

BEN



**BIO
Quarterly**

A Publication of
The Bioethics
Network of Ohio

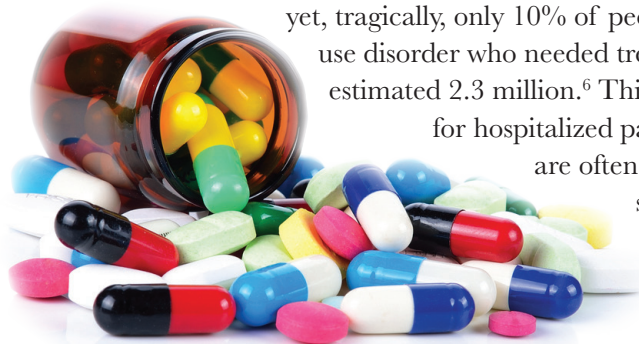
● Filling the Gap: Hospitalized Treatment Interventions for Substance Use Disorder



Robert M. Guerin, PhD, is the Clinical Fellow in Advanced Bioethics at the Cleveland Clinic. He received his PhD in Philosophy from the University of Kentucky in 2016. He also serves on the ethics committees of Cleveland Clinic and University Hospitals Cleveland Medical Center. In addition to consultation and education, he has an active research agenda in bioethics, which is both normative and empirical.

In 2016 the U.S. Surgeon General declared substance use disorder to be one of the most pressing public health crises of our time. Approximately 22 million people in the United States have a substance use disorder,¹ and the risks are significant: according to the Centers for Disease Control and Prevention, more than half a million people died from a drug overdose from 2000 to 2015.² Opioids, in particular, have played a prominent role. Of the approximately 47,000 overdose deaths in 2014, over 60% involved an opioid.³ Opioids were responsible for 33,091 deaths in 2015. In Ohio alone, unintentional drug overdoses caused the death of 4,050 people in 2016, a 32.8% increase compared to 2015, with fentanyl and related drugs involved in 58.2% of cases.⁴

Given these dire statistics, it is not surprising that in 2015, an estimated 21.7 million people needed substance use treatment.⁵ And yet, tragically, only 10% of people with a substance use disorder who needed treatment received it, an estimated 2.3 million.⁶ This is particularly unfortunate for hospitalized patients, whose interventions are often sub-optimal: one study suggests that despite good data, medication-assisted treatment harm-



continued on page 3...

Bio Quarterly

is published four times a year by Bioethics Network of Ohio, 2653 Ramsay Road Beachwood, OH 44122 PH 216.397.4445
www.BENOethics.org

Submissions

to Bio Quarterly are encouraged. Manuscripts may be original material or reprint with permission. Appropriate subject/topics include: issue analysis, cases, report of institutional activity or programs, legislative and policy commentary and book reviews. Please submit your article electronically to stephanie.fabbro@osumc.edu and alan.murphy@ohiohealth.com for consideration. Quarterly deadlines are the 15th of February, May, August and November.

Reprint Permission

is granted to BENO members for professional/educational purposes unless otherwise indicated in the article. As a courtesy, please inform the editor of the purpose of volume copying. We are interested in what you are doing.

Cassandra D. Hirsh, DO
President

Stephanie Fabbro, MD
Alan Murphy, PhD
Editors

We welcome your Charitable Contributions

Your financial contribution to BENO, a qualified 501 (c) (3) organization, is considered tax deductible. We appreciate all contributions to help further our mission and educational efforts. Contributions can be made by check or on our website, www.BENOethics.org. A receipt is available upon request.



WELCOME

New BENO Members

Institutions

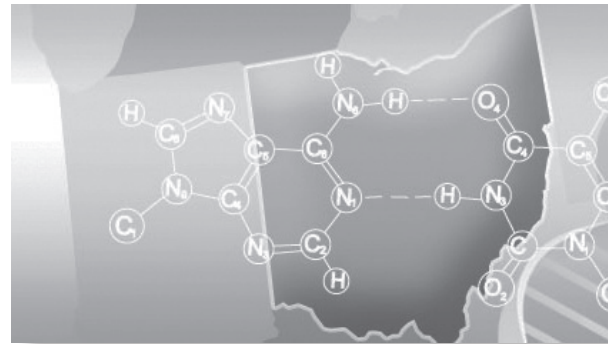
Akron Children's Hospital

Akron, OH

Individual

Delise Littlejohn, JD, MA

Student, Cleveland State University
Cleveland, OH



How can you as individuals and/or institutions benefit from BENO membership?

- Discounted or complimentary registration for the highly-rated Annual Conference
- Educational opportunities for members who serve on ethics committees
- Networking with colleagues on cutting-edge medical ethics issues
- Copies of the Beno BioQuarterly publication to read and/or contribute to
- Participation in an Ethics Consultation course

For these and other reasons that help us further our common values and mission, please join or renew your membership in the Bioethics Network of Ohio by going to www.BENOethics.org. Questions? Email ljmarket@ma-marketing.net

Filling the Gap: Hospitalized Treatment Interventions for Substance Use Disorder *continued from page 1...*

reduction strategies are almost non-existent.⁷ Hospitalized patients have a higher prevalence of substance use disorders than the general public,⁸ are highly vulnerable after discharge, likely due to reduced drug tolerance,⁹ and are at increased risk for readmission.¹⁰ One example of how this tragedy manifests is in cases of infective endocarditis in intravenous drug use. Clinicians, focused on the infection, may provide prosthetic heart valves to patients, but patients rarely, if at all, receive inpatient

Hospitalized patients have a higher prevalence of substance use disorders than the general public, are highly vulnerable after discharge, likely due to reduced drug tolerance, and are at increased risk for readmission.

addiction treatment for their substance use disorder—not to mention an addiction treatment plan post discharge. It goes almost without saying that handing patients a pamphlet with addiction information or providing patients a list of addiction treatment centers is inadequate, falling far short of our ethical obligations.

When we look at the research, however, we find that inpatient interventions on substance use disorder, such as pharmacotherapy, encourage post-discharge follow-up visits,¹¹ improve treatment retention and engagement,¹² and reduce substance use and hospital readmission.¹³

How do we fill the gap?

Healthcare providers have an ethical obligation to pursue a safe discharge plan. What would this plan look like for patients with substance use disorders? At Boston Medical Center, practitioners are providing answers to this vexing question with positive results. They developed an addiction consultation service, which provides pharmacotherapy initiation, behavioral intervention, and direct linkage to outpatient treatment. This team is comprised of a psychiatrist who is board-certified in addiction medicine, advanced practice nurses, clinical social workers, a clinical pharmacist, recovery coach, and a resource specialist. Each patient receives a diagnosis and a treatment plan, which begins in the hospital. The treatment plan consists of an assessment of the ideal level of care, pharmacotherapy initiation, psychosocial and harm reduction needs, and

patient readiness and preferences. Social workers provide motivational enhancement therapy, and recovery coaches are available for support during hospitalization and in select outpatient practices. Social workers and resource specialists identify community-based treatment resources and link patients to care following discharge.¹⁴ These interventions at Boston Medical Center, initiated during hospitalization, have reduced addiction severity, measured by the Addiction Severity Index,¹⁵ and increased the number of days of abstinence after discharge.¹⁶

The consultation service discussed here is just one example from an urban medical center in New England. More research needs to be performed to understand the complexity of treatment in substance use disorder in different patient populations and geographic locations. In Ohio, for instance, there were only 26 opioid treatment programs as of January 2017, making it difficult for placement for hospitalized patients with addiction.¹⁷ Fortunately, Senate Bill 319, signed into law by Governor Kasich in January 2017, enacts reforms that could facilitate treatment options similar to those in Boston. Part of this bill allows greater access to naloxone (Narcan®), allowing



facilities that regularly interact with high-risk individuals to have on-site access. The bill also waives a statutory requirement that a provider be certified by the Ohio Department of Mental Health and Addiction Services for at least two years prior to becoming licensed for methadone treatment and lifts a ban on for-profit methadone clinics. As medication-assisted treatments become more widely accessible and as treatment programs for addiction grow, addiction consultation services could feasibly take root in Ohio's hospitals.

continued on page 4...



Conclusion

As the public health crisis of substance use disorder continues, and as we continue to deal with the ongoing opioid epidemic, hospitals will continue to confront this challenging patient population. This confrontation requires two steps. The first step is to debunk the stigmas attached to substance use disorders. Addiction is not a moral failure. In many cases, it is an understandable consequence of disadvantageous social circumstances. The ethical response is not to blame the victim. Rather, the right response is to take social responsibility for behaviors that arise from social circumstances. The second step is to develop interdisciplinary consultation services for patients who present with substance use disorder. Patients need access to medication-assisted treatment, motivational therapy,

Addiction is not a moral failure. In many cases, it is an understandable consequence of disadvantageous social circumstances.

education in harm-reduction strategies, and support while hospitalized. Moreover, they need direct linkage to rehabilitation treatment centers and follow-up from specialists, such as recovery coaches. There are too few treatment facilities in Ohio specifically designed to address the opioid epidemic to meet the need. But with better legislation, including Senate Bill 319, patients will hopefully become connected to the care they require after discharge.

Perhaps these two steps are the first of many, but they are nonetheless crucial to begin to address the current neglect and inadequate treatment for patients with substance use disorder. To continue with the status quo is to continue down a path of perpetual relapses, readmissions, blame, and blunder.

References

1. Substance Abuse and Mental Health Services Administration. Results from the 2014 National Survey on Drug Use and Health: SAMHSA, 2014.
2. Rudd RA, Aleshire N, Zibbell JE, Gladden RM. Increases in drug and opioid overdose deaths—United States, 2000–2014. *MMWR Morb Mortal Wkly Rep* 2016; 64: 1378–82.
3. Rudd RA, Aleshire N, Zibbell JE, Gladden RM. Increases in drug and opioid overdose deaths—United States, 2000–2014. *MMWR Morb Mortal Wkly Rep* 2016; 64: 1378–82.
4. Ohio Department of Health. 2016 Ohio Drug Overdoses Data: General Findings.
5. Lipari RN, Park-Lee E, and Van Horn S. *America's need for and receipt of substance use treatment in 2015*. The CBHSQ Report: September 29, 2016. Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, Rockville, MD.
6. Lipari RN, Park-Lee E, and Van Horn S. *America's need for and receipt of substance use treatment in 2015*. The CBHSQ Report: September 29, 2016. Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, Rockville, MD.
7. Rosenthal ES et al., “Suboptimal Addiction Interventions for Patients Hospitalized with Injection Drug Use-Associated Infective Endocarditis.” *American Journal of Medicine* 129; 5 (2016): 481–85.
8. Brown RL, Leonard T, Saunders LA, et al. The prevalence and detection of substance use disorders among inpatients ages 18 to 49: an opportunity for prevention. *Prev Med* 27, 101–110 (1998).
9. Merrall EL, Bird SM, Hutchinson SJ. A record-linkage study of drug related death and suicide after hospital discharge among drug-treatment clients in Scotland, 1996-2006. *Addiction*. 2013;108 (2): 377–84.
10. Center for Health Information and Analysis. Behavioral health & readmissions in Massachusetts acute care hospitals. 2016.
11. Shanahan CW, Beers D, Alford DP, Brigandi E, Samet JH. A transitional opioid program to engage hospitalized drug users. *J Gen Intern Med*. 2010; 25(8): 803–808.
12. Pecoraro A, Horton T, Ewen E, et al. Early data from Project Engage: a program to identify and transition medically hospitalized patients into addictions treatment. *Addict Sci Clin Pract*. 2012;7:20.
13. Liebschutz JM, Crooks D, Herman D, et al. Buprenorphine treatment for hospitalized, opioid-dependent patients: a randomized clinical trial. *JAMA Intern Med*. 2014;174(8):1369–76; Rigotti NA, Regan S, Levy DE, et al. Sustained care intervention and postdischarge smoking cessation among hospitalized adults: a randomized clinical trial. *JAMA*. 2014;312 (7):719–28.
14. Trowbridge P, Weinstein ZM, Krensky T, et al. Addiction Consultation Services: Linking Hospitalized Patients to Outpatient Addiction Treatment. *Journal of Substance Abuse Treatment* 79 (2017): 1–5.
15. McLellan AT, Luborsky L, Woody GE, O'Brien CP. An improved diagnostic evaluation instrument for substance abuse patients. The Addiction Severity Index. *Journal of Nervous and Mental Disease*. 168 (1980):26–33.
16. Wakeman, SE, Metlay JP, Chang Y, Herman GE, and Rigotti NA. Inpatient Addiction Consultation for Hospitalized Patients Increases Post-Discharge Abstinence and Reduces Addiction Severity. *Journal of Internal General Medicine* 32 no. 8 (2017): 909–16.
17. <http://mha.ohio.gov/Default.aspx?tabid=97>

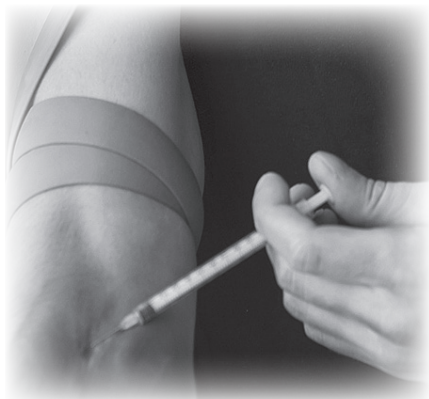
● An Ethical Duty to Provide Repeat Valve Replacement Surgeries for Patients with Intravenous Drug Addiction

Emanuela Peshel and Cyril Harfouche are medical students at Northeastern Ohio Medical University (NEOMED).

Julie Aultman, PhD, is Associate Professor in the Department of Family and Community Medicine at NEOMED and heads the Master's Degree Program in Bioethics at NEOMED as well as the Bioethics Certificate program.



The treatment of patients with intravenous drug use (IVDU) has evolved to include a wide range of medications, psychiatric rehabilitation, and surgical interventions, especially for life-threatening complications such as infective endocarditis (IE). These interventions, however, remain at the discretion of the physicians—particularly surgeons—whose treatment decisions are influenced by several medical factors, unfortunately not without bias. From a medical perspective, the relationship between substance use disorder and IE is no different than the relationship between any other chronic illness and its sequelae, for instance, between diabetes and nephropathy. But stigma associated with substance use disorder is prevalent, especially towards IVDU, which leads to significant biases, even in the healthcare system [1]. This bias is heightened when IVDU patients require multiple or repeat valve replacement surgeries for IE due to continued drug use, and can result in physicians



denying these patients life-saving care and neglecting their patients' need for advocacy and support to combat their addictions.

In this paper, we argue that it is the duty of physicians to provide comprehensive, multidisciplinary care to their patients who

are struggling with IVDU, and who require effective care for their IE and other co-morbidities. While we acknowledge that effective treatment of IE in the context of IVDU imposes significant financial, social, and moral burdens on patients, health teams, hospitals, and others, we argue that justice requires that patients (including those with IE and IVDU) have an equal opportunity to achieve health and life through reasonable means of medical interventions and care.

Brief Background

Historically, IVDU represented a small percent of patients with IE. In one study, the proportion increased from 14.8% in 2002-2004 to 26% in 2012-2014; heroin use doubled between the two sample periods [2, 3]. Today, approximately 11% of IVDU are at risk for developing IE [4], which is characterized by infection of the inner lining of the heart, leading to growth of vegetation on heart valves that disrupts the ability to pump blood. Overall, IE is an extremely morbid disease: in-hospital

mortality rates range from 11 to 26% with an estimated 5-year mortality of up to 50% [5]. Complications include heart failure, valve insufficiency, embolic strokes, and intracerebral hemorrhage. IE secondary to IVDU is most commonly caused by bacteremia from *Staphylococcus aureus* and *Enterococcus faecalis*—bacteria that are routinely and abundantly found on the skin and gastrointestinal tract—or by particulates in illicit drugs that cause microdamage to tissues as they circulate [6, 7]. High-dose, broad-spectrum antibiotics are often sufficient to treat IE, but 60 to 70% of severe cases require surgical intervention [2].

With the rise of the opioid epidemic in the past few years—particularly in Midwestern states such as Ohio—high risk valve replacement surgeries have become a growing medical, financial, and ethical burden. Studies have shown that patients with IE secondary to IVDU are more likely to be Caucasian males and are (on average) younger than are IE patients with no IVDU (35 years old vs. 59 years old), although the specific populations studied show regional variability [2]. Even though intravenous drug users typically are younger and have fewer cardiovascular and other comorbid risk factors, long-term outcomes for IE patients with IVDU are compromised by reinfection [2]. Patients who receive valve replacements yet continue to use intravenous drugs are likely to re-infect their bioprosthetic or homograft valves and require additional valve replacement surgeries. Because of the high rates of reinfection and death and because of the high financial cost associated with caring for these patients, some medical teams question whether they should provide repeat valve replacements to patients with histories of IV drug addiction.

A Duty to Treat Patients with IE Secondary to IVDU

The American Medical Association's *Code of Medical Ethics* states that is the physician's ethical obligations "to place patients' welfare above their own self-interest and above obligations to other groups, and to advocate for their patients' welfare" [8]. It is the duty of physicians to promote the health of their patients through comprehensive, beneficial treatment based on evidence based medicine, and to respect them as persons with dignity, uninfluenced by social stigma and clinical bias. For patients with IE secondary to IVDU, it is important to treat both the psychiatric and the infectious etiologies: the substance use disorder as well as the IE (along with any additional comorbidities that are present). Although every patient with IE secondary to IVDU differs in severity of

continued on page 6...

presentation and comorbid conditions, patients with a positive prognosis should have the opportunity to achieve health and life with medical assistance.

Two reasons to deny repeat valve replacements to patients with IE and IVDU are commonly advanced. First, based on this patient population's high mortality rates, it is argued that repeat valve replacements are non-beneficial or futile for patients with IVDU. Studies have found that patients who resume IVDU after their initial valve replacement have very high mortality rates compared to patients who abstain from drug use after their surgery [9]. A patient who resumes IVDU may have a viable valve for 1-2 years, rather than the 10-15 years of life that a new valve (mechanical or biological) can give a patient without IVDU. The second argument against repeat valve replacements for patients with IE and IVDU is financial. Not only do repeat valve replacement surgeries (and hospitalizations, often including time in intensive care) increase cost, but patients with IVDU are more likely to be unemployed and reliant upon publicly funded insurance, increasing burdens to the healthcare system at-large [10]. These are some of the most common arguments against repeat valve replacements.

However, little research has been done on the effects of extensive psychiatric and behavioral health interventions prior to, during, and following surgical treatment on clinical, psychosocial, and legal outcomes (e.g., improved medical compliance, reduced recidivism in drug use and criminal acts). One study found that only 7.8% of patients treated for IE were discharged with plans to receive medication-assisted treatment during the 10-year period of the study. In that same study, 25% of patients were readmitted with active IVDU

It is the duty of physicians to promote the health of their patients through comprehensive, beneficial treatment based on evidence based medicine, and to respect them as persons with dignity, uninfluenced by social stigma and clinical bias.

[11]. Aggressive treatment for IE, including antibiotics and valve transplants, is neither effective nor advantageous without targeting the underlying addictive behaviors that contribute to poor health outcomes and mortality.

Unless physicians treat the chronic and acute illnesses in patients with IE due to IVDU, their ethical duties towards their patients remain unfulfilled, and they fail to provide just care. This issue becomes more precarious when considering patients who require additional valve replacements due to continued IVDU. Unfortunately, it is not uncommon for physicians to deny their patients the opportunity to receive additional valve replacements, or to refer them to another

provider and institution to accommodate their medical and psychosocial needs. While some patients are justifiably denied because (from a strictly medical perspective) the risks of the intervention greatly outweigh its expected benefits, other patients are denied on less defensible grounds: because they are perceived as non-compliant, or because the adverse events to which these patients are more prone may negatively affect the publicly reported hospital and surgeon-specific outcomes. Ideally, surgeons and hospitals want to have absolutely no deaths or serious complications during or post surgeries so they can maintain trust among patient populations and provide safe and effective care. However, quality measurement and improvement in surgery, while an important goal, must consider variation in both structural processes and outcome measures for a population that has major morbidities (i.e., drug addiction). Unfortunately, quality measures are not as clear as one would imagine even for non-addicted cardiac surgical patients; there is an on-going debate regarding "hard endpoint" outcomes in cardiac surgery, what counts as major adverse cardiac events (MACE), and what counts as disability and how it should be quantified after surgery [12]. There are also large variations of outcomes across surgeons [13] influenced by their knowledge, skills, resources, and, arguably, their own moral compasses for treating patients with comorbidities, including, but not limited to, drug addiction.

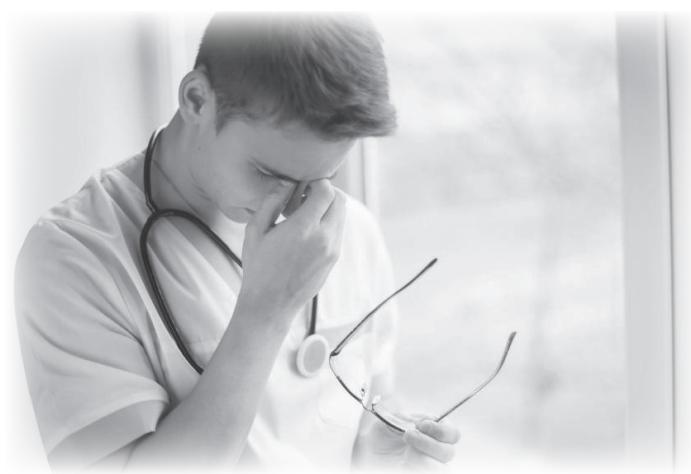
It is unjust to penalize viable surgical candidates when their addictive behaviors have neither been addressed nor treated. Despite the difficulty in treating patients with IE and addiction [14], high rates of treatment failure and non-compliance are not valid excuses when the substance use disorder has not been treated as aggressively as the IE. Such excuses cannot justify neglect of the physician's duty to treat and advocate for their patients in need. When patients receive, and comply with substance abuse treatment, it is likely they will relapse and even require a second or third valve replacement. Just because of their relapse, this should not automatically prevent them from acquiring further surgical and mental health treatment. Relapse does not mean treatment has failed. Relapse rates for drug addiction (40-60%) is like other chronic medical illnesses such as Type I diabetes (30-50%), hypertension (50-70%) and asthma (50-70%) [15]. Each patient's situation requires careful consideration for determining whether they are a good surgical candidate (e.g., age, medical history, probability of success), whether they can be successful in their addiction management, and if they are willing to continue and comply with their treatment. For those patients whose conditions are grave, where surgery has little to no probability of success, or who refuse to go through addiction treatment, further treatment other than palliative and comfort care is non-beneficial and should not be provided.

Recommendations

We strongly support more comprehensive care for IE secondary to IVDU. Such care should involve provisions of patient education, social resources (e.g., support groups, care managers, community programming), inpatient psychiatric treatment, outpatient behavioral health interventions, and

advocacy. In some cases, the health care team and the legal courts may need to work together to formulate best practices to promote patient care and safety, and to successfully fulfill legal requirements (e.g., court-ordered rehabilitation for substance abuse). Due to the complex nature of IVDU and the negative impact it has on patients' health, their social and financial status, and their support systems, it is essential for health care teams to identify substance use disorder as a chronic mental illness that requires continuous, comprehensive care. And, despite the fact that drug use and addiction is difficult to treat and requires personalized patient care, it should be regarded similarly to other chronic medical conditions, such as diabetes, without stigma and bias.

To further reduce stigma and bias, health care teams should receive continuous medical education in ethics to understand the ethical issues embedded in the debate over repeated valve replacements for patients with IE secondary to IVDU. Through ethics education and practice, the health care team



may be better equipped to consider each case separately, carefully weighing treatment risks and benefits, providing fair opportunities for patients to acquire surgical and mental health treatment, and be more motivated to advocate for this patient population.

Finally, further discussion and research is essential for characterizing the regional variability of the determinants of health that contribute to IVDU, for creating healthcare team-based best practices for treating and managing IVDU, and for establishing better predictors of successful repeat valve replacements, particularly with patients with comorbid conditions that further complicate treatments for IE and substance abuse disorders (e.g., schizophrenia).

Conclusions

It is an ethical imperative for health care teams to commit to comprehensive, continuous patient care for IE secondary to IVDU, including mental health treatment for addiction prior to, during, and following any surgical interventions for IE. Patients who require repeat valve replacements should be provided with an equal opportunity to receive another valve, for it is the duty of the physician and her team to promote the health of the patient without bias and to serve the community

through advocacy. Best practices may need to evolve through improved multidisciplinary, team-based approaches, a commitment to ethical and social justice, and a willingness to understand and address the determinants of health that contribute to IVDU, and subsequently IE.

References

1. Ohio Department of Mental Health and Addiction Services [OhioMHAS] (2016). Ohio Substance Abuse Monitoring Network: Surveillance of Drug Abuse Trends in the State of Ohio: June 2015-January 2016. Columbus, OH: State of Ohio.
2. Kim JB, Ejiofor JI, Yammine M, et al. Surgical outcomes of infective endocarditis among intravenous drug users. *J Thorac Cardiovasc Surg.* 2016;152(3):832-841.
3. Huynh TN, Kleerup EC, Wiley JF, et al. The Frequency and Cost of Treatment Perceived to Be Futile in Critical Care. *JAMA Intern Med.* 2013;173(20):1887-1894.
4. Phillips KT, Stein MD. Risk practices associated with bacterial infections among injection drug users in Denver, Colorado. *Am J Drug Alcohol Abuse.* 2010;36:92-7.
5. Wurcel AG, Anderson JE, Chui KKH, et al. Increasing Infectious Endocarditis Admissions Among Young People Who Inject Drugs. *Open Forum Infectious Diseases.* 2016;3(3).
6. Kaiser SP, Melby SJ, Zierer A et al. Long-term outcomes in valve replacement surgery for infective endocarditis. *Ann Thorac Surg.* 2007;83:30-5.
7. Mathew J, Addait T, Anand A, et al. Clinical Features, Site of Involvement, Bacteriologic Findings, and Outcome of Infective Endocarditis in Intravenous Drug Users. *Arch Intern Med.* 1995;155(15):1641-1648.
8. Riddick FA. The Code of Medical Ethics of the American Medical Association. *Ochsner J.* 2003;5(2):6-10.
9. Arbulu A, Asfaw I. Management of Infective Endocarditis: Seventeen Years' Experience. *Ann Thorac Surg.* 1987;43:144-149.
10. O'Toole TP, Pollini R, Gray P, et al. Suboptimal Addiction Interventions for Patients Hospitalized with Injection Drug Use-Associated Infective Endocarditis. *J Subst Abuse Treat.* 2007;33(1):51-9.
11. Substance Abuse and Mental Health Services Administration, Results from the 2013 National Survey on Drug Use and Health: Summary of National Findings, NSDUH Series H-48, HHS Publication No. (SMA) 14-4863. Rockville, MD: Substance Abuse and Mental Health Services Administration, 2014.
12. Myles PS. Meaningful Outcome Measures in Cardiac Surgery. *The Journal of Extra- corporeal Technology.* 2014;46(1):23-27.
13. Ashish K. Jha. Public Reporting of Surgical Outcomes: Surgeons, Hospitals, or Both?. *JAMA.* 2017;318(15):1429-1430. doi:10.1001/jama.2017.13815
14. Rosenthal ES, Karchmer AW, Theisen-Toupal J, et al. Suboptimal Addiction Interventions for Patients Hospitalized with Injection Drug Use-Associated Infective Endocarditis. *Am J Med.* 2016;129(5):481-5.
15. A. Thomas McLellan, David C. Lewis, Charles P. O'Brien, Herbert D. Kleber. Drug Dependence, a Chronic Medical Illness Implications for Treatment, Insurance, and Outcomes Evaluation. *JAMA.* 2000;284(13):1689-1695. doi:10.1001/jama.284.13.1689

BENO

Bioethics Network of Ohio
2653 Ramsay Road
Beachwood, OH 44122

Non-Profit Org
U.S. Postage
PAID
Berea, Ohio
Permit No. 333

Return Service Requested

Serving Ohio as an educational resource in healthcare ethics.

Plan to Attend 

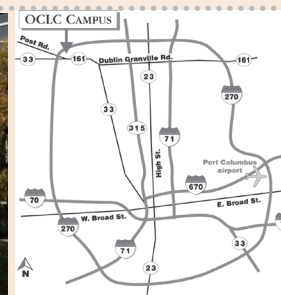
Bioethics Network of Ohio
28th Annual Conference



Friday, April 27, 2018

***“The Intersection of Bioethics
with Chronic Illness and Disability”***

Keynote Speaker: Dr. Kathryn Weise, MD, MA (Cleveland Clinic)



The Conference Center at OCLC • 6565 Kilgour Place • Dublin, Ohio 43017