MCST 604 Assignment 5.1: Cannabis Dosing and Administration Speaker Notes

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This presentation focuses on dosing and clinical practice guidelines related to medical cannabis.

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The goal is to analyze the similarities and differences in dosing between medical cannabis and allopathic medicine, identify the most valuable research or data for establishing best practices for medical cannabis dosing, and evaluate clinical practice guidelines or expert opinions to inform treatment decisions when medical evidence or current literature provides no dosing recommendations.

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Medical cannabis dosing is similar to allopathic medicine dosing in that both utilize a titration process to optimize efficacy and minimize adverse effects (Hempel-Sanderoff, 2024). Additionally, both approaches require consideration of patient-related variables, such as medical conditions and individual sensitivity to medications.

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Medical cannabis dosing differs from allopathic medicine in several key areas. First, cannabis dosing is highly individualized due to the variability in how different people respond to cannabis (Hempel-Sanderoff, 2024). This approach contrasts with allopathic medicine, where dosing is often standardized based on factors such as weight and age. Second, cannabis dosing takes into account the "entourage effect," or the synergistic effects of various cannabinoids and terpenes, which is a consideration not typically made in allopathic medicine, where medications are often isolated compounds. Lastly, both patient preference and experience frequently guide cannabis dosing, in addition to scientific evidence. In contrast, patient preference is rarely considered in allopathic medicine, where dosing decisions primarily rely on scientific evidence.

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Condition-Specific Dosing Guidelines: The current expert consensus guidelines provide a general framework for dosing, but more specific recommendations for different medical conditions would be beneficial (Hempel-Sanderoff, 2024). This would help clinicians tailor doses to individual patient needs and optimize therapeutic outcomes.

The Entourage Effect: Although the entourage effect is widely recognized, more research is necessary to gain a deeper understanding of the synergistic interactions among different cannabinoids and terpenes. This knowledge would facilitate the development of cannabis formulations using specific combinations of compounds to optimize therapeutic effects (Hempel-Sanderoff, 2024).

Long-Term Effects of Cannabis Use: More data is needed on the long-term effects of medical cannabis use, particularly at different doses and for various medical conditions. This information would help assess the safety and efficacy of long-term cannabis use and inform dosing practices.

Standardized Measurement of Cannabinoids and Terpenes: It is crucial to accurately and consistently measure cannabinoids and terpenes in cannabis products (Betty Wedman-St.Louis, 2018). Research should focus on developing standardized methods for measuring these compounds to ensure consistent dosing recommendations.

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Personalized Dosing Based on Genetics and Metabolism: Research on how individual genetic variations and metabolic factors influence cannabis's effects would allow for more personalized dosing strategies (Betty Wedman-St.Louis, 2018). This could lead to more precise and effective treatments, minimizing adverse effects.

Drug Interactions: Research on potential drug interactions between cannabis and other medications is essential for ensuring patient safety (Betty Wedman-St.Louis, 2018). This would help clinicians make informed decisions about dosing and avoid adverse drug reactions.

Clinical Trials with Standardized Cannabis Products: Conducting clinical trials with standardized cannabis products with known concentrations of cannabinoids and terpenes would provide more reliable data on dosing and efficacy (Chang J, 2018). This would help establish evidence-based dosing guidelines for different medical conditions.

Patient Registries and Real-World Data: Establishing patient registries and collecting real-world data on medical cannabis use, including dosing information and patient outcomes, would provide valuable insights into effective dosing practices (Chang J, 2018). This data could be used to refine dosing guidelines and improve patient care.

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When medical evidence or published literature does not provide adequate guidance on dosing for medical cannabis, evaluating Clinical Practice Guidelines (CPGs) and expert opinions becomes crucial for sound treatment decisions. This involves critically assessing the CPGs or expert opinions to ensure they are based on the best available evidence and are free from bias.

Here are some key factors to consider when evaluating CPGs and expert opinions on medical cannabis dosing:

Composition of the Guideline Panel or Expert Group: The panel should be diverse and include specialists, general practitioners, pharmacists, and patient advocates (Sera, 2025). This diversity ensures a comprehensive approach to medical cannabis dosing, considering various perspectives and expertise.

Conflicts of Interest: Conflicts of interest, particularly financial ties to the cannabis industry, should be disclosed and managed appropriately (Sera, 2025). This transparency helps maintain the integrity of the CPGs and expert opinions, ensuring that competing interests do not unduly influence recommendations.

Systematic Reviews of Evidence: If available, the CPGs or expert opinions should be based on a thorough review of the available evidence, including systematic reviews and meta-analyses (Sera, 2025). This ensures recommendations are based on the highest quality evidence available, even if specific dosing guidance is limited.

Consideration of Important Options and Outcomes: All available treatment options, including non-cannabis treatments, should be considered (Sera, 2025). The CPGs or expert opinions should address essential patient outcomes, such as symptom relief, quality of life, and potential adverse effects. This comprehensive approach ensures that medical cannabis dosing recommendations are made in the context of the patient's overall care and well-being.

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Patient Values and Preferences: The CPGs or expert opinions should acknowledge the role of patient values and preferences in medical cannabis dosing decisions (Sera, 2025). This patient-centered approach recognizes that the optimal dose may vary depending on individual needs and preferences, and it encourages shared decision-making between the patient and the healthcare provider.

Decision-Making Process: The CPGs or expert opinions should clearly describe the decision-making process, including how recommendations were developed and any voting or consensus procedures used (Sera, 2025). This transparency allows for scrutiny of the process and helps ensure that recommendations are based on a rigorous and unbiased evaluation of the evidence.

Quality of Evidence and Strength of Recommendations: The CPGs or expert opinions should provide recommendations based on a clear assessment of the quality of the evidence and differentiate between strong and weak recommendations (Guyatt et al., 2008). This helps healthcare providers understand the level of certainty behind the recommendations and make informed decisions about medical cannabis dosing.

Using these criteria to critically evaluate CPGs and expert opinions, healthcare providers can make more informed decisions about medical cannabis dosing, even when definitive guidance from medical evidence or published literature is lacking. This approach helps ensure patients receive safe and effective treatment tailored to their individual needs and preferences.

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Works Cited:

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