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### Effects of burnout amongst primary care providers

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## **EFFECTS OF BURNOUT AMONGST PRIMARY CARE PROVIDERS**

### **ABSTRACT**

**INTRODUCTION:** Physician burnout within the United States has been deemed an epidemic within the healthcare system with nearly 63% of physicians reporting burnout. The rate of burnout amongst Primary Care Providers (PCPs) is higher than other provider types at 70%. The presence of burnout affects the likelihood of medical errors, provider retention, and patient-provider communication. Fifty-six percent of PCPs that reported burnout also associated this burnout with their reason for leaving the practice. Physicians that are burnt out are less likely to find nonadherence in their patients, more likely to refer to specialists, and more likely to prescribe medications unnecessary.

**PURPOSE OF STUDY:** The purpose of this research was to analyze the effects of burnout amongst primary care providers and its impact on medical errors, provider retention, and patient-provider communication.

**METHODOLOGY:** The methodology for this qualitative study was a literature review as well as a semi-structured interview with an expert in managing primary care providers.

**RESULTS:** A 5% increase in the odds of a medical error was found if there was just a one-point increase in emotional exhaustion, which is one of the three aspects of burnout, among physicians. Primary Care Providers that reported burnout left the clinical medicine field at a higher rate than providers that did not report burnout. A survey was conducted of 6,695 United States physicians on if they were experiencing burnout, fatigue, or suicidal thoughts; of those participants, 10.5% reported making a major medical error, such as a mistaken diagnosis, technical error, or an error in judgment in the past three months.

KEYWORDS: Burnout, Medical Errors, Patient-Provider Communication, Primary Care Providers, and Provider Retention

## INTRODUCTION

Burnout has been defined by psychologist Christina Maslach as a feeling of distress within a helping relationship (McKee et al, 2020). There are three domains of burnout, emotional exhaustion, depersonalization, and personal accomplishment (Shanafelt, 2010). Physician burnout within the United States has been deemed an epidemic within the healthcare system with nearly 63% of physicians reporting burnout (AMA, 2023). Burnout has been attributed to many different factors amongst physicians such as electronic health records (EHRs) and administrative burdens (AMA, 2023). The Journal of the American Board of Family Medicine reported the occupational burnout rate among Primary Care Providers (PCP), which includes nurse practitioners, physician assistants, and physicians acting as PCPs, is 70% in the United States (Clifton et al, 2021).

One study estimated that the increase in physician burnout from 2011-2014 had resulted in a reduction of physician's equivalent to 7 graduating classes of medical schools (McKee et al, 2020). Although there are high burnout rates amongst all healthcare professions, family medicine/primary care suffers significantly higher rates than most specialties (AAFP, 2023). There is a gender gap when burnout is concerned; female providers are 10% more likely to experience burnout (AAFP, 2023). In one study, 56% of PCPs that reported burnout, also associated this burnout with their reason for leaving the practice, which resulted in higher provider turnover rates (Abraham et al, 2019).

One study completed between 2013-2016 found that amongst 740 PCP providers and staff, 53% of participants were experiencing burnout, and 2-3 years later 30% of those providers were no longer working in primary care (Willard-Grace et al, 2019). The American Medical Group Association estimated that the national average for clinician turnover is 6.8% for physicians and 11.5% for advanced nurse practitioners; higher turnover rates were found in underserved populations and community care settings (Willard-Grace et al, 2019). The conservative estimated turnover of PCPs published by Mayo Clinic in 2022 was 25% (Sinsky et al, 2022). Many longitudinal studies have shown that providers experiencing burnout are two times more likely to leave their organization in the next two years (Sinsky et al, 2022). The estimated cost of Primary Care Provider turnover in 2022 was one billion dollars, with 27% (about \$260 million) of that attributable to burnout (Mills, 2022).

The Journal of General Internal Medicine reported that physician burnout is also associated with poorer patient survey scores on patient-provider communication as well as negative effects on patient safety, such as medical errors (Chung et al, 2020). Many mental health factors play a part in burnout; providers with high exhaustion and high depersonalization have lower patient satisfaction scores compared to providers with low exhaustion and low depersonalization (Anagnostopoulos et al, 2012). The American Medical Association studied burnout and patient-physician communication and found that burnout was linked to less relationship-building and less patient-centered communication (Berg, 2019). Physicians that are burnt out are less likely to find nonadherence in their patients, more likely to refer to specialists, and more likely to prescribe medications unnecessary (Berg, 2019). One study found that provider burnout presented clear concerns about the quality of patient counseling and education

(Robbins et al, 2019). Burnout amongst PCPs is not only negatively affecting the providers' well-being it is also impacting the patient experience and quality of care (Chung et al, 2020).

Medical errors are common in the United States; studies have shown that medical errors result in 100,000-200,000 deaths each year (White, 2018). One study found that of 3,574 active physicians of varying specialties, within the United States, 55% reported burnout and of the 55%, 10% had at least one major medical error in the past three months (White, 2018). One study completed by the Journal of American Medical Association (JAMA) looked at the sleep-related impairment that physicians faced and its association with increased burnout and self-reported clinically significant medical errors (Trockel et al, 2020). Many physicians within that study were at high risk of burnout because of sleep deprivation and the high level of emotional processing that is required within the profession, both of these attributed to an increase in medical errors among these physicians (Trockel et al, 2020).

A survey was conducted of 6,695 United States physicians on if they were experiencing burnout, fatigue, or suicidal thoughts; of those participants, 10.5% reported making a major medical error, such as a mistaken diagnosis, technical error, or an error in judgment in the past three months (Harding, 2018). Of the physicians that made errors, they were also more likely to have fatigue and suicidal thoughts (Harding, 2018). Of 7905 US surgeons, 8.9 % reported a major medical error in the past 3 months and of these surgeons, there was a significant adverse relationship between their mental state and their likelihood of creating an error (Shanafelt, 2010). Providers who revealed signs of burnout were 2.2 times more likely to report a perceived medical error (Motluk,2018).

The purpose of this research was to analyze the effects of burnout amongst primary care providers and its impact on medical errors, provider retention, and patient-provider communication.

## METHODOLOGY

The working hypothesis was that primary care providers who are experiencing burnout create more medical errors, are more likely to leave their current practice, and have less effective patient-provider communication.

The methodology for this qualitative study was a literature review as well as a semi-structured interview with an expert in managing primary care providers. In search for data and literature in line with the topic of research, databases such as Marshall University's Summon, Marshall University's Academic Search Complete, Pubmed, and Google Scholar were used. Webpages used included but are not limited to AAFP, AMA, and Mayo Clinic. While in search of data and articles related to the research's purpose and hypothesis, keywords were used, such as "physicians" OR "providers" OR "burnout", AND "Medical error" OR "Clinical errors", AND "patient-provider communication" OR "patient satisfaction," AND "retention rates" OR "turnover rates."

The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework was used for the identification of 465 literary reviews that were relevant to the research study (PRISMA, 2020). References were included (N=33) if they met the inclusion criteria and excluded (N=447) if they did not meet the inclusion criteria. Articles from other sources were also included (N=15) in the research. These 33 references were subjected to full-text review and included in the final data abstraction and analysis. Only 16 references were used

in the results section (Figure 1). All 33 cited articles were limited to the English language and published in the years ranging from 2010 – 2023. The study was finalized by SP and validated by AC who contributed as a second reviewer and determined if the references met the inclusion criteria.

The research group conducted a semi-structured interview with a Vice President of Ambulatory Services of a hospital system and relevant answers were used in the discussion. The individual gave verbal consent as well as signed informed written consent. The interview was conducted and recorded in person within the confines of a private office. The answers were transcribed, then the recording was destroyed once the study was completed. The interview was approved by the Marshall University Institutional Review Board (IRB).

A conceptual framework (Singh et al, 2017) was adopted from the study that examined why PCPs experiencing burnout were more likely to create medical errors and why burnout rates are higher amongst PCPs. This conceptual framework was used to identify the effects of burnout on the patients of burnout PCPs in correlation with the research purpose (see Figure 2). The literature was analyzed to determine if Primary Care Providers make more medical errors, have higher turnover rates, and have less effective patient-provider communication and patient satisfaction scores when they are burnt out.

## RESULTS

### *Medical Errors*

Burnout has been linked to an increased risk of medical errors (Yates, 2020). A study completed consisting of 42 different studies, consisting of 42,000 physicians, found that burnout more than doubled the risk of adverse patient safety incidents (Yates, 2020). The commission of medical

errors and burnout were directly associated with physicians and healthcare providers of various specialties (Oglesby, 2022). A 5% increase in the odds of a medical error were found if there was just a one-point increase in emotional exhaustion among physicians (Oglesby, 2022). There were higher odds of medical errors in providers with higher emotional exhaustion and depersonalization but these odds decreased if the provider's personal achievement increased (Dewa et al, 2017). In a 2021 study, it was found that burnt-out providers are twice as likely to be involved in a patient safety incident (Zaggo, 2022).

Primary Care Providers were more likely to create a diagnostic error than other specialties; this was because PCPs typically face high-patient volumes and have to diagnose patients amid uncertainty (Singh et al, 2017). The high-patient volumes, lack of diagnostic testing, and the stress of having to balance the risk of missing a serious illness but simultaneously the wisdom not to place a costly referral or test are all things that increased burnout and attributed to medical errors in PCPs (Singh et al, 2017). Of 190 different cases in the primary care setting, 68 unique diagnoses were missed (Singh et al, 2013). The most common were pneumonia (6.7%), decompensated congestive heart failure (5.7%), acute renal failure (5.3%), cancer (5.3%), and urinary tract infections (4.8%) (Singh et al, 2013). One study found that 22.5% of office-based primary care physicians had experienced a malpractice dispute (Chia-HuiTan et al, 2019). This study found a strong causal relationship between malpractice disputes and provider work stress, burnout, and depression (Chia-HuiTan et al, 2019).

Specialties such as Emergency Medicine, General Internal Medicine (Primary Care), and Neurology had a 300 percent increase in the odds of burnout compared to other specialties (Drybye et al, 2017). In one cross-sectional study, burnout was an independent predictor of a reported medical error and being involved in a medical malpractice suit (Drybye et



al, 2017). Self-perceived medical errors were associated with worsening burnout, decreased quality of life, and depressive symptoms among providers (Dryby et al, 2017) There is likely a bidirectional relationship between burnout and medical errors (Drybye et al, 2017).

### *Retention Rates/Turnover Rates*

Burnout increases turnover in PCPs (Yates, 2020). Turnover in PCPs costs nearly \$1 billion in excess spending a year (Gooch, 2022). The loss of one PCP resulted in \$86,336 in additional healthcare spending during the next year (Gooch, 2022). Primary Care Providers that reported burnout left the clinical medicine field at a higher rate than providers that do not report burnout (Yates, 2020). A study completed with patients of the Veteran Health Administration (VHA) found that PCP turnover, more specifically patients that had to switch PCPs due to their previous provider leaving the practice, reduced the likelihood of a positive provider rating by 6.4% (Reddy et al, 2015). Within this VHA study, nearly 9% of patients experienced PCP turnover; patients that experience PCP turnover had a 2.5% reduction in getting care timely (Reddy et al, 2015). This study also found that the only ambulatory quality measure that was worse when a patient experienced PCP turnover was blood pressure control, 80.4% achieved blood pressure control with no PCP turnover compared to 78.7% that experience PCP turnover (Reddy et al, 2015).

A direct link between turnover in the healthcare field and employee satisfaction has been found (USC, 2023). This direct link associated the reasons for the high turnover rates being the fallout from the COVID-19 pandemic, disconnect with administration, and imbalances with workload and compensation (USC, 2023). The COVID-19 pandemic affected the burnout rates among providers; before the pandemic, 80% of providers reported some degree of burnout, and after the pandemic, 64% of those providers reported that the pandemic made this burnout worse

(CHG, 2021). The COVID-19 pandemic increased burnout by adding hours, stress, and caseload to providers thus increased the turnover rate (USC, 2023).

### *Patient-Provider Communication and Patient Satisfaction Scores*

Provider burnout affected patient satisfaction; in primary care, there was a significant correlation between reduced patient satisfaction and provider burnout (Zaggo, 2022). In providers with medium to high burnout, there was a high probability of negative rapport in patient-provider communication (Dewa et al, 2017). Burnout resulted in a two-fold increase in lower patient-reported satisfaction scores (Rosenberg, 2018). Burnout was also associated with a twofold increase in lower physician professionalism; providers in residency and early in their careers ( $\leq 5$  years post-residency) had a lower professionalism rate when they were experiencing burnout compared to providers at were in the middle or late careers (Panagioti et al, 2018). Emotional exhaustion, reduced personal accomplishment, symptoms of depression, and emotional distress were all factors to the increased burnout in the physicians as well as lowered professionalism and lowered patient satisfaction scores (Panagioti et al, 2018). Depersonalization was the dimension of burnout that appeared to have the most adverse correlation with patient quality, patient safety, and patient-reported satisfaction scores (Panagioti et al, 2018).

A good patient-provider relationship was greatly based on the communication skills of the provider, in one study (Lee, 2022). Patient-provider communication was associated with better compliance with advice, better treatment, and overall better outcomes (Lee, 2022). The two main contributors to patient satisfaction were the patient's perception and attitude toward their PCP; both the perception and attitude were more positive when the patient-provider communication was effective (Lee, 2022). Higher patient satisfaction was associated with less burnout (Weng et al, 2011). In addition, higher emotional intelligence among providers

decreased burnout and increased patient satisfaction scores (Weng et al, 2011). Providers with higher emotional intelligence have better stress management skills thus within themselves reduced the likelihood of burnout on an individual level (Weng et al, 2011).

## DISCUSSION

The purpose of this research was to analyze the effect of burnout on PCPs and their patients with a specific look at medical errors, provider turnover, and patient-provider communication in correlation to PCP burnout. The results of the literature review and the expert interview have demonstrated a positive relationship between PCPs that are experiencing burnout and an increase in medical errors and an increase in provider turnover. There was inconsistency in the expert interview and the literature review where the patient-provider communication was concerned. The expert interview applicate stated that she felt the patient-provider communication between patients and their PCPs was superior compared to providers of other specialties.

The expert interviewee was Nurse Practitioner Bethany Hoylman, Vice President of Ambulatory Service for WVU Thomas Hospitals. When Ms. Hoylman was asked if, in her professional opinion, PCPs left or threatened to leave their position more than other specialties her answer was yes in her experience. When asked why, she stated that PCPs have a lot of patients they are responsible for, and PCPs have a large, constant workload. When asked if PCPs create more medical errors, Ms. Hoylman stated yes, simply because of the sheer volume of their workload and how much is required of them. When asked if PCPs have better or worse patient-provider communication compared to other specialties, she said they have better communication with their patients; she feels they are the captain of the ship for many patients and patients reach to them for guidance. When asked if she would choose to be a PCP again at the beginning of her

career her answer was no, due to the heavy workload amount and lack of work-life balance she faced as a PCP.

This research was not without its limitations. The literature review was limited to the references available within the keywords that focused on burnout amongst providers in the searched databases. It was also limited to articles published between 2010-2023. References that discussed the effects of burnout on PCPs specifically were limited. There was also possible bias within the publishers and authors of the reviewed articles as well as possible bias within the expert interviewee. The practical implications of this research are to bring to light the effects of burnout amongst PCPs to inspire administrators and providers to create solutions surrounding this issue.

## CONCLUSIONS

As a result of this research, it was found that PCPs are more likely to experience burnout, and PCPs experiencing burnout are more likely to create medical errors and leave their current position. There was inconsistency between the reviewed literature and expert interview concerning how burnout affects patient-provider communication amongst PCPs. More research is needed on this topic to confirm or deny this hypothesis although it was supported during this research. Therefore, the hypothesis of this research was supported by the literature review in full and by the expert interview except for where patient-provider communication is concerned.

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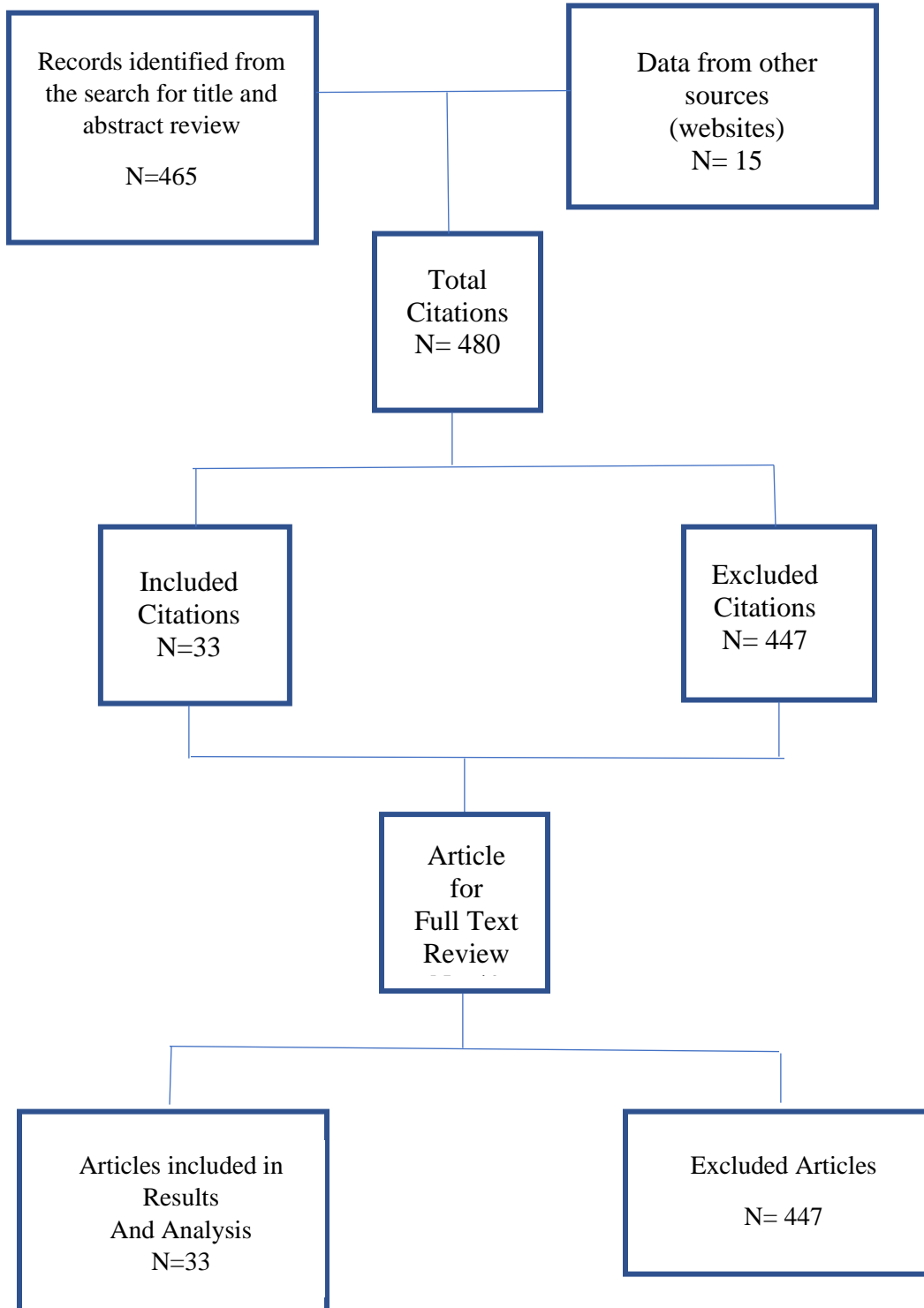
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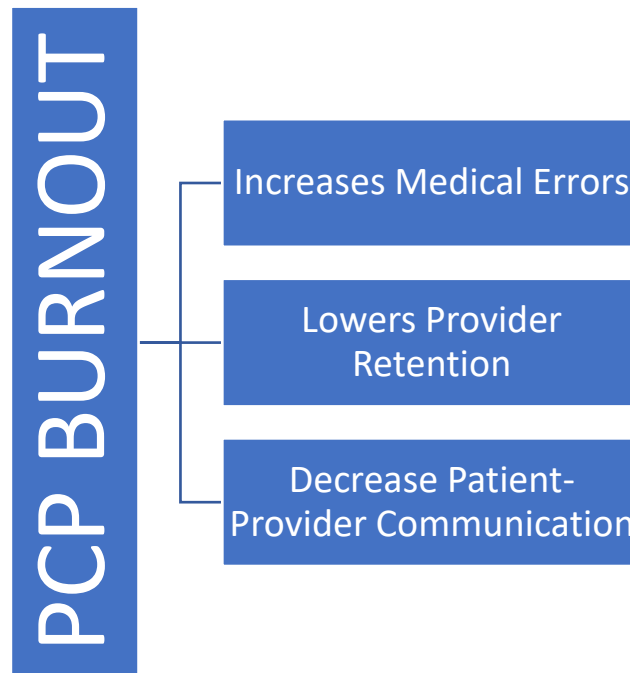
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**Figure 1**

Overview of Literature Evaluation



**Figure 2**



Conceptual Framework

(Singh et al, 2017)

## APPENDIX

Interview Questions – HCA 695

1. In your professional opinion, do Primary Care Physicians (PCP)s leave or threaten to leave their current place of employment more frequently than providers of other specialties?  
Why ? why not?
2. Can you provide an example?
3. Do you have your organization's PCP retention rate, or can you provide an estimate? Why? why not?
4. Is it greater or less than providers of other specialties? Why? why not?

5. In your professional opinion, do PCPs create more medical errors than providers of other specialties? Why ?
6. Can you provide examples of this?
7. In your professional opinion, do PCPs have better or worse patient-provider communication skills compared to providers of other specialties? Why ? why not?
8. Can you provide an example?
9. If you are a PCP, would you choose this specialty again at the start of your career now that you are in this specialty? Why? Why not ?
10. In your professional opinion, is burnout more common amongst PCPs compared to providers of other specialties? Why? Why not ?
11. Has your organization implemented ways to assist providers experiencing burnout? Why? Why not ?

