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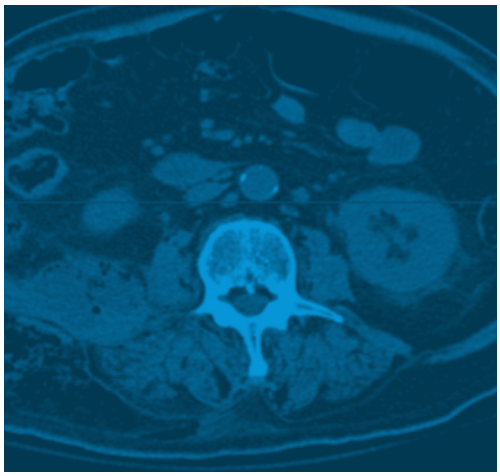

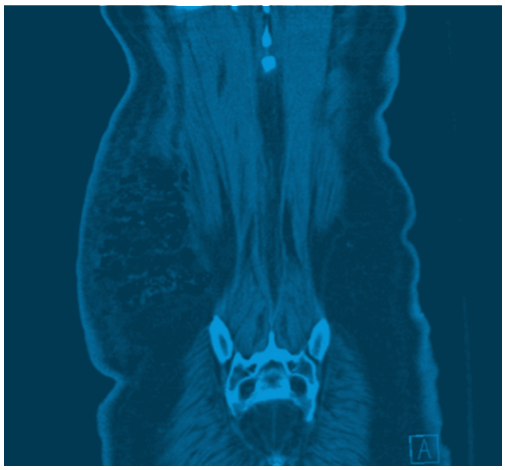

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The St. Vincent Charity Medical Center family is committed to the healing mission of Jesus. We serve with: a deep respect for the dignity and value of all persons; our practice of quality care; our dedication to the poor; and, our commitment to education. St. Vincent Charity Medical Center, with the commitment of its caregivers and physicians, will be a leading model for health care delivery in Northeast Ohio based on its faith-based mission, dedication to education, commitment to the communities it serves, excellence in the patient experience it provides, focus on surgical services, and partnerships with physicians and other constituencies.

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Trainee Well-Being: Is GME on the Right Track?

By **Jennifer N. Kenney, CPM**

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Three to seven or more years is the amount of time that fledgling physicians spend in the intense period of specialized hospital-based residency and fellowship training that occurs between medical school and medical practice. This phase of learning is more commonly referred to as Graduate Medical Education (GME) and the demands it places on medical trainees are well-documented.

The pages of various GME trade publications, such as the Journal of Graduate Medical Education and the Annals of Internal Medicine to name a few, have been teeming with articles on stress management and the prevention of burnout and suicide for medical trainees for a few years now. The course itineraries at the last several annual meetings of the Alliance for Academic Internal Medicine (AAIM) have offered GME administrators, coordinators, directors and teaching faculty ample presentations focused on enhancing trainee well-being. The growing concern for the overall welfare of fellows and residents is also evident in the summarized results of Clinical Learning Environment Reviews (CLER) conducted by the Accreditation Council for Graduate Medical Education (ACGME).

GME programs must continually strive to maintain learning environments that meet the unique needs of the hospitals they reside in and the physicians they train, while keeping up with healthcare trends and ever-evolving accreditation standards. For the last twenty years, the Graduate Medical Education programs at St. Vincent Charity Medical Center have aimed to graduate physicians that excel both professionally and personally. Developing and maintaining relevant curriculums that are academically challenging, but also conducive to good work-life balance has always been of paramount importance. However, the recent swell in concern and conversation about medical trainee well-being across the healthcare industry has given good reason to reassess efforts in this area.

Trainees in SVCMC GME programs have access to an Employee Assistance Program (EAP), no-interest financial aid fund, local food pantry, wellness fairs, on-site fitness center, social outings and spiritual support to assist them with maintaining their overall welfare. In light of the real and measurable health benefits of volunteering revealed in studies such as the *Doing Good is Good for You: 2013 Health and Volunteering Study* (UnitedHealth Group and The Optum Institute), the Office of GME also coordinates at least six volunteer events per year with various charitable organizations in the greater Cleveland area to help round out this well-being regimen for trainees.

Though the aforementioned activities and programs are beneficial and well-intentioned, a recent cross-sectional study of SVCMC attending and resident physicians conducted by Koram et al revealed that a high prevalence of burnout and compassion fatigue remain. The study raises questions about how effectively these interventions mitigate the stressors associated with the learning environment. Do they equally address both material and immaterial challenges to well-being, are they targeting root causes and do they consider the impact of things such as lack of autonomy and fear of litigation?

The increasing rates of stress, burnout and suicide among medical trainees are intolerable and detrimental to the ongoing efforts to improve our struggling healthcare system. Every effort must be made to create a model of healthcare education and delivery that is sustainable and allows fledgling physicians to flourish at all levels of their caregiving careers.

The St. Vincent Fund: Caring for the Caregiver

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For 154 years a beneficent institution nestled in the heart of downtown Cleveland has existed in order to provide high-quality and affordable healthcare to all citizens. St. Vincent Charity Medical Center (SVCMC) has a long history of promoting and defending human dignity and attending to the mental, physical and spiritual needs of not only its patients, but its Caregivers (employees) as well.

Today, employed Americans enjoy numerous perks and protections provided by their employers; a minimum wage, health insurance, family leave, unemployment benefits and a safe working environment are just a few. SVCMC not only provides the benefits required by the US Department of Labor, but also supports its employees with additional benefits unique to its mission. These additional benefits are provided by the medical center with the goal of reducing the negative impact of social challenges and pressures experienced by Caregivers in crisis.

The majority of workers in the United States live paycheck to paycheck, so it is easy to imagine how the stressors of an unexpected financial emergency could adversely affect a worker's morale and productivity on the job. In 1993, SVCMC set out to help relieve the stress of its employees who found themselves in the midst of financial difficulties by creating the St. Vincent Fund (SVF). The fund has been providing zero-interest loans for the last 26 years to Caregivers who have experienced a financial emergency.

The fund has clear guidelines to determine qualifying emergencies, streamline the application process and manage cash disbursements. These guidelines also ensure the dignified and respectful treatment of applicants and confidential handling of their personal information. Qualifying emergencies span from personal illness, the death of a family member to unusual car repairs. The fund can also provide 'gifts' to Caregivers who have experienced catastrophic events such as a serious house fire or criminal victimization. However, the fund does not subsidize the incomes of employees that are burdened due to poor money management or limited employment.

Caregivers can receive up to a $500 zero interest loan with an affordable payroll repayment plan consisting of monthly deductions of $25 until paid in full. At times, the fund can also provide loans greater than $500 and has also forgiven loans depending on the nature of the borrower's need. The SVF has been a great source of relief for Caregivers who have had the unfortunate need for it. In 2018, approximately $40,000 was given out in interest free loans to over 70 employees. The medical center is happy to provide this unique benefit and is encouraged by the various feedback and testimonies it gets from the beneficiaries.

Efforts of employers to accommodate the needs of their employees is always commendable and the right thing to do. It is also praiseworthy of donors to nonprofit organizations like SVCMC to support such efforts to improve employee wellbeing.

Identifying and addressing barriers to diabetes education for patients and physicians

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Diabetes is a complex disease that demands active participation from those living with diabetes in order to successfully manage the disease. Diabetes self-management education (DSME) gives patients the tools they need to manage their diabetes. DSME is recommended by both American Diabetes Association and American Academy of Diabetes Educators [11]. DSME is defined as the collaborative and ongoing process between the patient and provider that allows patient to develop the knowledge and skills necessary to modify their behavior and self manage diabetes [1]. Behavior change is attained using a six-step process: assessment, goal setting, planning, implementation, evaluation, and documentation [1]. Assessment is comprised of thorough history taking that includes information about the patient's personal lifestyle, occupation, living situation, and all possible barriers to self-management such as financial status and health literacy. For goal setting, the patient chooses an area of focus, such as diet or activity, and works with the physician or educator to develop a specific and timely goal [1]. For planning, the patient works with the care team to develop plans to achieve the goal. The care team will also develop strategies to help the patient stay on track if they veer from the original plan [11]. Support from care team and support groups are given to the patient so the plan can be successfully implemented [1]. The patient's progress is then evaluated and documented and changes are made to the plan to help patients better achieve their goals [11].

DSME has been shown to be beneficial to both patients and the health care system in multiple ways. By helping patients improve daily self-management, DSME decreases the onset of complications, leading to lower hospital admissions and health care cost [5, 8, 12]. DSME has also been shown to improve HbA1C by as much as 1% in those with type 2 DM [14, 15]. Other benefits include improved eating pattern and increased activity, enhanced self-efficacy and empowerment, and decreased depression/diabetes related distress [7, 16, 17].

Despite the potential for DSME to improve patients' health outcomes, there are several barriers to accessing DSME. In a paper by Chlebowy et al., facilitators and barriers to DSME in African American adults were studied. African Americans are disproportionately affected by diabetes: 14.7% of all African Americans are living with diabetes compared with 9.8% of their non-Hispanic white counterparts [10]. African Americans experience higher rates of diabetes related complications compared to other racial groups (e.g. blindness, kidney disease, amputations, and CVD) [10]. African Americans with type 2 diabetes had significantly lower medication adherence and

fewer prescription refills than non-Hispanic whites [13]. African Americans also exhibited lower intensity self-monitoring of blood glucose during a study's five-year follow up than did non-Hispanic whites [18]. When asked about barriers to diabetes management, many African Americans expressed mistrust in the medical system [4]. African American women stated that providers set unrealistic weight goals, and the lack of provider empathy was a major obstacle to self-management [9]. Other perceived barriers included lack of support, lack of affordable and accessible restaurants and stores, lack of recreational facilities, financial difficulties, and inadequate health care access [2, 6]. Knowledge and peer support were viewed as major facilitators of self-management [3].

St. Vincent Charity Medical Center (SVCMC) has an ADA accredited DSME program. The program consistently demonstrates a reduction in A1C levels for patients from pre to post education. The DSME visits do not only focus on diabetes, but also identify food insecurity, the need for social/legal support and help dealing with diabetes distress. This process can remove barriers for patients in order for them to be successful with the self management of their diabetes.

However, patient attendance rates for DSME continue to hover around 50%. Several patients never attend the program despite having physician referrals or drop out of the program after only one or two

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Identifying and addressing barriers to diabetes education for patients and physicians

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sessions. Of the patients that attend the DSME program at SVCMC 87% have Medicare and/or Medicaid insurance, and over 70% are African American. We believe that there are several barriers similar to those described in the previous paragraph. To increase access and participation the DSME team is currently working on a QI project to identify perceived barriers to DSME via patient and provider surveys. The patient surveys are in progress. Once the surveys are completed and the data analyzed the team will select three commonly identified barriers, implement interventions to remove them, and track monthly attendance rates to assess the success of the patient interventions.

As part of the QI project, the DSME team administered surveys to SVCMC providers to identify barriers to DSME referrals. Results to date of the project still in process demonstrate that of the 60 surveys that were sent out 24 were returned. According to the results to date, 50% of the surveyed providers said that 50 – 75% of their patients have diabetes. Half of the surveyed providers spent only 1-5 minutes talking about diabetes management with their patients. The majority of surveyed providers (70.83%) spent less than 5 minutes discussing diabetes related distress with their patients. Although 75% of surveyed providers had heard of DSME, providers ranked their familiarity with the content of DSME at 4.87/10. Greater than half (54.17%) of surveyed providers are unaware that SVCMC has an ADA accredited DSME program. Only half of the surveyed providers know that the DSME support group is free and open to everyone without a referral. The majority of surveyed providers (62.5%) are unaware that DSME visits with the dietitian are covered by insurance for those with a diagnosis of Pre-Diabetes. The majority of surveyed providers referred less than 25% of their patients with diabetes to DSME (70.83%), and only half of the surveyed providers knew how to make a DSME referral in the EMR. Approximately 79.17% of the surveyed providers said that they would refer more patients to DSME if they had more information about it. The top three most common reasons for not referring patients to DSME included: "I do not know how to fill out the referral in Meditech"; "Patient states they already had education"; and "Patient states they do not need education". Finally, providers were asked to select reasons that would prevent patients from attending DSME. The top three most common reasons included: "patient history of no shows", "patient has transportation issues", and "low health literacy".

As the results suggest, a large portion of providers are not familiar with the content of the DSME program and are unsure how to complete the referrals. The DSME team and chief residents believe that the providers would benefit from an information session with the DSME staff to become better acquainted with the program. A noon conference will take place to discuss the referral process, the DSME visit components and strategies to tackle barriers. Additional interventions are also being discussed to heighten visibility of the program and increase referrals.

The benefits of DSME are well documented and through this QI project the DSME program hopes to increase referrals and improve patient attendance rates. The provider survey to date has identified specific barriers and interventions are already in process to address those issues. The patient survey in progress will provide answers to why some patients do not attend or complete the program. The benefits of DSME are well documented and the SVCMC DSME program strives to meet patients where they are in their diabetes journey and improve self management. This project will help us better serve our provider and patient communities.

References

1. CS. Burke, D. Sherr, and R. Lipman, "Partnering with diabetes educators to improve patient outcomes," *Diabetes, Metabolic Syndrome and Obesity: Targets and Therapy*, p. 45, 2014.
2. D.O. Chlebowy and B. J. Garvin, "Social Support, Self-efficacy, and Outcome Expectations," *The Diabetes Educator*, vol. 32, no. 5, pp. 777–786, 2006.
3. D.O. Chlebowy, S. Hood, and A.S. Lajoie, "Facilitators and Barriers to Self-management of Type 2 Diabetes Among Urban African American Adults," *The Diabetes Educator*, vol. 36, no. 6, pp. 897–905, 2010.
4. H. Devlin, M. Roberts, A. Okaya, and Y. M. Xiong, "Our Lives Were Healthier Before: Focus Groups With African American, American Indian, Hispanic/Latino, and Hmong People With Diabetes," *Health Promotion Practice*, vol. 7, no. 1, pp. 47–55, 2006.
5. I. Duncan, C. Birkmeyer, S. Coughlin, Q. Li, D. Sherr, and S. Boren, "Assessing the Value of Diabetes Education," *The Diabetes Educator*, vol. 35, no. 5, pp. 752–760, 2009.
6. J.T. Feathers, E.C. Kieffer, G. Palmisano, M. Anderson, B. Sinco, N. Janz, M. Heisler, M. Spencer, R. Guzman, J. Thompson, K. Wisdom, and S.A. James, "Racial and Ethnic Approaches to Community Health (REACH) Detroit Partnership: Improving Diabetes-Related Outcomes Among African American and Latino Adults," *American Journal of Public Health*, vol. 95, no. 9, pp. 1552–1560, 2005.
7. E.B. Fisher, C.A. Brownson, M.L. Otoole, V.V. Anwuri, and G. Shetty, "Perspectives on Self-Management From the Diabetes Initiative of the Robert Wood Johnson Foundation," *The Diabetes Educator*, vol. 33, no. S6, 2007.
8. S.J. Healy, D. Black, C. Harris, A. Lorenz, and K.M. Dungan, "Inpatient Diabetes Education Is Associated With Less Frequent Hospital Readmission Among Patients With Poor Glycemic Control," *Diabetes Care*, vol. 36, no. 10, pp. 2960–2967, 2013.
9. N.A. Maillet, G.D. Melkus, and G. Spollett, "Using Focus Groups to Characterize the Health Beliefs and Practices of Black Women with Non-Insulin-Dependent Diabetes," *The Diabetes Educator*, vol. 22, no. 1, pp. 39–46, 1996.
10. "National Diabetes Statistics Report | Data & Statistics | Diabetes | CDC," *Centers for Disease Control and Prevention*. [Online]. Available: https://www.cdc.gov/diabetes/data/statistics-report/index.html. [Accessed: 08-Mar-2019].
11. M.A. Powers, J. Bardsley, M. Cypress, P. Duker, M. M. Funnell, A.H. Fischl, M.D. Maryniuk, L. Siminerio, and E. Vivian, "Diabetes Self-Management Education and Support in Type 2 Diabetes: A Joint Position Statement of the American Diabetes Association, the American Association of Diabetes Educators, and the Academy of Nutrition and Dietetics," *Journal of the Academy of Nutrition and Dietetics*, vol. 115, no. 8, pp. 1323–1334, 2015.
12. J.M. Robbins, G.E. Thatcher, D.A. Webb, and V.G. Valdmanis, "Nutritionist Visits, Diabetes Classes, and Hospitalization Rates and Charges: The Urban Diabetes Study," *Diabetes Care*, vol. 31, no. 4, pp. 655–660, 2008.
13. R. Shenolikar, R. Balkrishnan, R. Rajagopalan, F. Camacho, and R. Anderson, "Pdb31 Association Between Race And Medication Adherence In Type 2 Diabetes Medicaid Enrollees," *Value in Health*, vol. 9, no. 3, 2006.
14. L. Siminerio, K. Ruppert, K. Huber, and F. G. S. Toledo, "Telemedicine for Reach, Education, Access, and Treatment (TREAT)," *The Diabetes Educator*, vol. 40, no. 6, pp. 797–805, 2014.
15. A. Steinsbekk, L. Rygg, M. Lisulo, M.B. Rise, and A. Fretheim, "Group based diabetes self-management education compared to routine treatment for people with type 2 diabetes mellitus. A systematic review with meta-analysis," *BMC Health Services Research*, vol. 12, no. 1, 2012.
16. T. Tang, M. Funnell, and M. Oh, "Lasting Effects of a 2-Year Diabetes Self-Management Support Intervention: Outcomes at 1-Year Follow-Up," *Preventing Chronic Disease*, 2012.
17. D.J. Toobert, L.A. Strycker, D.K. King, M. Barrera, D. Osuna, and R.E. Glasgow, "Long-term outcomes from a multiple-risk-factor diabetes trial for Latinas: ¡Viva Bien!," *Translational Behavioral Medicine*, vol. 1, no. 3, pp. 416–426, 2011.
18. C.M. Trinacty, A.S. Adams, S.B. Soumerai, F. Zhang, J. B. Meigs, J.D. Piette, and D. Ross-Degnan, "Racial Differences in Long-Term Self-Monitoring Practice Among Newly Drug-Treated Diabetes Patients in an HMO," *Journal of General Internal Medicine*, vol. 22, no. 11, pp. 1506–1513, 2007.

Lowest effective dose of Buprenorphine in stable office based opioid maintenance treatment

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BACKGROUND

Research and extensive clinical experience since its release in 2002 have established that bup/NX is a safe and effective treatment for moderate and severe opioid use disorder as part of medication assisted treatment. Bup/NX treatment decreases opioid use, improves treatment adherence and increases sobriety rates. Much less has been reported regarding the safety and efficacy of changing bup/NX doses in stable patients during long-term opioid maintenance therapy. Very little information is available as to whether or not patients need the same bup/NX dose in long-term stable maintenance that was necessary to initially stabilize them from active addiction.

Bup/NX doses appear to rarely be changed over time, and even strategies to introduce the topic of dose change have not been reported in the literature. This is contrary to many other areas of chronic illness management, where in very stable patients concepts of "lowest effective dose" or "gradual dose adjustment to ensure stability and limit side effects" are commonly encountered. Bup/NX tapering could be done for a number of good clinical reasons: 1) evaluate a long term stable dose to see if it is the most appropriate dose for the patient at this point in time (i.e. sustained full remission), 2) to limit side effects of bup/NX resulting from higher initial induction doses, 3) to keep the over-all pharmacy costs of MAT to the lowest reasonable level, or 4) to maintain the patient on as low a level of physical dependence as is safe in order to facilitate final tapering if or when the patient decides to stop bup/NX entirely. Despite all of these potential clinical indications to discuss the gradual tapering of bup/NX dose during long term MAT, there is little research or even case reports indicating whether or not such discussions take place or the safety and efficacy of such tapers.

In this report we present data from a MAT clinic initiative to introduce the idea of ultra-gradual bup/NX dose taper to patients in sustained full remission from opioid use disorder and fully adherent with a comprehensive sobriety support program. Data includes clinical characteristics of those patients who agreed to taper, how an ultra-slow taper was tolerated including the emergence of withdrawal / craving / relapse data during a taper, and whether an initial dose taper was likely to result in the patient deciding to taper off of bup/nx completely. In addition data about patient satisfaction with their MAT program in those who chose to taper and those who did not are presented.

METHODS

The study is a retrospective case series chart review of patients stable on long-term outpatient MAT and fully adherent with a comprehensive sobriety support program who were receiving bup/NX between the years of 2003 through 2017. All patients met criteria to be considered in sustained full remission from their opioid use disorder. We collected the following demographic data: patient age, sex, race, insurance status, employment, urine toxicology history, bup/NX dosage history, outpatient program adherence, and withdrawal symptoms if tapered. In addition, a validated Satisfaction with Life Scale wellbeing survey was also given to all patients to assess self-wellbeing. Patients were asked to assess their wellbeing satisfaction scores prior to their start of bup/NX treatment, and also after receiving bup/NX MAT.

Chart 1

DEMOGRAPHICS	PERCENT
Male	64.3%
Female	35.7%
Employed	64.3%
Caucasian	73.8%
African American	19%
Hispanic	7.1%

Chart 2

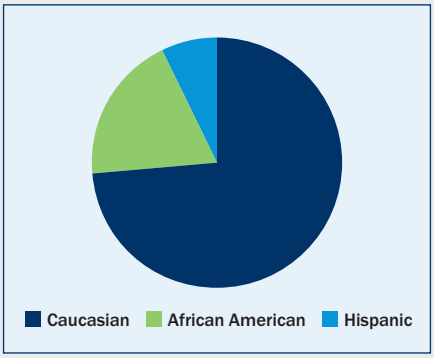
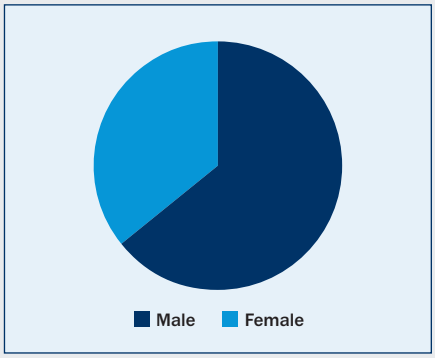


Chart 3



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Lowest effective dose of Buprenorphine in stable office based opioid maintenance treatment

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Chart 4

PATIENT POPULATION	
Patients agreeing to slow dose tape	45
Patient that did not agree to taper	56
Patients able to taper to zero	5
Patient unable to tolerate taper	4
Total	110

Chart 5

DOSE ADJUSTMENT DATA OF PATIENTS AGREEING TO TAPER REGIMENS	
Average bup/NX dosage prior to taper	11 mg
Median bup/NX dosage prior to taper	12 mg
Range of dosages	6mg –16mg
Average bup/NX dosage prior to taper	5.4 mg
Median bup/NX dosage prior to taper	5.5mg
Range of dosages	0mg – 12 mg

The taper option was presented to patients in sustained full remission from opioid use disorder on long-term bup/NX MAT through the question: "now that you have done so well for so long in sobriety… how long would you like to be on this medication, and what is your interest in a very slow partial taper of your dose?" The ultra-slow taper involved decreases of 1-2 mg every 3-4 months, and all dose decreases were initiated with the patient's agreement. If at any time the patient chose not to taper, or to reverse a previous dose decrease this was done immediately.

RESULTS

45 of 101 patients expressed interest in attempting a slow dose taper while 56 declined to taper and remained on their original dose. Of the 45 taper attempting patients, their average length of time on stable MAT was 58.1 months with a range of 6 to 130 months and median length of 47 months. Characteristics of those agreeing to dose adjustment: 35. 7% were female, 64. 3% male, 64. 3% employed, 73. 8% were Caucasian, 19% African American, 7. 1% Hispanic. All patients in the MAT Clinic had already completed an IOP and Aftercare program, ongoing 12 step participation, regular urine toxicology screening and prescription monitoring program checks. The average daily bup/NX dosage of patients prior to taper was 11 mg with a range of 6 mg to 16 mg. The ultra-slow taper approach produced minimal withdrawal symptoms (some mild increase in self-reported anxiety in the two weeks following a dose decrease), no increase in opioid cravings and no relapse events. The average final bup/NX dose at the time of data gathering for taper patients was 5.4 mg with a range of 0 mg to 12 mg. Of the 45 patients who chose to taper, 5 patients reduced their dose to zero, 4 patients were unable to tolerate the taper at all were returned to their initial bup/NX dose. There was no report of relapse in patients who began tapering, and there were no abnormal UDS results in this group.

Of the 101 patients in long-term stable MAT clinic, 66 patients completed the wellbeing assessment survey. Of these 66 patients, 21 patients participated in dose adjustment while 45 did not. The average pretreatment wellbeing satisfaction scores of patients agreeing to dosage adjustment was 6.76. The average pretreatment wellbeing satisfaction scores of patients who did not participate in dose adjustments was 6.2 (p=.287). The t-value comparing these two groups is 0.5648. The average posttreatment wellbeing satisfaction score of taper patients was 24.05 and of the non-taper patients was 23.38 (p=.253). The t-value comparing these two groups is 0.668.

CONCLUSIONS

Patients in sustained full remission, two or more years enrolled in a comprehensive sobriety support program combined with bup/NX MAT, can be safely screened for their willingness to very gradually reduce their bup/NX dosage. In motivated patients, gradual dose reductions in the range of 1-2 mg Q3 months appears to be safe and well tolerated. The act of screening patients on long term stable MAT regarding a possible gradual tapering of dose often results in patient agreement to participate in a taper attempt. The efficacy of dose adjustment in long term stable patients in MAT as measured by patient satisfaction, withdrawal, and cravings is safe and well tolerated. There was no appreciable difference in wellbeing satisfaction in patients who agree to dose adjustments verses those who did not agree. In stable patients on MAT, discussion of dose adjustments and gradual dose tapering can be considered and in our experience was welcomed by almost half of the patients in our clinic.

References

1. Access to and Payment for Office-Based Buprenorphine Treatment in Ohio. Parran TV, Muller JZ, Chernyak E, Adelman C, Delos Reyes CM, Rowland D, Kolganov M. Subst Abuse. 2017 Jun 13;11:1178221817699247. doi: 10.1177/1178221817699247.
2. A randomized trial to evaluate primary care clinician training to use the Teachable Moment Communication Process for smoking cessation counseling. Flocke SA, Step MM, Antognoli E, Lawson PJ, Smith S, Jackson B, Krejci S, Parran T, Marsh S. Prev Med. 2014 Dec;69:267-73. doi: 10.1016/j.ypmed.2014.10.020. Epub 2014 Oct 30
3. Long-term outcomes of office-based buprenorphine/naloxone maintenance therapy. Parran TV, Adelman CA, Merkin B, Pagano ME, Defranco R, Ionescu RA, Mace AG. Drug Alcohol Depend. 2010 Jan 1;106(1):56-60. doi: 10.1016/j.drugalcdep.2009.07.013. Epub 2009 Aug 29
4. Bouchez J, Beauverie P, Touzeau D. Substitution with buprenorphine in methadone- and morphine sulfate–dependent patients. Preliminary results. Eur Addict Res 1998; 4(Suppl 1):8–12.
5. Amass L, Kamien JB. A controlled comparison of the buprenorphine-naloxone tablet and methadone for opioid maintenance treatment : interim results. In: Harris L S, ed. Problems of drug dependence 199. NIDA Research Monograph Series. Bethesda, MD: National Institute on Drug Abuse, 2001.
6. Chutuape MA, Johnson RE, Strain EC, et al . Controlled clinical trial comparing maintenance treatment efficacy of buprenorphine (buprenorphine), levomethadoneadoneadyl acetate (LAAM) and methadone (m). I n : Harris L S, ed. Problems of drug dependence 1998 (NDA Research Monograph 179). Rockville, MD: National Institute on Drug Abuse. 1999:74.

Chart 6

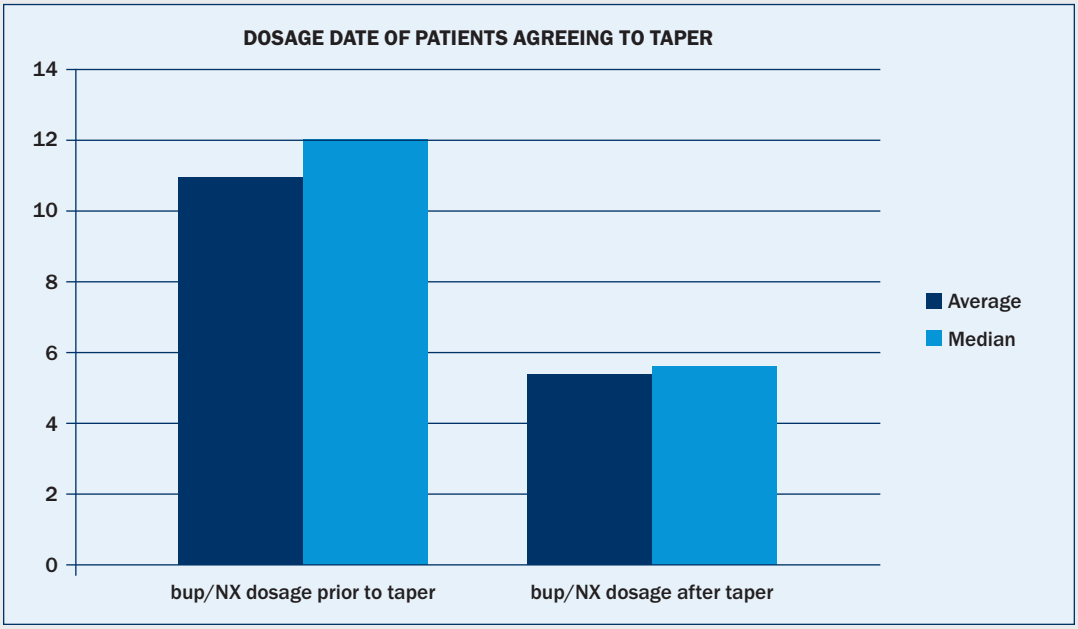
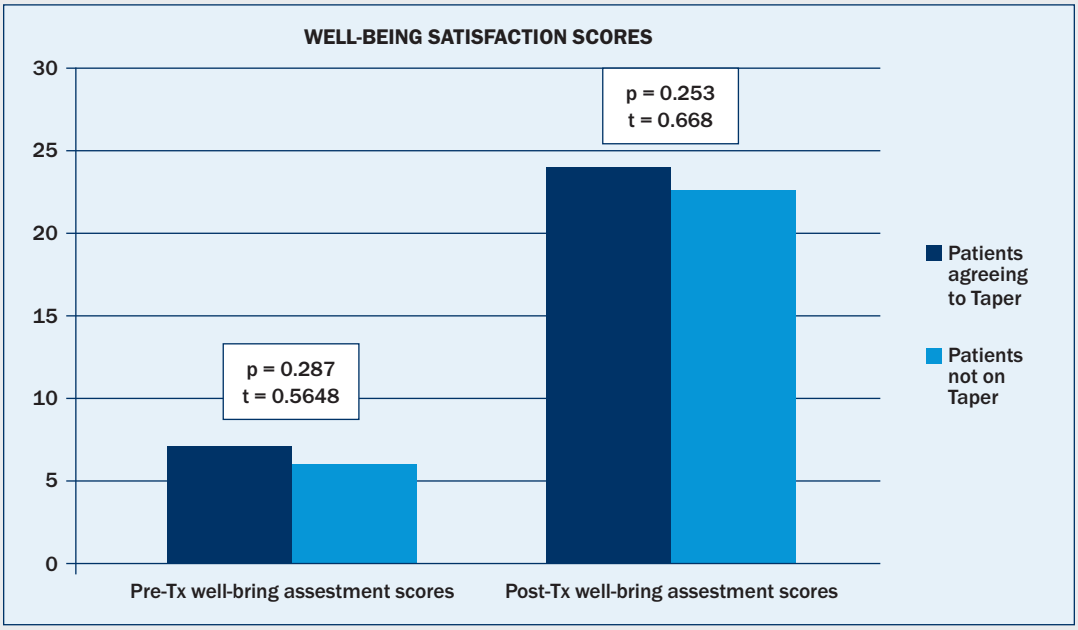


Chart 7



7. Stain EC, Stitzer ML. Buprenorphine versus methadone in the treatment of opioid dependence: self -reports, urinalysis and Addiction Severity Index J Clin Psychopharmacol 1996; 16: 58–67.
8. Walsh SL, Preston KL. Clinical pharmacology of buprenorphine: ceiling effects at high doses . Clin Pharmacol Ther 1994; 55: 569–580.
9. Weiss RD, Potter JS, Fiellin D, Byrne M, Connery HS, Dickinson W, et al. A Two-Phase Randomized Controlled Trial of Adjunctive Counseling during Brief and Extended Buprenorphine-Naloxone Treatment for Prescription Opioid Dependence. Arch Gen Psychiatry. 2011;68(12):1238–46.

Compassion Fatigue is Still Unacceptably High Among Internal Medicine Residents

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INTRODUCTION

Compassion fatigue is common among practicing physicians and residents. Factors driving its prevalence may differ with care settings.

OBJECTIVES

We estimated the prevalence of compassion fatigue (CF) among internal medicine residents and attendings at an inner-city community hospital. We also investigated factors that may be associated with CF.

METHOD

We distributed anonymous survey to attending and resident physicians at the St. Vincent Charity Medical Center in October 2016. The survey included patient demographics and the 30-item questionnaire of the Professional Quality of Life Scale version 5 (ProQL 5). The demographic information collected were age, gender, marital status, having dependent child and chronic illness, use of alcohol. The ProQL5 measures compassion satisfaction (CS) and compassion fatigue (burnout and secondary traumatic stress).

STATISTICAL ANALYSIS

Raw scores on the ProQL5 three subscales were converted to standardized t score. Per the ProQL manual we identified respondents with compassion fatigue by scores average and above on either burnout (BO) or secondary traumatic stress (STS) or both. We presented continuous variables as mean with standard deviation and categorical variable as counts and percentages. We compared ProQL5 subscales scores with participants' demographics using two-sample t test, ANOVA and Fisher exact test where appropriate. Analysis was performed with Stata version 12; Tests were two sided and statistical significance was defined by p-values < 0.05.

RESULTS

There was a total of 76 respondents; 51 (65%) were male and 25(35%) were female. Forty-nine (64%) were residents at various levels of training and 28(36%) were attending physicians. The residents included 19(40%) in their first year, 15(31%) in second year and 14(29%) in the final year. The attending physicians consisted of 14(50%) in primary care practice and 14(50%) who were specialist. Per ProQL5 survey scores 38(78%) of respondents had compassion fatigue compared with 14(52%) of attending physicians. There was no significant difference between residents at different levels of training on compassion fatigue and satisfaction scales. On other attending physicians compared with residents, had higher scores for CS (55 vs. 47 p=0.001), lower scores for BO (45.7 vs 52.3, p=0.006) and lower scores for STS (45.7 vs. 51.8, p=0.017). Fifty-two percent of residents had compassion fatigue while 37% of attendings did.

CONCLUSION

Compassion fatigue unacceptably high among internal medicine residents and every effort should be made to combat these high levels.

INTRODUCTION

The first principle of medical ethics in the American Medical Association's guidelines states "A physician shall be dedicated to providing competent medical care with compassion and respect for human dignity and rights" [1]. Compassion is paramount to the effective practice of medicine [2] and is the feeling that arises in witnessing another's suffering and motivates a subsequent desire to help [3]. Compassionate caring is associated with greater patient satisfaction, better doctor-patient relationships and improved psychological states among patients [4]. However, it has emerged that healthcare providers often suffer from a dearth of compassion while providing care. Compassion fatigue can be defined as a lack of sympathetic pity and concern for the sufferings or misfortunes of others [5]. The term was coined by Johnson in 1992 while studying nurses in emergency rooms who were burned out [2]. Compassion fatigue can lead to an acute onset of physical, emotional and work-related symptoms that affect patient care and relationships [6].

Compassion fatigue has been extensively studied in other healthcare professions such as nurses and social workers. However, very little research studying this concept has been conducted among internal medicine residents, though there is evidence of widespread burnout in this population [7].

OBJECTIVES

1. To determine the prevalence of compassion fatigue among internal medicine residents at St. Vincent Charity Medical
2. To determine prevalence of compassion fatigue among internal medicine attending physicians.
3. To compare residents and attending physicians on Professional Quality of Life Scale (PRoQL) version 5 subscales
4. Evaluate the relationship between demographic variables and ProQL subscales.

METHOD

The study was a cross-sectional survey of the internal medicine residents and attending physicians at St Vincent Charity Medical Center in October of 2016. The survey which was anonymous included patient demographics and the 30-item questionnaire of the Professional Quality of Life Scale version 5 (ProQL 5). The demographic information collected were age, gender, marital status, having dependent child and chronic

Table 1

CHARACTERISTICS	PARTICIPANTS, N (%)
AGE	
20-29	16 (22)
30-39	34 (45)
40 and above	25 (33)
GENDER	
Male	51 (65)
Female	25 (35)
MARITAL STATUS	
Married	51 (68)
Single	23 (31)
Widowed	1 (1)
CHILD DEPENDENT	
Yes	40 (53)
No	36 (47)
CHRONIC ILLNESS	
Yes	16 (21)
No	60 (79
ALCOHOL CONSUMPTION	
Yes	39 (51)
No	37 (49)
PROFESSIONAL LEVEL	
Resident	49(64)
Attending	28(36)
RESIDENT	
PGY 1	19(40)
PGY2	15(31)
PGY 3	14(29)
ATTENDING	
Primary care	14(50)
Specialist	14(50)
HEARD COMPASSION FATIGUE	
Yes	36(47)
No	40(53)
EXPERIENCED COMPASSION FATIGUE	
Yes	18(25)
No	53(75)
RESOURCES AVAILABLE	
Yes	14(21)
No	53(79)
COMPASSION FATIGUE (OVERALL)	
Above average	52(68)
Below average	24(32)
COMPASSION FATIGUE	
Residents	
Above average	38(78)
Below average	11(22)
Attendings	
Above average	14(52)
Below average	13(48)
COMPASSION SATISFACTION (OVERALL)	
Above average	38(50)
Below average	38(50)
COMPASSION SATISFACTION	
Residents	
Above average	17(35)
Below average	32(65)
Attendings	
Above average	21(78)
Below average	6(22)

Table 1. Summary characteristics of respondents and measures of ProQOL subscales.

illness, use of alcohol. The ProQL5 is a validated tool that measures compassion satisfaction (CS) and compassion fatigue as experienced by participants in the last 30days. Compassion fatigue is a composite of burnout (BO) and secondary traumatic stress scales (STS) [8,9].

Burnout is defined as exhaustion and frustration resulting from stressful, demanding environments [10], and secondary traumatic stress is described as experiencing traumatization through hearing and supporting another through a traumatic event [11]. The reliability of the PRoQOL tool has been established by Stamm, with an alpha coefficient of .88, .75 and .91 for the CS, BO and STS scales respectively [8]. The 30-item PRoQOL instrument took approximately 10 minutes to complete, and the response choices were administered in a 5-point Likert scale format (1=never to 5=always) [12].

The ProQOL may be scored using the computed raw score from the survey or by converting raw score to standardized

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t scores. A raw score of 22 or less is considered low, between 23 and 41 is considered average, and 42 or more is considered high. For the standardized scoring, average score is 50 with standard deviation of 10. About 25% of people score higher than 57 (75th percentile) and about 25% of people score below 43 (25th percentile). A high score on CS scale is consider good while a high score on either BO or STS is considered bad and suggestive of compassion fatigue. [8]

The study was approved my the St. Vincent Charity Medical Center Institutional Review Board.

STATISTICAL ANALYSES

Raw scores on the ProQL5 three subscales were converted to standardized t score. Per the ProQL manual we identified respondents with compassion fatigue by scores above average on either burnout (BO) or secondary traumatic stress (STS) or both. We presented continuous variables as mean with standard deviation and categorical variable as counts and percentages. We compared ProQL5 subscales scores with participants' demographics using t test, ANOVA and Fisher exact test. We used logistic regression to evaluate association between demographics and compassion fatigue which is composite (BO and STS). Analysis was performed with Stata version 12; tests were two sided and statistical significance was defined by p-values < 0.05.

RESULTS

There was a total of 76 respondents, representing 84.5% of people surveyed. Forty-nine (96%) out of 51 total residents responded to the survey. Of the attending physicians, 27 (82%) out of 33 responded. Fifty-one (65%) of respondents were male. Majority (34) of respondents were aged 30-39 years (45%), with 16 (22%) aged 20-29 years. Of the attending physicians, 50% (14) were in primary care, whilst 14 (50%) were in specialty care. Considering residents, 19 (40%) were in PGY1, 15 (31%) were in PGY2 and 14(29%) were in PGY3. Forty (53%) of respondents had at least a dependent child, and the rest did not. Thirty-six (47%) of respondents had heard about compassion fatigue and the rest had not; only eighteen (25%) of respondents reported they had experienced it, and 14 (21%) knew of available resources to deal with compassion fatigue (Table 1).

COMPASSION SATISFACTION (CS)

Seventeen (35%) of residents had average and above CS and 32(65%) had low to average level of CS. Twenty-one (78%) of attending physicians had average and above CS and 6(22%) had below average CS. There was a significant difference between residents mean CS compared with attending physicians, the latter had higher CS (47.3 vs 55.2, p=0.001). There was no significant between residents at different levels of training and across the various demographic variables Table 3.

COMPASSION FATIGUE (CF)

Thirty-eight (78%) of internal medicine residents had CF, i.e., they scored 50 and above on either the BO or STS scales or both. Eleven (22%) of residents scored below average and were considered not to have CF. Attending physicians did better than residents, 14(52%) scored 50 and above while 13(48%) were below average.

Overall CF among respondents was 52 (68%), Table 1.

BURNOUT (BO)

Across the demographic and baseline characteristics of respondents a significant difference in BO was only observed between attending physicians and residents. Attending physicians had a relatively lower BO compared with residents (45.7 vs 52.3, p=0.006). There was no significant statistical difference between respondents who reported having experienced CF and those who did not, Table 2.

SECONDARY TRAUMATIC STRESS (STS)

Attending physicians compared with residents had lower STS (45.7 vs 51.8, p=0.017). Also, respondents who reported having experienced compassion fatigue did have higher STS compared with respondents who did not (55.2 vs 47.6, p=0.005). There was no significant difference in STS across the various demographic and baseline variables, Table 2.

DISCUSSION

Our study showed a high prevalence of compassion fatigue among internal medicine residents, 78% them scoring average and above on either BO or STS or both. Our study finding is similar to previous estimates 76% burnout among internal medicine residents [13]. Factors that have been associated with burnout include time demands, difficult job situations and interpersonal relationships, work organization and planning, and lack of control. [14] The reasons why internal medicine residents have highest prevalence of compassion fatigue compared with other specialties is not well established. Internal medicine involves a very broad spectrum of diseases and perhaps IM residents have to consume a large volume of learning material within 3years compared with surgical specialties whose training is spread over a longer duration.

Majority of residents in our study had below average compassion satisfaction. These observations were across the 3 postgraduate levels of residents training. This finding somewhat contradicts study by Foreback et al which showed increased mean empathy score in community-based IM residents in the beginning of resident's training and decreased empathy by end of training. [15]

Attending physicians had high prevalence of compassion fatigue (52%), nonetheless better than residents. This finding is similar to what has been reported among practicing physician (54%) with at least one symptom of burnout. [16] The level of compassion satisfaction among attending physicians was significantly higher compared with residents. This difference between residents and attending physicians may be attributed to length of years worked. Attending physicians having had more years of work experience and may have had more time to build up such key skills as empathy, self-empathy and resilience, to help them develop compassion satisfaction. [17] Residents, on the other hand, may have had limited time to build up coping mechanisms to help them deal with the emotional toll of caring for patients.

LIMITATIONS

Our study was conducted in a single center community hospital with small sample size. The findings may not apply to internal medicine residents and attending physicians in for instance large tertiary academic medical centers.

It is important to put in context that the survey asked respondents' experience in the last 30days of

Table 2

CHARACTERISTICS	COMPASSION SATISFACTION		COMPASSION FATIGUE			
			Burnout Stress		Secondary Traumatic	
	Mean, SD	P value	Mean, SD	P value	Mean, SD	P value
AGE		0.587		0.222		0.470
20-29	45.1±10.6		51.8±7.4		50.9±8.2	
30-39	50.4±10.2		50.2±11.1		50.5±10.5	
40 and above	53.0±8.5		48.0±9.4		48.5±11.0	
GENDER		0.877		0.637		0.896
Male	49.9±11.2		50.4±10.6		50.1±9.6	
Female	50.3-±7.0		49.2±8.8		49.8±10.8	
MARITAL STATUS		0.795		0.385		0.831
Married	49.4±10.0		50.8±9.4		50.1±10.0	
Single	51.4±9.5		47.8±11.0		49.8±10.4	
Widowed	60.0±10.0					
CHILD DEPENDENT		0.498		0.832		0.577
Yes	50.8±10.3		50.1±10.1		49.3±9.2	
No	49.2±9.8		49.6±10.0		50.6±11.0	
CHRONIC ILLNESS		0.132		0.086		0.345
Yes	53.3±9.2		51.0±10.0		47.7±7.4	
No	49.0±10.0		46.2±9.2		50.6±10.5	
ALCOHOL CONSUMPTION		0.411		0.695		0.081
Yes	50.9±9.7		49.5±10.0		48.0±8.4	
No	49.0±10.3		50.4±10.0		52.2±11.2	
PROFESSIONAL LEVEL		0.001		0.006		0.017
Resident	47.3±10.4		52.3±10.0		51.8±10.4	
Attending	55.2± 6.7		45.7±8.6		45.7±7.6	
RESIDENT		0.595		0.820		0.215
PGY 1	49.5± 9.1		50.8- 9.4		50.6- 10.4	
PGY2	45.3±11.6		52.1-10.4		53.0-7.0	
PGY 3	46.5±11.2		54.0- 11.0		50.3-11.4	
ATTENDING		0.568		0.748		0.294
Primary care	54.0±5.6		46.8- 9.0		45.0- 9.2	
Specialist	55.6±7.8		45.7-9.2		49.8- 11.6	
HEARD CF		0.390		0.081		0.526
Yes	48.9- 9.4		52.0-8.9		50.8- 11.6	
No	50.9- 10.4		48.0- 10.6		49.2- 8.3	
EXPERIENCED CF		0.636		0.246		0.005
Yes	49.0±10.8		52.7- 7.5		55.2- 10.4	
No	50.2±9.8		49.5-10.4		47.6- 9.1	
RESOURCES AVAILABLE		0.063		0.432		0.738
Yes	54.1±7.2		48.5±9.2		50.8±10.7	
No	48.4±10.6		51.0±10.5		49.8±10.2	

Table 2. Comparisons of participant characteristics by compassion satisfaction and fatigues t scores

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A Subtle Spontaneous Tension Pneumothorax in a stable patient

By **Randol Kennedy, MD**[1]

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INTRODUCTION

Although tension pneumothorax is known to be associated with severe respiratory distress or hemodynamic instability, this potentially life-threatening diagnosis may uncommonly present less tellingly in an atraumatic patient.

CASE

This is a case of a 60-year-old male with a past medical history of recurrent bronchitis, schizophrenia, depression and diabetes who had a sudden onset, severe, progressive shortness of breath an hour and a half prior to presentation. This occurred at rest, did not worsen with exertion and was not associated with chest pain, palpitations or diaphoresis.

Two weeks before his presentation was started on a week's course of doxycycline and prednisone because of interment cough productive of whitish sputum and associated dyspnea but no hemoptysis.

He denied prior chest trauma or COPD. He, however, had a 40-pack year smoking history with no significant occupational or environmental exposures. No pulmonary function testing had ever been done despite his extensive smoking history and recurrent bronchitis. He further denied a family history of pneumothorax, lung disease or Marfan's syndrome.

On presentation to the emergency department, he was in no respiratory distress. Vitals signs were temperature 36.5oC, pulse 55 beats/min, respirations 17 breaths/min, oxygen saturation 95% on room air and blood pressure 123/84 mmHg. An initial respiratory exam revealed symmetrical chest expansion despite a decrease in breath sounds to the left lung. Percussion, vocal resonance or tracheal deviation was not reported. Examination of other organ systems was unrevealing.

A chest x-ray (Fig. 1a) revealed a large left-sided tension pneumothorax. This was managed emergently by placing a chest tube. A repeated chest x-ray (Fig. 1b) after chest tube placement showed re-expansion of the left lung. Complete blood count and basic metabolic panel were within normal limits. Arterial blood gas analysis on room air showed hypoxia (arterial oxygen partial pressure 62mmHg).

He was admitted to the intensive care unit (ICU) for close observation while being worked up for a cause of his tension pneumothorax. A thoracic CT obtained after chest tube placement (Fig. 2) revealed a 6.3 cm pneumatocele/bulla in the superior segment of the left lower lobe, the likely source of the pneumothorax. Similar cysts were also seen alongside the left lower lobe. Upper lobe predominant centrilobular emphysema was also present which appeared to be independent of these cysts. A primary versus a secondary cause of spontaneous pneumothorax was entertained due to the appearance of the cysts as well as the patient's risk factors.

He remained stable, and his hospital course was uneventful. The chest tube was removed on the third day of the patient's hospital stay, and he was discharged in stable condition a day after.

Figure 1

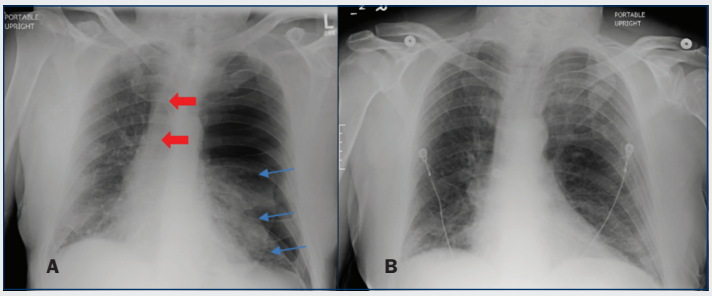

Figure 1. Chest x-ray of tension pneumothorax (A) as evidence of significant mediastinal shift (red arrows) and left lung collapse (blue arrows). (B) Lung re-expansion post chest tube placement.

Figure 2

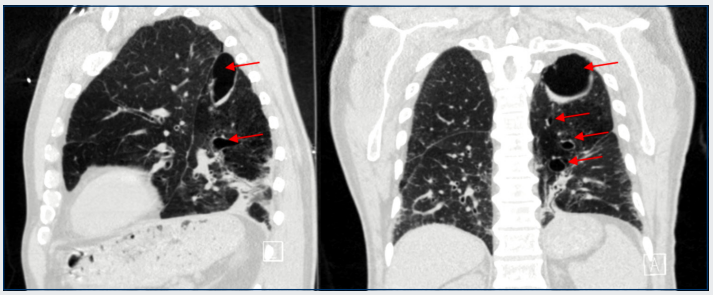

Figure 2. CT scan of lung showing a large bulla/pneumatocele in left upper lobe and smaller cysts in left lower lobe.

DISCUSSION

The annual incidence of spontaneous pneumothorax in men is around 18-26 per 100,000 cases [1]. Secondary spontaneous pneumothorax is more common and usually presents in patients with a known background of severe lung disease. Our patient had a recurrent history of bronchitis, and the presence of emphysema suggested a possibility of secondary pneumothorax. An estimated 1-2% of spontaneous pneumothoraces will be under tension [2], with fewer reports highlighting a more subtle presentation [1,3]. Typical definitions of tension pneumothorax have included a clinical presentation of respiratory distress and hemodynamic instability, evidence of large pneumothorax on clinical exam and radiological evidence of mediastinal shift if imaging is taken [3,4]. These definitions have been derived from more common presentations of tension pneumothorax associated

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A case of complicated appendicitis presenting as necrotizing soft tissue infection of the right flank

By **James Tamesis, MD[1]; Hunter Mwansa, MD[1]; Meyyappan Somasundaram, MD[1]; Keyvan Ravakhah, MD, MBA[1]**

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INTRODUCTION

Severe soft tissue infections like necrotizing fasciitis may be mimicked by cellulitis especially when the clinical course is subtle. Trauma to the skin typically provides entry for bacteria to cause the infection. On rare occasions, however, necrotizing fasciitis may be as a result of contiguous spread of an intra-abdominal infection such as appendicitis.

Acute appendicitis is a common cause of acute abdominal pain and abdominal emergencies. It is usually caused by an obstructive process of the appendiceal lumen with ensuing stagnation of secretions and bacterial growth, these acting in concert cause inflammation and build-up of intraluminal pressure distal to the obstruction. Left unattended appendicitis may lead to severe complications including appendiceal ischemia and necrosis, peritonitis, sepsis, and potentially death.

Figure 1

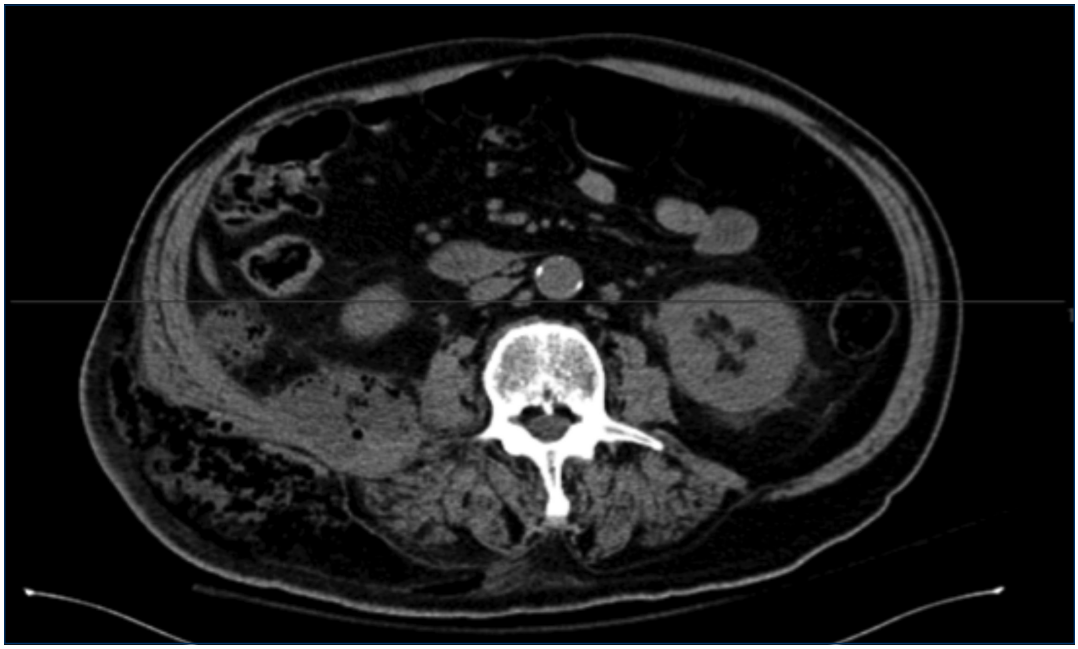

Fig 1. Subcutaneous and retroperitoneal gas

CASE PRESENTATION

We present a 69-year-old male with a medical history of Alzheimer's dementia, Diabetes mellitus type 2, and peripheral artery disease on clopidogrel and cilostazol who presented to his primary care physician with complaints of right flank swelling noted by his caretaker for a day. Dementia limited our ability to elicit a reliable history from the patient. The primary caretaker who was the patient's daughter mentioned noticing a progressively increasing swelling of the patient's right flank for the past 24 hours. She had also noticed that the patient was less ambulant. However, the patient did not complain of any fever, chills, abdominal pain or anorexia. He was admitted for evaluation and management of a possible right flank abscess versus hematoma. Physical exam was remarkable for a blood pressure reading of 90/60 mmHg and tachycardia of 110/min; he had a 20x20cm, fluctuant, differentially warm swelling over the right iliac crest with a crepitant feel to touch. Work-up showed elevated white cells of 21,000/uL and markedly elevated inflammatory markers (Erythrocyte sedimentation rate (ESR) >120mm/hr, and C-reactive protein (CRP) >190 mg/L). Imaging of the abdomen with computed tomography scan was suggestive of appendicular rupture and extensive necrotizing soft tissue infection involving the right retroperitoneal fat, right quadratus lumborum, right iliopsoas muscle and right superficial fat and subcutaneous tissue overlying the right flank (Figures 1-3). The patient was managed per sepsis protocol and received intravenous fluids clindamycin, vancomycin and meropenem. He subsequently had debridement of necrotic tissue and drainage of the abscesses. Intraoperative deep tissue cultures grew *Actinomyces odontolytica*, and two different strains of *Escherichia coli* pointing towards an intraabdominal source, with the appendix as the likely culprit of the extensive necrotizing infection. Antibiotics were then changed to ampicillin-sulbactam based on these cultures and sensitivity studies. The patient was discharged to a post-acute care facility (LTAC) for 6 weeks of antibiotic therapy.

Figure 2

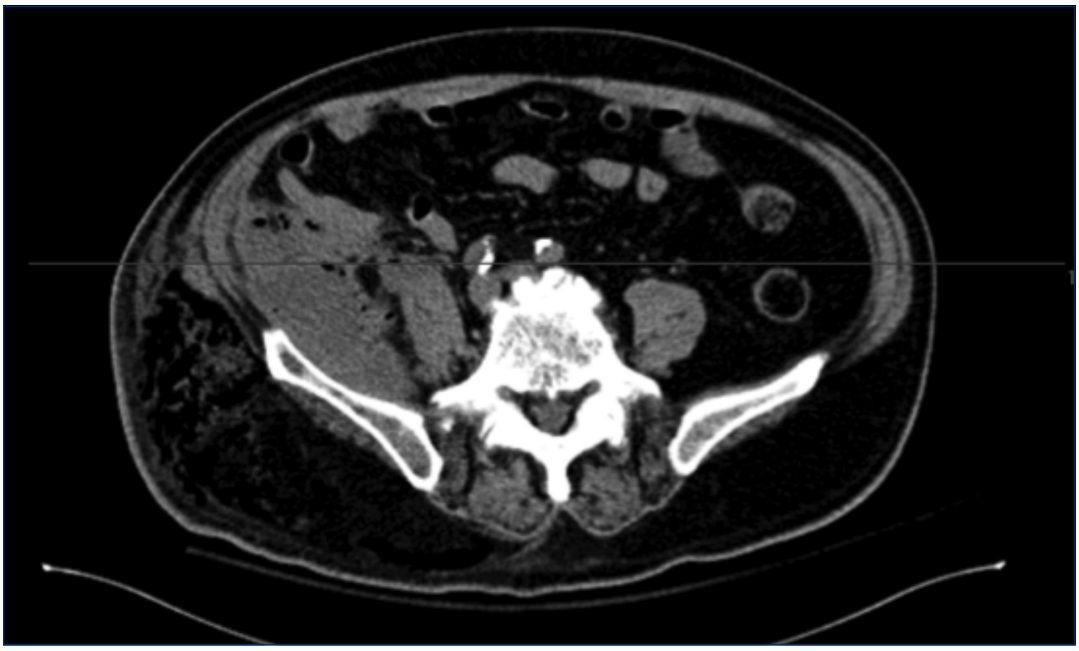

Fig 2. Appendiceal abscess

The patient's condition improved, and he was eventually discharged home.

DISCUSSION

Despite acute appendicitis being one of the more common causes of acute abdomen, it can potentially be missed in individuals who are not able to provide a reliable history to spell out the typical symptomatology and sequelae associated with the disease process as was the case with our dementia patient. Complications of appendicitis include perforation, abscess, peritonitis and sepsis. Rarely though, particularly in retrocecal appendix, a ruptured appendix may result in necrotizing fasciitis. This presentation is rarely reported, with one case report citing only 13 documented cases [1]. Despite the actual pathogenesis being unknown, it is postulated that the infection spreads through two areas of relative weakness in the abdominal wall, particularly the inferior lumbar triangle and the superior lumbar triangle [1]. Early recognition and initiation of broad-spectrum antibiotics followed by surgical debridement of the affected area is crucial in the management of such cases.

Actinomyces odontolyticus is an infrequent cause of invasive bacterial disease, and an even rarer cause of perforated appendicitis. *Actinomyces odontolyticus* is a filamentous Gram-positive bacillus found mainly in the oropharynx, gastrointestinal tract, and urogenital tract [2]. Actinomycosis related appendicitis accounts for only about 0.02%-0.06% of cases and is typically diagnosed only after appendiceal rupture due to its indolent course [3]. Treatment typically consists of beta-lactams, particularly penicillin G and amoxicillin as they are not known to produce beta-lactamases [2].

CONCLUSION

This case report presents a rare sequela of complicated appendicitis with perforation that resulted in involvement of the retroperitoneum and an attendant rapidly progressing necrotizing soft tissue infection. In dealing with retroperitoneal necrotizing soft tissue infections, and infections of the abdominal wall, clinicians should consider intra-abdominal sources, particularly in individuals who cannot provide a detailed history.

References

1. Hua, J. Yao, L., He, Z., Xu, B., Song, Z., Necrotizing fasciitis caused by perforated appendicitis: a case report. International Journal of Clinical and Experimental Pathology. 2015; 8(3): 3334–3338.
2. Valour, F., Sénéchal, A., Dupieux, C., Karsenty, J., Lustig, S., Breton, P., Gleizal, A., Boussel, L., Laurent, F., Braun, E., Chidiac, C., Ader, F., Ferry, T. Actinomycosis: etiology, clinical features, diagnosis, treatment, and management. Infection and Drug Resistance. 2014; 7: 183–197.
3. Gómez-Torres, G.A. Ortega-Gárcia, O.S. Gutierrez-López, E.G. Carballido-Murguía, C.A. Flores-Rios, J.A. López-Lizarraga, C.R. Bautista López, C.A. and Ploneda-Valenciaa,C.F. A rare case of subacute appendicitis, actinomycosis as the final pathology reports: A case report and literature review. International Journal of Surgery Case Reports. 2017; 36: 46–49.

Figure 3

Fig 3. Necrotizing infection involving muscles of the back, subcutaneous tissue

Compassion Fatigue is Still Unacceptably High Among Internal Medicine Residents

(cont. from page 13)

work and this can be associated with recall bias. Also, residents were in different clinical rotations during survey, some rotations were more intense than others. This could have affected resident responses on the survey. In spite of the above limitations our study results were similar to previously published studies.

CONCLUSION

High levels of compassion fatigue still persist among internal medicine residents more than a decade after it was first published. Interventions by graduate medical education (GME) seems not have availed much. Compassion fatigue can herald clinical depression. [18] and the implications of poor physician wellbeing on patient safety and healthcare quality is well known [15]. The ever changing and complex healthcare environment will continue to impose stress and increase the risk of compassion fatigue.[19]

We recommend bold and effective steps by graduate medical education (GME) and stakeholders to reverse the trend of compassion fatigue (burnout and secondary traumatic stress) among residents.

References

1. AMA. *AMA's Code of Medical Ethics.* Chicago : American Medical Association, 2001.
2. Fernando, AT and Consedine, NS. *Barriers to medical compassion as a function of experience and specialization; Psychiatry, Pediatrics, Internal Medicine, Surgery and General Practice.* 6, 2017, Journal of Pain and Symptom Management, Vol. 53, pp. 979-987.
3. Goetz, JL, Keltner, D and Simon-Thomas, E. *Compassion: an evolutionary anaysis and empirical reivew.* 2010, Psychol Bull, Vol. 136, pp. 351-374.
4. Fogarty, L.A, et al. *Can 40 seconds of compassion reduce patient anxiety.* 17, 1999, J Clin Oncol, pp. 371-379.
5. Stevenson, A. Oxford University of English. Oxford, England : OUP, 2010.
6. Lombardo, B and Eyre, C *Compassion fatigue: A nurse's primer.* 1, Online Journal of Issues in Nursing, Vol. 16. Manuscript 3.
7. *Prevalence of Resident Burnout at the Start of Training.* Ripp, J, et al. 3, 2010, Teach =Learn Med, Vol. 22, pp. 172-175.
8. Stamm, B.H. ProQOL concise manual. *www.proqol.org.* [Online]
9. FIgley, C., & Stamm, B. (1996). Psychometric review of compassion fatigue self test. *Meas stress trauma adapt.*, 127-128
10. Baker, T. (2012). Burnout. In C. (. Figley, Encyclopedia of trauma:an interdisciplinary guide. Sage Publications.
11. Bride, B. (2012). Secondary traumatic stress. In C. (. Figley, *Encyclopedia of trauma: An interdisciplinary guide.* Sage Publications.
12. Klein, C., Rggenbach-Hays, J., Sollenberger, L., Harney, D., & McGarvey, J. (2017). QUality of Life and Compassion Satisfaction in clinicians: A Pilot Intervention Study for Reducing Compassion Fatigue. American Hournal of Hospice & Palliative Medicine, 1-7.
13. Shanafelt TD, *et al.* Burnout and Satisfaction with Work-Life Balance among US Physicians Relative to the General US Population. *Archives of Internal Medicine* 172, 1377-1385, doi:10.1001/archinternmed.2012.3199 (2012).
14. Ishak WW, et al. Burnout during Residency Training: a literature review. Journal of Graduate Medical Education 1, 236-242, doi:10.4300/ JGME-D-09-00054.1 (2009).
15. Foreback, J., Kusz, H., Lepisto, B. L., & Pawlaczyk, B. (2018). Empathy in Internal Medicine Residents at Community-based Hospitals: A Cross-sectional Study. *Journal of Medical Education and Curricular Development.* https://doi.org/10.1177/2382120518771352
16. Shanafelt TD, *et al.* Changes in Burnout and Satisfaction with Work-Life Balance in Physicians and the General US Working Population Between 2011 and 2014. *Mayo Clin Proc* 90, 1600-1613, doi:10.1016/j.mayocp.2015.08.023 (2015).
17. Bhutani J, Bhutani S, Balhara YP, Kalra S. Compassion fatigue and burnout amongst clinicians: a medical exploratory study. *Indian J Psychol Med.* 2012;34(4):332–337. doi:10.4103/0253-7176.108206
18. Toker, S. and Biron, M *Job burnout and depression: Unraveling their temporal relationship and considering the role of physical activity.* 3, 2012, J. Appl Psychol, Vol. 97, pp. 699-710.
19. Crowe, L *Identifying the risk of compassion fatigue, improving compassion satisfaction and building resilience in emergency medicine.* 2016, Emergecy Medicine Australasia, Vol. 28, pp. 106-108.

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(cont. from page 14)

with either penetrating trauma or barotrauma. However, cases such as the one we have described above have brought to question these defining signs of tension pneumothorax and whether radiological findings might be more defining of tension pneumothorax than the widely known and usually dramatic clinical presentation. Such peculiar cases highlight the sometimes-misleading perception of this medical emergency.

CONCLUSION

Spontaneous tension pneumothorax presentation can be accepted to present less dramatically than tension pneumothraox related to trauma and therefore may not occur with typical warning signs of hemodynamic instability.

References

1. Onuki T et al. Primary and Secondary Spontaneous Pneumothorax: Prevalence, Clinical Features, and In-Hospital Mortality. Can Respir J. 2017;2017:6014967. doi: 10.115/2017/6014967.
2. Holloway VJ, Harris JK. Spontaneous pneumothorax: is it under tension?. Emergency Medicine Journal 2000;17:222-223. doi: 10.1136/emj.17.3.222
3. Johnson M et al. An unusual case of primary spontaneous tension pneumothorax in a Jamaican female. West Indian Med J. 2014 Jun;63(3): 274-277. doi: 10.7727/wimj.2013.301.
4. Leigh-Smith S, Harris T. Tension pneumothorax – time for a re-think. Emerg Med J 2005;22:8-16. doi: 10.1136/emj.2003.010421

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