

Elizabeth Margaret Shivers
jshivers3@gatech.edu

***Abstract*—**Every year medical providers are required to participate in Continuing Medical Education (CME) to maintain their licenses. Educational Technology is providing an avenue for delivering CME content effectively and efficiently. At the same time, the need for increased medical provider knowledge regarding both medical and cultural aspects of care for patients who are Transgender or Nonbinary has not been addressed. The goal of this project is to develop Transgender and Nonbinary CME content, utilizing Educational Technology to address a rapidly changing landscape of care for these patients as well as address key cultural knowledge that is often omitted from purely technical areas of education, improving overall provider knowledge and, as a result, quality of care.

1 JOURNAL

This week will be focused on developing content and using the annotated bibliography to help begin to organize the resources into a manner that can be directly traced back to areas of content.

First however, I should note the following: I have decided to abbreviate my original statement of content coverage from "Transgender, Nonbinary, and Genderqueer" to "Transgender and Nonbinary". Genderqueer will be spoken of explicitly as potentially distinct in the Nonbinary section of the material, and an effort will still be made to give context to Genderqueer identities held by people who do not also hold themselves to be Nonbinary. The rationale for this change is mostly academic in nature, in that there is not literature able to support extensive Genderqueer content development. In contrast, generally speaking, Nonbinary provides a mostly acceptable broader umbrella terminology that can be more concretely discussed within the scope and resources of this project. As part of the documentation for this project, I will recommend that this be addressed in future content development, alongside adding coverage for Gender

Nonconforming individuals and any other identified groups who fall outside of sex/gender norms.

Before jumping in, I will also mention that, in a stroke of fortune, I attended a transgender social group the Saturday prior to writing this journal. There I met another transgender woman who is a graduate student at KSU working on a master's in social working, focusing on Transgender care. She provided me with a copy of a paper she is seeking to have published on puberty blockers and HRT. While the paper itself unfortunately cannot be cited academically as of yet, the extensive resources she has brought together to support her work may prove invaluable in supporting parts of my own content. I hope to have the opportunity to speak with her further about this project to receive feedback and direction.

Given that the Annotated Bibliography will fully summarize the papers looked at this week, I will keep my journal narrative on their content on the brief side and delve a bit more into topics such as rationale for my approach.

1.1 Sexual Health

The first stop was looking into sexual health, as this is easily the most documented area of transgender care. The first article [1] reviewed covered Trans Men, a welcome find given that many studies that focus on a specific group of trans people will follow Trans Women. A second article [2] provided a very stark analysis of young transgender women, age 16-29 in Boston and Chicago, particularly as it relates to HIV status. This study alone could occupy this entire journal. The most notable findings were that 53% had engaged in transactional sex and also 53% had been or are homeless. Ability to access care was a surprisingly positive (relatively speaking) finding in the study however, as only 20% reported that their gender identity had been a barrier to receiving care—though I suspect this number is largely because the study was done in traditionally more accepting urban environments, at least one of which (Boston) has a notable transgender population.

1.2 Discrimination in Healthcare and Tyra Hunter

Thinking about this study and what it means for the vulnerability of the transgender population, I decided to take a detour to gather resources on one particular story I want to tell in this course material above all else: the death of Tyra Hunter. This story is one that has shook the transgender community for 25

years and encapsulates our largest fears when turning to the medical community. In 1995, 24-year-old African American transgender woman Tyra Hunter was a passenger during a severe car crash. When the first respondents begun working on her at the scene, they cut away her clothes and discovered she had a penis. They immediately stopped working to save her life, and witnesses say they watched her choke on her own blood while the people supposed to be saving her life stood aside and cruelly mocked her. Eventually a supervisor arrived, and she was taken to the ER. There, the physician on duty refused to give her care. Tyra Hunter died shortly after. An independent examiner found she had an 86% chance of survival had she received even the slightest bit of care [3]. I don't have any academic journals or major news outlets to cite for the full story. There are WordPress blogs, wiki entries, and lamentative poetry. The stories exist almost exclusively in the LGBTQ press. Yet, the partial stories in the immediate aftermath in papers such as the Washington Post speak volumes on a different issue, committing continuous indignity to Tyra even in death. Over the span of multiple articles and authors, they fail to gender Tyra Hunter correctly even once, and repeatedly refer to her as a man in women's clothing [4][5]. Verified and poignant details from the court case are left out, and the stories are designed around a sympathetic narrative solely for her mother. Tyra's story will be my opening. Not for the sake of melodrama, certainly there is no place for that in a professional CME course, but as a clear and succinct statement of the problem, and why this content matters. Sadly, as the first article I cite in this part of the journal shows in conjunction with the many references I have located for needfinding purposes, not that much has changed [3].

1.3 Surgical Procedures

To be frank, I found the previous are of research distressing. As such, I shifted gears dramatically to find refuge in (hopefully) drier medical papers. The first of such was a very affirming piece found in JAMA, "What Surgeons Need to Know About Gender Confirmation Surgery When Providing Care for Transgender Individuals A Review" [6]. This article alone directly addresses the larger picture for discussion of options for medical intervention, though I do wish they had addressed alternatives to WPATH guidelines (the standards of care section of this journal explains WPATH). The second piece I located of relevance directly addressed Facial Feminization Surgery, describing procedures and surveying patient satisfaction and surgical results [7].

1.4 Standards of Care

An important facet to transgender healthcare are the different established standards of care. WPATH is the World Professional Association for Transgender Health, which sets likely the most commonly followed standard of care, considered to be a relatively moderate one [10]. There are a few points of contention with WPATH, one of which is that their current standards of care, version 7, was published in 2012 [10]—a veritable lifetime away in knowledge of transgender healthcare. This can be seen with the WPATH recommendations on therapy or other requirements that are often deemed to be "gatekeeping", including requirements for letters from psychiatrists to be eligible for medical interventions.

Gatekeeping is the act of a third party deciding who is or is not transgender or creating an undue burden to receive care. For instance, mental health care is often expensive, and providers are rarely well versed in gender identity. This severely limits access to transitional care both on the merits of geography and finances, and disproportionately disenfranchises the most vulnerable. Medical gatekeeping often comes in the form of provider preconceptions about what it means to be transgender, as well as adherence to gender norms. In one narrative from the AMA Journal of Ethics, a transgender man discusses his encounter starting HRT, in which a physician—who was fully prepared to provide HRT in the first place and seemingly not hostile to transgender interests—cancelled his HRT upon learning that the author, Ryan Sallans, had no intention to seek GCS [8]. This is a common narrative in the community, with numerous stories of people playing into stereotypes, such as transgender women dressing excessively feminine or even claiming to be heterosexual (attracted to men) to play to provider perceptions on gender norms and being transgender to receive care, playing into the cliché of "a girl trapped in a man's body". In reality, as studies mentioned herein have shown, transgender people are more likely to have queer sexualities in addition to being transgender, which often matches presentation.

There is a growing push by patients and some providers to follow an Informed Consent model, which is intended to remove barriers and increase access [9]. Unfortunately, some standards around the world are far more arduous than WPATH, such as those employed by the UK's NIH gender clinics which includes requiring people to socially transition full time for over a year (referred to as Real Life Experience), prior to even being able to receive HRT. Without the physical

effects and mental stabilization associated with HRT, this is often seen as an insurmountable barrier, and results in leaving people terrified to even attempt transition. Informed consent is followed by an increasing number of GPs specializing in transgender healthcare as well as organizations such as Planned Parenthood. Informed consent involves informing a patient considered legally component about the risks and benefits of transitional care and trusting their judgment [9].

To put a fine point on the issues discussed in this section, I will close it with a quote from an article in the AMA Journal of Ethics on Informed Consent that I believe pulls everything together quite nicely [9].

> As a result of the historic practice of close scrutiny of transgender patients seeking medical care and the discomfort of clinicians and society with gender identity diversity, patients might nonetheless still present a stereotypical narrative in a discussion of informed consent with a prescribing clinician and seek to say the "right words" necessary to ensure a prescription for hormones or another desired intervention. The informed consent model renders this subterfuge unnecessary. [9]

1.5 Hormone Replacement Therapy

Hormone Therapy is the most common form of medical intervention transgender and potentially nonbinary people seek. The first article located discusses both expected and unexpected general blood work results from Hormone Therapy on Transgender Women/Transfeminine patients [11]. The second article provided a more rote series of suggestions from WPATH and the Endocrine Society, providing general guidelines on medications and dosing involved in HRT [13]. I should note that I hope to find alternative sources here however, as the doses listed are 50% lower than is typical and seem to be overly conservative. This is perhaps unsurprising given the source. Nonetheless, an academic source is important. I will likely pull the Endocrine Society's latest recommendations directly for content development.

1.6 Nonbinary Care

It has proven far more difficult to find articles addressing the nonbinary experience than that on binary transgender people. As such, I opted to end this week by explicitly focusing on nonbinary issues. The first article I located of value

discussed nonbinary patient experiences, and unsurprisingly they found patients had unique difficulty in even gender affirming settings, which failed to differentiate them from binary trans individuals [12]. The next article showed similar issues and documented increased odds of poor mental health and non-suicidal self-harm [14]. The final article for the week provided an excellent sourcing for describing different nonbinary terminologies, as well as general estimates of the nonbinary population [15]. Though I have some serious concerns about aspects of the paper and their terminology use and would like to do more research on their sources in turn to consider their methodology. Unfortunately, there is little data I have located on this topic, and I might not have many options but this article.

Moving forward, I will continue to source content as I begin building it out in preparation for the next phase of the project assignments. Content layout is already underway in an attempt to guide research areas, though I may have gotten ahead of myself a bit as I have not yet laid out a clear development plan. Depending on what the next weeks have in store, I will hopefully be able to set a clear development plan in place to follow over the course of the semester.

2 ANNOTATED BIBLIOGRAPHY

This bibliography is divided into several categories: Needfinding, Content Development or Support, and Educational Concepts and Theories. The Needfinding category provides academic support in identifying failures in the healthcare industry in regards to Transgender and Nonbinary care, though may have additional purposes in supporting content. Educational Concepts and Theories is a catchall for items relating to pedagogy, educational tools, CME, and any other article that is not directly related to needfinding or content.

2.1 Needfinding

Deborah Mcphail, Marina Rountree-James, and Ian Whetter. "Addressing Gaps in Physician Knowledge regarding Transgender Health and Healthcare through Medical Education." Canadian Medical Education Journal 7.2 (2016): 70-78. Web.

This article provides a review of other research and identifies both lack of knowledge and Transphobia as barriers to patient care. In many cases,

transgender patients are forced to specialty clinics to receive even fairly simple care such as for Hormone Replacement Therapy. The respondents to the paper's research offered a number of areas of valuable insight, particularly about encountering probing, purely curiosity driven questions from physicians about their genitals, which was regarded as hurtful and othering as with more obvious discriminatory beliefs. Of particular concern was discrimination faced during ER visits, which resulted in potentially dangerous outcomes.

Kcomt, L. (2018). Profound health-care discrimination experienced by transgender people: rapid systematic review. ***Social Work in Health Care*****, *58*(2), 201–219. doi: 10.1080/00981389.2018.1532941**

This is another major review of existing literature, delving into a bit broader array of studies, such as those that included LGB as well as questioning and intersex people. The results studying the transgender respondents showed a median of 27% of transgender people had been denied care by a medical provider and were three times as likely to be denied care than sexual minorities. A median of 35% had encountered issues where they were forced to inform their providers with information due to provider lack of knowledge. This is the only study I've seen that offered the data that transgender patients were twice as likely (7.8%) to be abused by a medical provider.

Safer, J., & Pearce, E. (2013). A Simple Curriculum Content Change Increased Medical Student Comfort with Transgender Medicine. ***Endocrine Practice*****, *19*(4), 633–637. doi: 10.4158/ep13014.or**

While not directly related to CME, this article helps establish that even minor changes in curriculum—that is, additional education—can greatly improve medical student's comfort with treating transgender patients. The study touches upon the roots of the discomfort, which likely also apply to current medical providers, including misconceptions about what it means to be transgender. Perhaps most notably, students had "anxiety about the legitimacy, complexity, and safety of interventions." By being provided proper context, and addressing misconceptions, the students showed a 67% decrease in their reported discomfort. In addition to providing justification for this project, this can also be used to explain to medical providers that such misconceptions do exist and are in fact seemingly common.

2.2 Content Development or Support

Bauer, G. R., Redman, N., Bradley, K., & Scheim, A. I. (2013). Sexual Health of Trans Men Who Are Gay, Bisexual, or Who Have Sex with Men: Results from Ontario, Canada. ***The international journal of transgenderism*****, *14*(2), 66–74. doi:10.1080/15532739.2013.791650**

This article focuses on Trans Men, who are historically ignored in research in comparison to Transgender women. While the focus is on sexual health, it also provides a broader survey of sexual orientation, a point which I wish to in the content unit on sexuality to dispel misconceptions about who transgender people date. Many times, the assumption by the general populace is that trans people are straight (that is, attracted to their sex assigned at birth), yet this study shows that roughly 2/3rds of trans men are gay, bi/pan, or another queer sexuality. The core of the study however also will play a role in content development, as it discusses relative HIV risk, as well as going into detail about sexual satisfaction and body image.

Berli, J. U., Knudson, G., Fraser, L., Tangpricha, V., Ettner, R., Ettner, F. M., … Schechter, L. (2017). What Surgeons Need to Know About Gender Confirmation Surgery When Providing Care for Transgender Individuals. JAMA Surgery, 152(4), 394. doi: 10.1001/jamasurg.2016.5549

This journal article summarizes a few key points for content creation. It delves into the history of care to some degree and mentions a few key points in time in transgender healthcare. The core of the article delves into the positive effects of surgeries, not limited to what is now commonly termed GCS. It additionally provides a number of important references into defining the technical aspects of different surgeries, along with a very high-level terminology primer. The most notable point in the article is the following: "[Gender dysphoria] is not a pathological state, but instead is a condition of distress."

Clark, B. A., Veale, J. F., Townsend, M., Frohard-Dourlent, H., & Saewyc, E. (2018). Non-binary youth: Access to gender-affirming primary health care. ***International Journal of Transgenderism*****, *19*(2), 158–169. doi: 10.1080/15532739.2017.1394954**

This is one of the few pieces to focus on exclusively nonbinary and genderqueer experiences. It discusses general barriers to care, primarily lack of provider experience even in otherwise gender affirming settings. It also discusses some key aspects of nonbinary care that are difficult to source, such as that patients may require "low dose hormones or temporary use of hormones in order to bring their body into alignment with their gender." Nonbinary patients were also shown to have notably worse mental health reported, and 62% increased chance of non-suicidal self-harm (i.e. cutting).

Christina Richards, Walter Pierre Bouman, Leighton Seal, Meg John Barker, Timo O. Nieder & Guy T'Sjoen (2016) Non-binary or genderqueer genders, International Review of Psychiatry, 28:1, 95-102, DOI: 10.3109/09540261.2015.1106446

This was the strongest article I located that acted as a sort of primer on nonbinary and genderqueer identities, and parts of it can certainly be used to support sourcing content in the relevant education unit. The authors begin by providing important distinctions between different nonbinary identities and summarize the general issues people have looking outside of binary gender. It discusses two surveys that have attempted to estimate the general population of nonbinary individuals, though I have concerns with the methodology utilized in those studies. Nonetheless, they believe the rate is 1.8% in people assigned male at birth and 4.1% in people assigned female at birth. Other surveys discussed showed between a 13% to 25% rate of people who identify as transgender who also identify as nonbinary.

Goldhammer, H., Malina, S., & Keuroghlian, A. S. (2018). Communicating With Patients Who Have Nonbinary Gender Identities. *The Annals of Family Medicine*, *16*(6), 559–562. doi: 10.1370/afm.2321

This piece covers general recommendations for providers when communicating with nonbinary patients by walking through a case scenario. For instance, staff avoids any use of gendered terminology. The intake form should provide phrasing such as "sex assigned at birth" rather than straight forward "sex" or "gender" questions, preferred name fields, and pronoun selection—keeping this last point from being tied to legal sex/gender is particularly important.) Additionally, the paper discusses a few common terminologies, and unlike any other I have found

delves into the topic of neopronouns—pronouns which are intended to represent an individual outside of the binary while also not relying on generic genderless pronouns such as they/them or it/its.

Harry Jin, Arjee Restar, Katie Biello, Lisa Kuhns, Sari Reisner, Robert Garofalo & Matthew J. Mimiaga (2019) Burden of HIV among young transgender women: factors associated with HIV infection and HIV treatment engagement, AIDS Care, 31:1, 125-130, DOI: 10.1080/09540121.2018.1539213

This article provides a wealth of information to pull from with regards to content for several areas. It surveys young transgender women (n=298), with young defined as age 16-29, focusing on HIV infection and treatment, in Chicago and Boston. The primary statistic in the study is identification of a 25% HIV infection rate, with less than 50% of infected respondents adhering to Antiretroviral Therapy (ART). Additional major findings included: 1) Less than 8% with a college degree. 2) 46% with a household income of less than $10,000. 3) 25% experienced homelessness in the past 4 months, with 53% experiencing homelessness at any time. 4) 52% engaged in transactional sex.

Informed Consent in the Medical Care of Transgender and Gender-Nonconforming Patients. (2016). AMA Journal of Ethics, 18(11), 1147–1155. doi: 10.1001/journalofethics.2016.18.11.sect1-1611

This provides a general overview of standards of care, including WPATH as a comparison, with a focus on the informed consent model. Importantly, it defines the limit of informed consent ("[it] is not 'hormones on command'"). Another notable thread is the view from patients on the issue, based on the distrust of the medical community, particularly mental health providers. It also delves into insurance coverage and requirements for coverage in terms of these models. This will provide a few key points of content, particularly as it can be largely used as a primary support in explaining the informed consent model to providers.

Kattari, Shanna K. ""Getting It": Identity and Sexual Communication for Sexual and Gender Minorities with Physical Disabilities." Sexuality and Culture 19.4 (2015): 882. Web.

This is a complex look into people with disabilities and the intersection with being LGBTQ along with sexual kink (i.e. BDSM). In particular, the topic of using kink

as a means of communication, and affirmation, is important. While seemingly not a topic for medical consideration, it may have large implications in mental health care and in aiding in cultural understanding of sexual minorities in general. A major takeaway was the role of communication involved in kink/BDSM that negotiated around disability, and how those with disabilities who were LGBTQ connected their experiences.

Lessons from a Transgender Patient for Health Care Professionals. (2016). AMA Journal of Ethics, 18(11), 1139–1146. doi: 10.1001/journalofethics.2016.18.11.mnar1-1611

This is a narrative from a transgender patient, Ryan Sallans, published in the AMA Journal of Ethics, specializing in the topic of transgender health education. Mr. Sallans details a number of lessons they have learned and try to impart to medical providers. These largely deal with speaking with transgender patients, understanding each an individual, as well as imploring people to curb demeaning talk from others, though it is not limited to these points. Each of the lessons Mr. Sallans imparts is a vital part of the content for this project.

Lykens, J. E., Leblanc, A. J., & Bockting, W. O. (2018). Healthcare Experiences Among Young Adults Who Identify as Genderqueer or Nonbinary. *LGBT Health*, 5(3), 191–196. doi: 10.1089/lgbt.2017.0215

This is one of the few sources of nonbinary and genderqueer perspectives I located. The researchers interviewed 10 participants extensively, providing an in depth look at each as individuals. They then analyzed the results, and came to some major points of shared experience. Poignantly, this includes nonbinary patients who do not identify as transgender "borrowing" the transgender label in order to receive improved care. This reflects the core finding in that many, even gender affirming providers, still lack understanding of nonbinary identities. This will hopefully provide some supporting material for the section of content on nonbinary individuals, further reinforcing that even providers who are mindful of transgender issues should expand their knowledge of nonbinary and genderqueer care.

Maragh-Bass, A. C., Torain, M., Adler, R., Ranjit, A., Schneider, E., Shields, R. Y., … Haider, A. H. (2017). Is It Okay To Ask: Transgender Patient Perspectives on Sexual Orientation and Gender Identity Collection in Healthcare. ***Academic Emergency Medicine*****, *24*(6), 655–667. doi: 10.1111/acem.13182**

This study samples a group of transgender patients on their experience with disclosure of sexual orientation and gender identity to medical providers. This is a unique piece, addressing a topic usually spoken of anecdotally within the transgender community than addressed elsewhere. To summarize, they found that transgender people were largely fine disclosing that information in a primary care setting, but far less likely to in an emergency care setting. This plays directly to a point I wish to address in the content for the course, in that it should be up to the patient to disclose either gender identity or sexual orientation unless it is expressly relevant to the practice at hand, as it is considered to be othering compared to how cis patients are addressed.

Roberts, T. K., Kraft, C. S., French, D., Ji, W., Wu, A. H., Tangpricha, V., & Fantz, C. R. (2014). Interpreting Laboratory Results in Transgender Patients on Hormone Therapy. The American Journal of Medicine, 127(2), 159–162. doi: 10.1016/j.amjmed.2013.10.009

One core area of content is providing general recommendations for approaching lab results, and this article addresses that well. This is not about hormone levels, but about lab work in general. It observes "consistent changes" in some measured levels for transgender patients undergoing hormone therapy (assigned male at birth undergoing Estrogen therapy). Some results matched male range, others female ranges. Still yet other results were expected based on the effect of estrogen therapy on postmenopausal cis women and the effects of Spironolactone. Oddly, Creatinine and ALP showed very unexpected results unique to trans feminine patients. The paper recommends empirically establishing new references ranges to avoid risk of error.

Romanelli, M., Lu, W., & Lindsey, M. A. (2018). Examining Mechanisms and Moderators of the Relationship Between Discriminatory Health Care Encounters and Attempted Suicide Among U.S. Transgender Help-Seekers. ***Administration and Policy in Mental Health and Mental Health Services Research*****, *45*(6), 831–849. doi: 10.1007/s10488-018-0868-8**

This article covers the complex relationship between discrimination in healthcare, substance use, support systems, and attempted suicide rates among transgender individuals. As with similar studies, the findings were stark, with a lifetime suicide attempt rate of 45%. It also provides hard numbers on issues such as denial of service. 22% of transgender patients had been denied service at a doctor's office, 13% at an emergency room, and 11% at a mental health clinic. This will hopefully be able to place discrimination into hard numbers in the content for those who may question the existence of the problem.

Thomas, J. P., & Macmillan, C. (2013). Feminization laryngoplasty: assessment of surgical pitch elevation. ***European Archives of Oto-Rhino-Laryngology*****, *270*(10), 2695–2700. doi: 10.1007/s00405-013-2511-3**

This study discusses the changes due to vocal surgery for transgender women in order to feminize voice by raising pitch. They found that the average comfortable speaking voice was raised from 139 Hz to 196 Hz. The provided mean reference range for cis women was 196 Hz to 224 Hz, with a total range of 145 Hz to 275 Hz. This places the post-operative range into the low end of mean for cis women, well above the typical bottom range. This will be a raw data reference in the project content for the related section.

Twenty Years After Tyra Hunter's Death, LGBT People Are Still Waiting For Basic Protections. (2015, August 7). Retrieved from https://genprogress.org/on-20th-anniversary-of-tyra-hunters-death-lgbt-people-are-still-waiting-for-basic-protections/

This article begins by summarizing the findings related to the death of Tyra Hunter in 1995 due to medical malfeasance, with a report stating if she had received basic care, she would have had an 86% chance of survival. It then goes to discuss broader LGBTQ discrimination as well and cites two important figures: Nearly 56% of Lesbian, Gay, or Bisexual people faced discrimination in

healthcare, and 70% of Transgender people had. The article discusses both the lack of protections available as well as some areas of progress, though this is largely dated due to numerous directives and pieces of legislation pushed in the interim.

Unger, C. A. (2016). Hormone therapy for transgender patients. *Translational Andrology and Urology*, 5(6), 877–884. doi: 10.21037/tau.2016.09.04

This article provides general guidelines for hormone therapy for transgender men and women (or trans masc/fem nonbinary individuals). Recommendations on type of medications to prescribe, WPATH and Endocrine Society recommended dosages, and so forth are included. It's worth noting that many providers believe these standards are too conservative, though it is still important information to provide for participants in the CME course who are cautious about going too far on their own with hormone replacement therapy. The article also briefly describes the expected (or rather, typical) results from HRT.

What does the scholarly research say about the effect of gender transition on transgender well-being? (n.d.). Retrieved from https://whatweknow.inequality.cornell.edu/topics/lgbt-equality/what-does-the-scholarly-research-say-about-the-well-being-of-transgender-people/

This paper from Cornell's What We Know project summarizes findings from 72 other studies on the outcome of gender transition on the well being of transgender patients. They found a "robust international consensus" that transition is a positive impact on the lives of transgender patients, alleviating dysphoria. Additionally, it seems as though the positive effect has grown over the years as the medicine has improved. It also reinforces other well-established statistics on the other side, documenting the negative impacts of being able to receive care or encountering "unsupportive environments".

Wpath. (n.d.). Standards of Care version 7. Retrieved from https://wpath.org/publications/soc

This reference is the official World Professional Association of Transgender Health version 7, published in 2012. WPATH is an international organization specializing in transgender care, including publishing a (somewhat horrifically titled) journal on the topic. The standards here are too in depth to summarize

neatly, though the most important piece of information is that Psychiatric evaluation is required for referral to receive all transitional care, including HRT. There will be numerous points requiring direct reference to the WPATH SOC in the content, and regardless of consent models it still offers important insight into the care itself.

2.3 Educational Concepts and Theories

Armstrong, E., & Parsa-Parsi, R. (2005). How Can Physicians Learning Styles Drive Educational Planning? Academic Medicine, 80(7), 680–684. doi: 10.1097/00001888-200507000-00013

This is one of the most in-depth looks at educational approach for physicians, proposing what they believe is the most effective approach to education. They cite that "new knowledge does not necessarily lead to new behavior", which ultimately undermines the value of the education. They lay out a four-part design approach meant to address all areas of learning and discuss how it can be applied at all levels including CME. I am hopeful this approach may provide some insight into potential avenues of course design not previously considered, though project resources may limit options in this regard.

Canchihuaman, F.A, P.J Garcia, and K.K Holmes. "Designing of a Multicomponent Internet-Based CME Course in the Management of Sexually Transmitted Diseases for Physicians and Midwives in Peru." International Journal of Infectious Diseases 12.S1 (2008): E184. Web.

This was a simple article discussing the results of the development of an online CME designed to deliver specialized knowledge to a developing area of Peru, regarding the treatment of STDs/STIs. The researchers only vaguely document the development of the CME material itself. When surveying the participants, they found overwhelming favorability for the course and its potential impact on care. This is mostly relevant in that it provides justification for this project being developed as online CME, and proving the effectiveness in an area of particular concern, as some of the largest issues with discrimination often occur in rural areas from which diverse CME is accessible.

Rosof, A. B. (1992). Continuing medical education: a primer. New York: Praeger.

This book provides what is the standard on CME. While it predates modern online CME, it nonetheless provides numerous recommendations on structure and approach, much of which will become applicable should I seek accreditation later. One of the biggest takeaways is in the chapter on peer review, which deals heavily with accountability. The most directly useful section of the book is in the area of design, which I will be following to ensure the proper approach throughout development of this project. The "traditional" approach of content delivery, which I intend to use, is laid out simply.

Thepwongsa, I., Kirby, C., Schattner, P., & Piterman, L. (2014). Online continuing medical education (CME) for GPs: does it work? A systematic review. *Australian Family Physician*, *43*(10), 717–721.

This study provides a general look into the effectiveness of online Continuing Medical Education, through "assessing changes in GPs' knowledge and practice, or patient outcomes following an online educational intervention." The study found a few key points that support the development of this project, though does not really offer any guidelines as to approach. Nonetheless, the results found were positive for the areas they addressed, including showing satisfaction on the part of General Practitioners with online CME. While no improvement over traditional CME was shown, this is mostly irrelevant as the focus of this project is accessibility.

3 REFERENCES

All numerical citations reference the articles listed under "New References". The Compiled references section is provided for the sake of completeness in regards to the Annotated Bibliography and are not directly cited in this paper except for as part of the Bibliography.

3.1 New References

1. Bauer, G. R., Redman, N., Bradley, K., & Scheim, A. I. (2013). Sexual Health of Trans Men Who Are Gay, Bisexual, or Who Have Sex with Men: Results from Ontario, Canada. *The international journal of transgenderism*, *14*(2), 66–74. doi:10.1080/15532739.2013.791650
2. Harry Jin, Arjee Restar, Katie Biello, Lisa Kuhns, Sari Reisner, Robert Garofalo & Matthew J. Mimiaga (2019) Burden of HIV among young transgender

women: factors associated with HIV infection and HIV treatment engagement, AIDS Care, 31:1, 125-130, DOI: 10.1080/09540121.2018.1539213

3. Twenty Years After Tyra Hunter's Death, LGBT People Are Still Waiting For Basic Protections. (2015, August 7). Retrieved from https://genprogress.org/on-20th-anniversary-of-tyra-hunters-death-lgbt-people-are-still-waiting-for-basic-protections/
4. Bowles, S. (1995, December 10). A DEATH ROBBED OF DIGNITY MOBILIZES A COMMUNITY. Retrieved from https://www.washingtonpost.com/archive/local/1995/12/10/a-death-robbed-of-dignity-mobilizes-a-community/2ca40566-9d67-47a2-80f2-e5756b2753a6/
5. Fern, M. E., & Ez. (1998, December 12). DEATH SUIT COSTS CITY $2.9 MILLION. Retrieved from https://www.washingtonpost.com/archive/local/1998/12/12/death-suit-costs-city-29-million/b8ab4d34-1907-463c-b5d5-64ec00dee2a1/
6. Berli, J. U., Knudson, G., Fraser, L., Tangpricha, V., Ettner, R., Ettner, F. M., … Schechter, L. (2017). What Surgeons Need to Know About Gender Confirmation Surgery When Providing Care for Transgender Indi-viduals. JAMA Surgery, 152(4), 394. doi: 10.1001/jamasurg.2016.5549
7. Capitán, L., Simon, D., Kaye, K., & Tenorio, T. (2014). Facial Feminization Surgery. *Plastic and Reconstructive Surgery*, *134*(4), 609–619. doi: 10.1097/prs.0000000000000545
8. Lessons from a Transgender Patient for Health Care Professionals. (2016). *AMA Journal of Ethics*, *18*(11), 1139–1146. doi: 10.1001/journalofethics.2016.18.11.mnar1-1611
9. Informed Consent in the Medical Care of Transgender and Gender-Nonconforming Patients. (2016). *AMA Journal of Ethics*, *18*(11), 1147–1155. doi: 10.1001/journalofethics.2016.18.11.sect1-1611
10. Wpath. (n.d.). Standards of Care version 7. Retrieved from https://wpath.org/publications/soc
11. Roberts, T. K., Kraft, C. S., French, D., Ji, W., Wu, A. H., Tangpricha, V., & Fantz, C. R. (2014). Interpreting Laboratory Results in Transgender Patients on Hormone Therapy. *The American Journal of Medicine*, *127*(2), 159–162. doi: 10.1016/j.amjmed.2013.10.009
12. Lykens, J. E., Leblanc, A. J., & Bockting, W. O. (2018). Healthcare Experiences Among Young Adults Who Identify as Genderqueer or Nonbinary. *LGBT Health*, *5*(3), 191–196. doi: 10.1089/lgbt.2017.0215

13. Unger, C. A. (2016). Hormone therapy for transgender patients. *Translational Andrology and Urology*, *5*(6), 877–884. doi: 10.21037/tau.2016.09.04
14. Clark, B. A., Veale, J. F., Townsend, M., Frohard-Dourlent, H., & Saewyc, E. (2018). Non-binary youth: Access to gender-affirming primary health care. International Journal of Transgenderism, 19(2), 158–169. doi: 10.1080/15532739.2017.1394954
15. Christina Richards, Walter Pierre Bouman, Leighton Seal, Meg John Barker, Timo O. Nieder & Guy T'Sjoen (2016) Non-binary or genderqueer genders, International Review of Psychiatry, 28:1, 95-102, DOI: 10.3109/09540261.2015.1106446
16. Armstrong, E., & Parsa-Parsi, R. (2005). How Can Physicians??? Learning Styles Drive Educational Planning? *Academic Medicine*, *80*(7), 680–684. doi: 10.1097/00001888-200507000-00013
17. Kattari, Shanna K. ""Getting It": Identity and Sexual Communication for Sexual and Gender Minorities with Physical Disabilities." Sexuality and Culture 19.4 (2015): 882. Web.
18. Thomas, J. P., & Macmillan, C. (2013). Feminization laryngoplasty: assessment of surgical pitch elevation. *European Archives of Oto-Rhino-Laryngology*, *270*(10), 2695–2700. doi: 10.1007/s00405-013-2511-3

3.2 Compiled References from Assignment 1 & 2

19. Thepwongsa, I., Kirby, C., Schattner, P., & Piterman, L. (2014). Online continuing medical education (CME) for GPs: does it work? A systematic review. *Australian Family Physician*, *43*(10), 717–721.
20. Sinclair, P., Kable, A., & Levett-Jones, T. (2015). The effectiveness of internet-based e-learning on clinician behavior and patient outcomes: a systematic review protocol. *JBI Database of Systematic Reviews and Implementation Reports*, *13*(1), 52–64. doi: 10.11124/jbisrir-2015-1919
21. Lineker, S., Fleet, L., Bell, M., Sweezie, R., Curran, V., Brock, G., & Badley, E. (2019). Getting a Grip on Arthritis Online: Responses of rural/remote primary care providers to a web-based continuing medical education programme. *Canadian Journal of Rural Medicine*, *24*(2), 52. doi: 10.4103/cjrm.cjrm_10_18
22. Canchihuaman, F.A, P.J Garcia, and K.K Holmes. "Designing of a Multicomponent Internet-Based CME Course in the Management of Sexually Transmitted Diseases for Physicians and Midwives in Peru." International Journal of Infectious Diseases 12.S1 (2008): E184. Web.

23. Bonevski, B., Magin, P., Horton, G., Bryant, J., Randell, M., & Kimlin, M. (2015). An internet based approach to improve general practitioners' knowledge and practices: The development and pilot testing of the "ABCs of vitamin D" program. *International Journal of Medical Informatics*, *84*(6), 413–422. doi: 10.1016/j.ijmedinf.2015.01.006
24. Goodyear-Smith, F., Whitehorn, M., & Mccormick, R. (2003). General Practitioners Perceptions of Continuing Medical Educations Role in Changing Behaviour. *Education for Health: Change in Learning & Practice*, *16*(3), 328–338. doi: 10.1080/13576280310001607659
25. Cervantes, A. (2009). Continuing medical education (CME) or continuing professional development (CPD): a need, a challenge, but also a must. Clinical and Translational Oncology, 11(4), 189–190. doi: 10.1007/s12094-009-0338-6
26. Armstrong, E., & Parsa-Parsi, R. (2005). How Can Physicians Learning Styles Drive Educational Planning? *Academic Medicine*, *80*(7), 680–684. doi: 10.1097/00001888-200507000-00013
27. Lewis, A. P. (n.d.). General practitioners and their learning styles. *The Journal of the Royal College of General Practitioners 1989*, *39*(322), 187–189.
28. Vanvoorhees, C., Wolf, F. M., Gruppen, L. D., & Stross, J. K. (1988). Learning styles and continuing medical education. *Journal of Continuing Education in the Health Professions*, *8*(4), 257–265. doi: 10.1002/chp.4750080403
29. Hubackova, S., & Klimova, B. F. (2013). Pedagogical Aspects of eLearning. Language On-line Course and Issues of Learning Styles. Procedia - Social and Behavioral Sciences, 93, 1095–1098. doi: 10.1016/j.sbspro.2013.09.337
30. Filipe, H. P., Silva, E. D., Stulting, A. A., & Golnik, K. C. (2014). Continuing professional development: best practices. Middle East African journal of ophthalmology, 21(2), 134–141. doi:10.4103/0974-9233.129760
31. Finogeev, A., Kravets, A., Deev, M., Bershadsky, A., & Gamidullaeva, L. (2018). Life-cycle management of educational programs and resources in a smart learning environment. Smart Learning Environments, 5(1). doi: 10.1186/s40561-018-0055-0
32. Harwood, T., & Clarke, J. (2006). Grounding continuous professional development (CPD) in teaching practice: Journal of the association for programmed learning ETTI. Innovations in Education and Teaching International, 43(1), 29-39. Retrieved from http://prx.library.gatech.edu/login?url=https://search-proquest-com.prx.library.gatech.edu/docview/210674383?accountid=11107

33. Stevenson, Robin, and Eugene Pozniak. "CME on the Cusp of Change." Journal of European CME 4.1 (2015): Journal of European CME, 2015, Vol.4. Web.
34. Deborah Mcphail, Marina Rountree-James, and Ian Whetter. "Addressing Gaps in Physician Knowledge regarding Transgender Health and Healthcare through Medical Education." Canadian Medical Education Journal 7.2 (2016): 70-78. Web.
35. Jaffee, K. D., Shires, D. A., & Stroumsa, D. (2016). Discrimination and Delayed Health Care Among Transgender Women and Men. *Medical Care*, *54*(11), 1010–1016. doi: 10.1097/mlr.0000000000000583
36. Safer, J. D., Coleman, E., Feldman, J., Garofalo, R., Hembree, W., Radix, A., & Sevelius, J. (2016). Barriers to healthcare for transgender individuals. *Current Opinion in Endocrinology & Diabetes and Obesity*, *23*(2), 168–171. doi: 10.1097/med.0000000000000227
37. Rodriguez, A., Agardh, A., & Asamoah, B. O. (2017). Self-Reported Discrimination in Health-Care Settings Based on Recognizability as Transgender: A Cross-Sectional Study Among Transgender U.S. Citizens. *Archives of Sexual Behavior*, *47*(4), 973–985. doi: 10.1007/s10508-017-1028-z
38. Hughto, J. M. W., Rose, A. J., Pachankis, J. E., & Reisner, S. L. (2017). Barriers to Gender Transition-Related Healthcare: Identifying Underserved Transgender Adults in Massachusetts. *Transgender Health*, *2*(1), 107–118. doi: 10.1089/trgh.2017.0014
39. Kcomt, L. (2018). Profound health-care discrimination experienced by transgender people: rapid systematic review. *Social Work in Health Care*, *58*(2), 201–219. doi: 10.1080/00981389.2018.1532941
40. Flores, A.R., Herman, J.L., Gates, G.J. & Brown, T.N.T. (2016). How Many Adults Identify as Transgender in the United States? Los Angeles, CA: The Williams Institute. Retrieved from https://williamsinstitute.law.ucla.edu/wp-content/uploads/How-Many-Adults-Identify-as-Transgender-in-the-United-States.pdf
41. Romanelli, M., Lu, W., & Lindsey, M. A. (2018). Examining Mechanisms and Moderators of the Relationship Between Discriminatory Health Care Encounters and Attempted Suicide Among U.S. Transgender Help-Seekers. *Administration and Policy in Mental Health and Mental Health Services Research*, *45*(6), 831–849. doi: 10.1007/s10488-018-0868-8
42. What does the scholarly research say about the effect of gender transition on transgender well-being? (n.d.). Retrieved from

https://whatweknow.inequality.cornell.edu/topics/lgbt-equality/what-does-the-scholarly-research-say-about-the-well-being-of-transgender-people/
43. Goldhammer, H., Malina, S., & Keuroghlian, A. S. (2018). Communicating With Patients Who Have Nonbinary Gender Identities. *The Annals of Family Medicine*, *16*(6), 559–562. doi: 10.1370/afm.2321
44. Russell, G. M., & Bohan, J. S. (2007). The Gay Generation Gap: Communicating Across the LGBT Generational Divide. *The Policy Journal of The Institute for Gay and Lesbian Strategic Studies*, *8*(1). Retrieved from https://www.researchgate.net/profile/Glenda_Russell2/publication/292261005_The_gay_generation_gap_communicating_across_the_divide/links/5d672e5f458515b5b42096a6/The-gay-generation-gap-communicating-across-the-divide.pdf
45. Maragh-Bass, A. C., Torain, M., Adler, R., Ranjit, A., Schneider, E., Shields, R. Y., … Haider, A. H. (2017). Is It Okay To Ask: Transgender Patient Perspectives on Sexual Orientation and Gender Identity Collection in Healthcare. *Academic Emergency Medicine*, *24*(6), 655–667. doi: 10.1111/acem.13182
46. Safer, J., & Pearce, E. (2013). A Simple Curriculum Content Change Increased Medical Student Comfort with Transgender Medicine. *Endocrine Practice*, *19*(4), 633–637. doi: 10.4158/ep13014.or
47. Guy T'Sjoen, Jon Arcelus, Louis Gooren, Daniel T Klink, Vin Tangpricha, Endocrinology of Transgender Medicine, Endocrine Reviews, Volume 40, Issue 1, February 2019, Pages 97–117, https://doi.org/10.1210/er.2018-00011
48. Rosof, A. B. (1992). *Continuing medical education: a primer*. New York: Praeger.

4 APPENDIX

4.1 Content Outline Draft

Provided below is an early draft outline of potential content areas, intended to direct research.

- Unit 1 General/Introduction
  - Introduction
  - The Problem
    - Discuss discrimination explicitly by the medical community, illustrate the problem. Begin with Tyra Hunter death (https://genprogress.org/on-20th-anniversary-of-

tyra-hunters-death-lgbt-people-are-still-waiting-for-basic-protections/). Get people's attention, make sure they understand how important this is. Move into "Those of you inclined to take a course such as this may not understand this mentality. You may hope that times have changed since the death of Tyra Hunter. Unfortunately, this is not the case in many, if not most, circumstances." Provide examples of modern discrimination in medicine against trans people, including the resources used to establish project need.

- Failures historically in medical classification and general hostility towards transgender people.
- General Terminology
  - Transgender vs Nonbinary
    - Also: Binary vs Nonbinary
  - Transgender, Transsexual, and More
    - Include offensive and potentially offensive terminology. (Tranny, Trap, Transsexual depending on context, Shemale, Dickgirl, etc.)
  - Trans, GNC vs GQ vs NB, etc.
  - Transgender Bodies
    - Include names for genitals or other "uncomfortable" topics. Used as one of many ways of approaching dealing with dysphoria. Probably don't lead with this though.
  - Pre op vs post op vs non op
    - terms still possibly discriminatory. Places focus on genitals
  - "Gender Identity" itself is not always a welcomed term.
  - Deadname, etc.
- "Bedside manner" matters.
  - Trans/NB may require additional personal attention.
  - Trans/NB people do not feel safe most places. I.e. Cis people take their safety for granted in medical settings. You may even be meeting these patients on the most vulnerable day of their life. Coming out is never easy, and coming out to your doctor and requesting HRT/etc.

can be harder than even family. May be more leeway in settings that are explicitly trans friendly.

- Unit 2 Transgender
  - What it means to be Transgender
    - Expand from Unit 1 terminology
    - Sex vs. Gender (or lack of distinction, need a lot of support here)
  - Gender Dysphoria
    - Note that dysphoria NOT required.
  - Not just trans women, don't ignore trans men
  - "Passing"
    - If you view a passing trans person as their identity, you should view a nonpassing one as well
    - Concept and Term potentially offensive.
  - Talking to trans patients
    - Trans people are NOT crossdressers/drag queens etc. (May perform drag separate from being transgender) I.E.: *DON'T SAY THAT YOU LIKE DRAG RACE WHEN SOMEONE COMES OUT.* May even be some contentious feelings between groups.
  - Transsexual vs Transgender
    - Expand from Unit 1 terminology
    - TG has two common uses. 1) As umbrella term. 2) Adapted as equivalent for ppl who used to be labeled transsexual.
    - TS largely in disuse except in sex work or by people making a (largely right wing) political statement. Not invalid, but inappropriate unless self-applied.
    - Generational divide ideologically.
  - Transition
    - Give general overviews of transitional procedures and surgeries to be expanded upon in Unit 6.
    - Include non-medical facets of transition, including cultural concerns such as bathroom and lockerroom usage as well as acceptance for such.
    - HRT, Surgeries, Hair Removal, Voice Therapy
    - Trans people do not transition for it to be socially acceptable to date their sex assigned at birth.

    - "Gatekeeping"
        - Communal.
        - Medical.
    - MAY NOT MEDICALLY TRANSITION
    - Trans youth.
        - Introduction to puberty blockers. (more in medical)
- Unit 3 Non-Binary
    - NOTE: REMEMBER AT ALL TIMES to structure so that discussion of oppression, sexuality, etc comes after NB, DO NOT DEFACTO EXCLUDE NB BY LEAVING AS AN AFTERTHOUGHT.
    - Pronouns
        - They/them pronouns.
        - Neo pronouns.
    - Terminology elaboration from Unit 1
        - Genderfluid, genderqueer, agender, two-spirit, demi boy/girl
        - May even be trans fem or trans masc but not binary gender
    - Gender presentation and nonbinary identities
        - Ex: Someone who is AFAB and NB may still present feminine.
        - Difficulties "never passing". Cannot
        - Not simply GNC.
    - May or may not identify as transgender.
    - May still seek medical transition.
- Unit 4 - Society and Marginalization
    - Comorbidity with disorders associated with marginalized groups. Obesity, depression, suicide rates, etc.
    - Sex Rate
    - Poverty rates.
    - (Lack of) Legal protections
        - "Trans Panic" defense against murder.
        - Lack of work protections in most places. Talk about pending supreme court cases.
        - Bathroom bills
        - Anti-childhood intervention (South Dakota)
    - Violence

        - Focus on murder rate of black trans women
    - Dating
        - Include dating apps.
        - Fetishists ("Chasers") and dehumanization
    - Conversion therapy
    - Hate groups
        - How to spot disingenuous language. I.e. LGB Alliance and other Anti-Trans groups masquerading as Pro-Gay rights organizations.
    - Introduction to community outreach and education
        - Links to unit 7.
- Unit 5 – Sexuality and Transgender/Nonbinary People
    - Inappropriateness to ask about sexuality unless relevant.
        - AND DON'T JUMP RIGHT TO IT AFTER SOMEONE COMES OUT. Ease into it. Explain why it matters.
            - I.e. "Now, I have a question that as your doctor it is important for me to ask, as it may inform treatment. You are free to decline to answer, and know that this question in no way is making assumptions about your sexuality based on your gender identity. Unfortunately, there is a high occurrence of HIV among transgender women who engage in sex with men and other transgender women, and as such I need to know if this is a concern for you as an individual. If so, I highly recommend we start you on preventative medications (pitch for PREP)."
    - Define Relative Transgender Sexualities
        - Straight Trans Woman likes Men, etc.
        - Non normative terminology. Androphilic, phallophillic, etc.
        - NB people may still use binary sexuality terms.
    - Connection of gender identity and sexuality
        - Not inherently anything, potentially correlative queer identities, not causative.
    - Kink
        - Interplay between outlets for expression and sexuality
        - BDSM

        - Crossdressing and Forced Feminization (TW)
- Unit 6 Medical
    - Readdress comorbidity of major conditions
    - Mental Health
    - Standards of Care
        - WPATH
        - Informed Consent
    - HRT
        - Endocrinologists and GP roles
        - The effects of Estrogen.
        - The effects of Testosterone.
        - Common dosing and guidelines.
        - Timeline of effects.
        - Results.
    - "Bottom Surgery"
        - Terminology. SRS, GCS, etc.
        - Phalloplasty
        - Vaginoplasty
        - Orchiectomy
    - "Top Surgery"
        - Breast reduction or augmentation
    - Facial Surgery
        - FFS (Facial Feminization Surgery)
        - FMS (Facial Masculinization Surgery)
            - Rarer.
    - Voice Surgery
    - State of Insurance Coverage including Medicaid
    - HIV/AIDs
        - HIV risks by population group
        - Prescribing PREP
    - Puberty blockers
- Unit 7 Being a good ally/Providing a welcoming office environment & Conclusion
    - Indicate a Welcome Environment
        - Trans literature in office. I.e. Pamphlets.
        - Pride flags
        - Gender neutral bathroom policies (Note: Show the "doesn't matter, just wash your hands sign".)

        - Does not have to be extravagant as transgender people learn how to spot subtle tells.
    - Politics and Religion
        - Avoid talking about personal politics or religion.
        - Many transgender people have bad personal experiences with religious family, friends, or physicians and discrimination.
        - For those who are, it's not enough to say "I'm liberal/progressive", nor is it appropriate.
            - Trans people have specific concerns that aren't covered by any political ideology. Attacks often come from the left and right. (Show slide of talking of indistinguishable talking points by TERFs and Conservatives.) There is no assumption by trans people that a progressive space is a safe space, or even that otherwise LGB friendly spaces are a safe space.
    - Stand up for transgender people even when not around them
        - A cis gender person can correct other cis gender people in a way that a transgender person might not be able to.
    - Stay up to date on the materials discussed here. Things change.
    - Hidden concerns.
        - Intrusive/excessive pronoun questions
        - Also provide "outs" in settings such as pronoun circles
    - Don't ask about genitals or plans regarding them or any other surgeries. That's private, EVEN TO MEDICAL PROVIDERS. Unless it has to do with YOU and YOUR practice, let it be. You don't ask the same of cis patients. (i.e. A gynecologist is justified in needing to know if a patient has a neovagina. Most hematologists are not.) (Cite McPhail)
    - Reiterate over and over: LISTEN TO PATIENTS.