SECOND VICTIM EXPOSURE AND RESULTANT IMPACT ON PATIENT SAFETY PERCEPTIONS

A Dissertation presented to
The Faculty of the Graduate School
at the University of Missouri

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy

by
SUSAN DONNELL SCOTT
Dr. Marilyn Rantz, Dissertation Supervisor
MAY 2014
The undersigned, appointed by the Dean of the Graduate School, have examined the dissertation entitled:

SECOND VICTIM EXPOSURE AND RESULTANT IMPACT ON PATIENT SAFETY PERCEPTIONS

presented by Susan Donnell Scott a candidate for the degree of Doctor of Philosophy and hereby certify that, in their opinion, it is worthy of acceptance.

______________________________
Dr. Marilyn Rantz

______________________________
Dr. Louise Miller

______________________________
Dr. Myra Aud

______________________________
Dr. Joan Hermsen
DEDICATION

I dedicate this dissertation to recognize the devotion and contributions of the University of Missouri Health Care’s forYOU Team in helping with this pioneering initiative to provide care and support for our colleagues suffering as second victims. Their efforts have been very informative in helping advance our understanding of the second victim phenomenon. They truly make a difference each and every day for their work families!

I would also like to recognize the many health care clinicians that may be suffering in silence as second victims. My sincere hope is that this work will help springboard efforts so that social support and clinician care become a standard operating procedure at every health care facility.

“*The longer we dwell on our misfortunes, the greater is their power to harm us.*”
Voltaire
ACKNOWLEDGMENTS

This dissertation represents the cumulative knowledge of my graduate studies. This accomplishment would not be possible without the invaluable support from so many. I have a deep sense of gratitude to these very special individuals who helped me during the five years of my doctoral training.

First, I would like to express my deepest gratitude to my amazing best friend and husband, Gary, who kept the ‘home fires burning’ while I was distracted with my school work. He is such a steadfast partner in life and I owe him a tremendous debt of appreciation for the many sacrifices that he made so that I could pursue my dream of earning my doctoral degree. My two wonderful daughters, Katie and Erin, were always available to me as ‘lifelines’ of encouragement, endless love and support. They provided me with the encouragement to continue when I needed it most. And last, my late parents (W.H. ‘Jack’ and Elizabeth Donnell) who raised me to believe in myself and the value of not just doing something to get it done but to do it as best as I possibly could. A heartfelt thanks to my entire incredible family for their love and endless compassion during my educational journey.

I was truly blessed with an absolutely amazing doctoral committee. I would like to thank Dr. Marilyn Rantz for her patience, encouragement, and ongoing feedback throughout my doctoral studies and the dissertation research process. I deeply admire her enthusiasm and depth of knowledge. I would also like to thank Dr. Louise Miller for her energy and enthusiasm about the second victim phenomenon. I truly valued our conversations regarding my research trajectory and her many ideas on how to continue advancing the work. Dr. Myra Aud provided insights into the Theory of Caring Science.
I valued our conversations where she provided much needed guidance on several aspects of my research. I would also like to thank Dr. Joan Hermsen who shared invaluable insights into the field of social sciences. Her keen insights helped strengthen my understanding of the many social influences impacting care of the second victim. Each committee member has contributed uniquely to my academic development and for that, I thank them. I am also grateful for the skills and keen insights of Dr. Richard Madsen who contributed his statistical expertise in assistance with data analysis.

While this dissertation has only one author, it truly reflects a research trajectory that involved a team effort. I would like to thank my professional colleagues within the Office of Clinical Effectiveness who share a common passion and drive to enhance the quality of care delivered at University of Missouri Health Care. This work could not have been realized without their dedication and passion for care of the second victim. They include Laura Hirschinger, Dr. Karen Cox, Myra McCoig, Dr. Les Hall, Dr. Kristin Hahn-Cover, Dr. Laurel Despins, Judi Massey, Staci Walters, and Kelly Butler. What an honor it has been to work with such amazing professionals.

Last, but certainly not least, I would like to acknowledge the cheerleading efforts of my closest friends who comprise the Sunday Morning Breakfast Group (SMBG). These very dear friends include Donna Otto, Dick Otto, Carol Nierling, and Beth Schroeder. Thanks to each of you from the bottom of my heart for your care, kindness and unending support. Your words of support and encouragement mean more than you will ever know!

“The best way to predict the future is to event it.”

Alan Kay
# TABLE OF CONTENTS

ACKNOWLEDGMENTS .................................................................................................................. ii
LIST OF ILLUSTRATIONS ......................................................................................................... vii
LIST OF TABLES ........................................................................................................................ viii
LIST OF ABBREVIATIONS .......................................................................................................... ix

CHAPTER

1. INTRODUCTION ................................................................................................................... 1
   1.1 Background and Significance ....................................................................................... 3
   1.2 Current Study ............................................................................................................... 5

2. REVIEW OF LITERATURE ................................................................................................. 8
   2.1 Defining the Second Victim Phenomenon ..................................................................... 10
   2.2 Second Victim Recovery Trajectory .............................................................................. 18
   2.3 Second Victim Support – Assisting Recovery .............................................................. 22
   2.4 Institutional Guidance – Response Plan Interventions .............................................. 24
   2.5 Emotional Support for Second Victims ......................................................................... 27
   2.6 The forYOU Team – A Comprehensive Support Infrastructure .............................. 28

3. INTERVENTIONAL DESIGN ............................................................................................... 31
   3.1 Abstract ....................................................................................................................... 31
   3.2 Introduction .................................................................................................................. 31
   3.3 The forYOU Team Intervention–Second Victim Caring Moment ......................... 34
   3.4 Second Victim Interventional Support – forYOU Team ............................................ 37
   3.5 The Caring Moment Intervention ............................................................................... 39
   3.6 Results – forYOU Team Activities: A Five Year Review ..................................... 42
   3.7 Discussion ................................................................................................................... 45
   3.8 Conclusion .................................................................................................................... 48
   3.9 References .................................................................................................................. 51
4. SECOND VICTIM EXPERIENCE AND PATIENT SAFETY ATTITUDES/PERCEPTIONS ........................................................................................................53
  4.1 Abstract ..................................................................................................................53
  4.2 Background ...........................................................................................................54
  4.3 Patient Safety Culture ..........................................................................................55
  4.4 MUHC Patient Safety Journey ...........................................................................56
  4.5 The Second Victim Phenomenon .......................................................................57
  4.6 Intervention – MUHC’s forYOU Team ...............................................................58
  4.7 Research Design ..................................................................................................60
  4.8 Sample ..................................................................................................................60
  4.9 Instrument ............................................................................................................61
  4.10 Study ....................................................................................................................63
  4.11 Design ................................................................................................................64
  4.12 Study Limitations ...............................................................................................65
  4.13 Data Analysis ......................................................................................................65
  4.14 Method Analysis ................................................................................................66
  4.15 Results ................................................................................................................67
  4.16 Discussion ............................................................................................................74
  4.17 Conclusion ..........................................................................................................77
  4.18 References .........................................................................................................78

5. CONCLUSION ..........................................................................................................81
  5.1 Summary ...............................................................................................................81
  5.2 Significance of Dissertation Work .......................................................................84
  5.3 Future Directions ................................................................................................85

APPENDICES

A. MUHC ‘MODIFIED’ AHRQ-PSOS SURVEY INSTRUMENT ..........................86
B. AHRQ-PSOS SURVEY QUESTIONS AND DIMENSIONS .............................93
C. INSTITUTIONAL REVIEW BOARD APPROVAL NOTIFICATIONS ..........94
LIST OF ILLUSTRATIONS

2.1 Reciprocal Cycle of Error Involvement ............................................................... 17
2.2 Second Victim Recovery Trajectory ......................................................................... 19
3.1 Scott Three-Tiered Interventional Model ............................................................... 39
3.2 Second Victim Interventional Support Conceptual Model ....................................... 42
4.1 Scott Three-Tiered Interventional Model ............................................................... 59
4.2 AHRQ-HSPOS Mean Dimension Scores by Group Across Time ............................ 72
4.3 AHRQ-HSPOS Mean Scores by Group of Year ..................................................... 73
LIST OF TABLES

2.1 Commonly Reported Second Victim Symptoms ......................................................15
2.2 Common Second Victim Phrases .............................................................................16
3.1 Caring Moment Guide ..........................................................................................37
3.2 The forYOU Team Encounter Form .......................................................................41
3.3 Overview of forYOU Team Interventions .............................................................43
3.4 Risk Factors Evoking Second Victim Response ....................................................45
4.1 Overview of AHRQ-HSOPS Patient Safety Culture Dimensions ............................62
4.2 Timeline – Culture Surveys and forYOU Team Activities .....................................63
4.3 Professional Types Participating by Facility – All Years ........................................68
4.4 Second Victim Prevalence ....................................................................................69
4.5 Second Victim Support Prevalence .....................................................................70
4.6 Culture Survey Mean Scores – Patient Safety Dimensions .....................................71
4.7 MUHC Patient Safety Culture Survey – Specific Unit Examplars ..........................74
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AHRQ</td>
<td>Agency for Healthcare Research and Quality</td>
</tr>
<tr>
<td>AHRQ-HSOPS</td>
<td>Agency for Healthcare Research and Quality Hospital Survey on Patient Safety</td>
</tr>
<tr>
<td>EAP</td>
<td>Employee Assistance Program</td>
</tr>
<tr>
<td>EMT-P/EMT</td>
<td>Emergency Medical Technician-Paramedic/Emergency Medical Technician</td>
</tr>
<tr>
<td>IOM</td>
<td>Institute of Medicine</td>
</tr>
<tr>
<td>IRB</td>
<td>Institutional Review Board</td>
</tr>
<tr>
<td>ISMP</td>
<td>Institute for Safe Medication Practices</td>
</tr>
<tr>
<td>MD/DO</td>
<td>Medical Doctor/Doctor of Osteopathy</td>
</tr>
<tr>
<td>MRC</td>
<td>Missouri Rehabilitation Center</td>
</tr>
<tr>
<td>MUHC</td>
<td>University of Missouri Health Care</td>
</tr>
<tr>
<td>NICU</td>
<td>Neonatal Intensive Care Unit</td>
</tr>
<tr>
<td>RN/LPN</td>
<td>Registered Nurse/Licensed Practical Nurse</td>
</tr>
<tr>
<td>UH</td>
<td>University Hospital</td>
</tr>
<tr>
<td>WCH</td>
<td>Women’s and Children’s Hospital</td>
</tr>
</tbody>
</table>
CHAPTER ONE

Introduction

Every day, health care providers face a multitude of challenging demands within a high-stress clinical setting to practice their chosen profession. These providers have strong emotional defenses that carry them through their busy work days which allow them to ‘get the job done’. However, when the patient under their watch experiences an unanticipated clinical event it can shake even the most resilient of clinicians. Clinicians experiencing this type of emotional response in the aftermath of an unanticipated clinical event have become known as ‘second victims’ (Wu, 2000).

The second victim response can take an immense professional and personal toll on the involved clinicians and can potentially lead to a career-altering experience if emotional support is not rendered (Scott et al., 2008). Signs and symptoms of this emotional aftershock may last days, a few weeks, a few months or even longer (White, Waterman, McCotter, Boyle, & Gallagher, 2008). Feelings of isolation, shame, guilt, anger, loss of confidence, loss of empathy, and depression are all possible reactions experienced by the suffering health care provider (White & Gallagher, 2011; Schwappach & Boluarte, 2009; Scott et al., 2009; Waterman et al., 2007). Most second victims feel quite vulnerable by the wide ranging symptoms and frequently will express that they have never experienced such an intense emotional response in their lives. The troublesome feelings and intense doubts that accompany the second victim phenomenon do not easily resolve without emotional support (Mizrahi, 1984).

Provision of emotional support for health care clinicians who may be suffering as second victims is critical for an individual’s psychosocial and physical recovery after an
Several constructive models of emotional support that allow health care organizations to meet the needs of health care providers after adverse clinical events have emerged in recent health care literature. Frequently cited elements of successful models include the presence of social support systems for individual and teams of clinicians, transparent policies and guidelines to govern the handling of adverse clinical events, and an accompanying educational program to ensure providers are preemptively aware of post event activities and clinician expectations (Hall & Scott, 2012).

University of Missouri Health Care (MUHC) implemented a second victim emotional support infrastructure using the above mentioned elements as a roadmap for design. This ‘first of its kind’ comprehensive intervention to support health care’s second victims was deployed on March 31, 2009. The support system, known as the forYOU Team, offers immediate emotional and social support for second victims based on findings from internally conducted research (Scott et al., 2011). The forYOU Team was designed to increase awareness of the second victim phenomenon to normalize the psychosocial and physical impact on the second victim, to provide continual surveillance for possible second victims within clinical settings, and to render immediate emotional support once a clinician is identified as a potential second victim (Paparella, 2011). The forYOU Team addresses the individual unique needs for every clinician using a three-tiered model of comprehensive support (Scott et al., 2011).

Although recent publications have enhanced our understanding of the second victim phenomenon, many unanswered questions remain. The vast majority of the second victim literature focuses on describing the second victim experience in an attempt
to demystify this possible career ending phenomenon. One area that requires further exploration is the impact that second victim support (or lack thereof) might have on the individual clinician’s attitude and perceptions that could impact the quality and safety of future care and ultimately, an institution’s overall culture of patient safety. This gap in the literature provides an opportunity for the nurse researcher to identify the potential impact of the second victim experience on the individual clinician as well as the long term impact on his/her patient safety perceptions/attitudes regarding the safety culture of the respective health care organization. This study will explore the impact of second victim support (and lack of support) on overall patient safety perceptions of clinicians within University of Missouri Health Care.

**Background and Significance**

The second victim phenomenon is a potentially serious consequence of any health care provider role. The vast majority of the health care workforce have been suffering in silence from career related anxiety, stress and sometimes even shame and/or guilt as a result of adverse clinical events in the health care setting (Wolf, Serembus, Smetzer, Cohen, & Cohen, 2000). It is estimated that as many as half of all health care providers could experience the impact of the second victim phenomenon at least once during their career (Seys et al., 2013). Many times health care professionals are unsure to whom they can safely turn for support and/or guidance. As a result, many often suffer in silence. If emotional support is not addressed promptly and appropriately by the health care facility, second victims can face long term career sequelae that could negatively affect their professional careers.
It is becoming evident that a formalized strategy or initiative to address the suffering of second victims needs to become an institutional priority for every health care facility (Carr, 2009). Health care institutions should proactively anticipate needs of second victims and plan interventions to sustain a health recovery (White et al., 2008). An effective support structure is one that is designed to reduce the impact of a stressful event on the health care clinician with a goal of return to normal working baseline (Carr, 2009).

Very few health care organizations have a formalized plan of action in place at the institutional level to address the second victim epidemic (Denham, 2007). In fact, despite growing evidence that unexpected clinical events, particularly those relating to medical errors, can have ominous emotional consequences, most clinicians do not receive adequate emotional support from their respective health care institution (Hu et al., 2011). As a result, many clinicians suffer alone. Without appropriate emotional support during this critical period, some excellent health care providers may experience long term consequences of the event such as leaving their chosen profession prematurely or experience prolonged personal suffering (Scott, 2013).

We now know that a comprehensive event-response plan for health care clinicians who may be suffering as second victims is critical for restoring psychosocial and physical health after an event (Hall & Scott, 2012). Organizational awareness of the seriousness of the second victim phenomenon and an institutional response plan are significant steps in protecting the institution’s health care clinicians. Serious clinical events occur 24 hours a day, seven days a week. Health care facilities should proactively develop a
comprehensive plan which provides immediate support and assistance to clinicians who are experiencing the second victim phenomenon.

Health care organizations have a moral and ethical obligation to clinicians to ensure that emotional support strategies are designed and deployed to help mitigate second victim suffering. Institutional programs should be developed to screen at-risk professionals immediately after an unanticipated clinical event, and appropriate emotional support deployed to expedite clinician recovery and mitigate adverse career outcomes as a result of the clinical experience.

**Current Study**

The current study was undertaken to determine the prevalence of second victimization across time for three different health care entities within MU Health Care, identify the frequency of interventional supportive procedures for staff following an adverse event across time, and analyze data for group differences among clinicians relating to overall perceptions of patient safety. The three health care settings included in the study were University Hospital, Womens’ and Childrens’ Hospital and Missouri Rehabilitation Center.

A cross-sectional, longitudinal analysis of the University of Missouri Health Care (MUHC) Patient Safety Culture Survey results from 2007, 2009, 2012, and 2013 were analyzed to explore and determine the prevalence and provision of support for clinicians who responded favorably to the second victim question, as well as to investigate the impact of the second victim experience on patient safety attitudes and perceptions. The Agency for Healthcare Research and Quality Hospital Survey on Patient Safety (AHRQ-HSOPS) survey instrument was chosen for this current study. Baseline patient safety
culture data prior to implementation of the forYOU Team (intervention) plus two additional assessment points were evaluated to determine if there are differences in either the overall patient safety grade or the individual 12 patient safety dimensions across three distinct clinician groups (second victims with support, second victims without support, and non-second victims) across time. Sample size for the four respective years for the three facilities was 1054, 1203, 758, and 1213. A total of 4,228 nurses and allied health professionals participated in the voluntary survey.

Specific aims for this study were the following: 1) quantify second victim prevalence at MUHC over the six year study period (2007-2013), 2) evaluate for changes in perceived institutional support for the second victim during the study period (2007-2013), and 3) examine differences in the overall patient safety perceptions (overall safety grade and individual dimensions) among three clinician groups (non-second victims, second victims with support, and second victims without support).

There were three research questions for this proposed study. The questions are as follows:

1. During the four study periods, is second victim prevalence different at any of the three individual facilities?
2. During the four study periods, is second victim support different at any of the three individual facilities for clinicians who have been second victims?
3. Over time is there a difference in clinician perceptions relating to patient safety (overall patient safety grade and 12 dimensions) among the groups of survey respondents (non-second victims, second victims with support, and second victims without support) within the three study locations?
An overview of the MUHC forYOU Team intervention designed to address second victim needs as well as performance data from the first years of service with key lessons learned for future team deployments is presented as a manuscript in Chapter Three. The current study design of the impact of the forYOU Team on patient safety culture survey scores is described with results shared within a manuscript in Chapter Four. Chapter Five includes a summary of the research and concluding remarks. Appendix A includes the MUHC ‘modified’ AHRQ-PSOS Survey Instrument. Appendix B includes a list of the AHRA-PSOS Survey Dimensions and Associated Questions. Appendix C contains the IRB Approval Notification for this research study.
CHAPTER TWO

Review of Literature

Medical errors and complications experienced in health care facilities were once considered inevitable outcomes of care due to a combination of modern medicine and/or poor performing providers (Wachter, 2012). During recent years, there has been a significant shift in our understanding of medical errors because of specific milestones that have drastically influenced the patient safety and quality improvement movements within today’s health care environments. The evolutionary growth of patient safety and quality improvement efforts started to unfold within the past 14 years.

It was relatively recently that the mindset of inevitable medical errors dramatically changed with the introduction of the Institute of Medicine’s (IOM) *To Err Is Human: Building a Safer Health Care System* in October 1999 (Kohn, Corrigan, & Donaldson, 2000). This milestone report drew international attention to the issue of patient safety and patient harm with the estimation that as many as 98,000 people die in hospitals each year as a result of preventable medical errors (Kohn, Corrigan, & Donaldson, 2000). This seminal report thrust the subject of patient safety and medical errors in the forefront of the American public and on the agendas of health care institutions, consumer organizations, and provider associations. The report triggered a focus on national health care policy with comprehensive plans and direction for system changes necessary to improve patient safety. It was only recently that the initially reported deaths related to preventable medical errors was identified as an underestimate with projected volumes as high as 400,000 (James, 2013).
Medical errors and unanticipated clinical events occur every day within health care environments and seem to be a predictable certainty of today’s health care systems. Behind each error, there is typically at least one provider who feels personally accountable for the event. The number of health professionals involved in the care of a patient can be considerable. Occasionally, entire health care teams suffer when medical errors are realized. From this perspective, the number of health care professionals potentially impacted by unanticipated clinical events is staggering. Resilient health care members can typically review case events and make sense of what has unfolded under their watch. Occasionally, specific patient experiences trouble even the most experienced and confident clinician. The emotionally laden work of health care inherently makes its clinicians vulnerable to emotional turmoil and angst following these events. This response has been described in health care literature as the second victim experience.

The purpose of this literature review is to explore the second victim phenomenon.

A comprehensive literature search was completed in September 2012 and included specific key words such as second victim, medical error, emotions or psychological distress. Literature from CINAHL, MEDLINE and EMBASE databases published between 1960 and 2013 was searched for relevant research and information. The search strategy also included a manual review of all relevant articles for further references. Only search results with English language abstracts were reviewed. A total of 207 potentially relevant studies were initially identified. After abstract review, 65 manuscripts were recognized as pertinent. An additional 13 articles were identified by an expert panel identified as second victim scholars. After review, 32 articles were identified, as well as one editorial, two white paper reports, three systematic reviews, one
book chapter, one case study, and one ethical review article were identified as pertinent (Seys et al., 2012; Seys et al., 2013).

**Defining the Second Victim Phenomenon**

The impact of medical errors on well-intending health care clinicians initially appeared in the 1980s when articles chronicled personal stories regarding the aftermath of health care errors. This early literature contained personal renditions of the adverse clinical event and testimonies that were descriptive in nature which were authored by either the individual second victim or a close professional colleague. Although these original works were not theory or research based, they assume an important role in our current understanding of medical error repercussions on clinicians. Information garnered from personal accounts of medical errors coupled with research studies help define and clarify the second victim phenomenon and serve as a platform for future research.

The first published case study depicted the professional and personal impact of a medical error on a family practitioner in response to his own medical error, the inadvertent termination of a live fetus. Hilfiker (1984) articulated the magnitude of pain and agony he suffered from the moment of error realization as well as the personal confusion he encountered in the aftermath of the error. He detailed his failure to deal effectively with the clinical situation and described a lack of formal training regarding appropriate responses to medical errors (Hilfiker, 1984; Hilfiker, 1985). The failure to address the event in a knowledgeable manner compounded his suffering.

Depicting personal reactions following a medical error, another physician described human fallibility and the inevitability of making mistakes while rendering care. Identifying unresolved feelings of guilt from his own experience, which contributed to
significant emotional suffering, he recognized the potential negative impact this type of experience could have on one’s professional career. Concerned about the inability to effectively perform in a professional role as well as the lack of information regarding post-error management in general, he endorsed an open dialogue about medical errors within the medical community and training programs. To mitigate personal suffering, he encouraged clinicians experiencing an error to find a trusted colleague to discuss the events of the case (Levinson & Dunn, 1989).

The first nursing commentary, authored under conditions of anonymity, articulated the anguish experienced by a professional registered nurse, following a preventable patient death and subsequent lawsuit. She described extreme guilt and fear for the event itself and experienced significant anxiety relating to the possible loss of her professional license. She encouraged nurses to reach out to colleagues and offer support during the period of time following an adverse event. Sharing personal stories with other professional nurses was identified as one source of comfort (Anonymous, 1990). Each personal story reflected the traumatic repercussions of adverse medical events and the subsequent emotional turmoil among well-intending clinicians.

Early research regarding the impact of clinical errors on medical staff was conducted in 1992 by a psychologist when he explored the experiences of 11 general internists. The project yielded insights into physician perspectives of medical errors and clearly depicted the personal and professional impact of an error on the individual clinician. Realization of a clinical mistake created significant emotional distress for the practicing physician. The immediate period following a medical mistake was portrayed as a time of shame, panic and isolation for the clinician. The severity of a person’s
distress seemed to be influenced by prior beliefs and expectation of perfectionism which originated from formal training programs (Christensen, Levinson, & Dunn, 1992). As a result of the brutal realization to their imperfections in the wake of a medical error, clinicians tend to be susceptible to considerable mental anguish, emotional distress and feelings of shamefulness and humiliation following the medical error recognition (Crigger, 2004). If not effectively addressed in a timely and effective manner, the clinical event could have overwhelming and potentially detrimental impact on long term professional careers. Initially, the suffering clinicians need emotional support and empathy. Feelings of imperfection and shame coupled with the fear of appearing less competent often prevent open dialogue about the event. This type of unconditional support is beneficial to the clinician but frequently does not occur in a formal manner within health care institutions (Wears & Wu, 2002).

The Institute for Safe Medication Practices (ISMP) 1999 health practitioner survey evaluated the impact of medication errors on 9,000 physicians. The study revealed a wide range of clinician responses which varied from guilt, anxiety, and nervousness to self-disgust, spiritual distress and panic. Many clinicians described a sense of inferiority because they did not meet conventional expectations of being a perfect, error-free clinician. It was noted that the affected clinicians tended to be quite hard on themselves during the painful aftermath of a medical error (Cardinale, 1999). Another 1999 descriptive, correlation study examining the responses of 402 healthcare professionals (physicians, pharmacists, and nurses) to self-reported medication errors, revealed that respondents were worried, nervous and felt guilty about the mistake.
Respondents reported fearing for the safety of their patient, disciplinary action and punishment (Wolf, Seremus, Smetzer, Cohen, & Cohen, 2000).

The phrase ‘second victim’ was initially introduced in 2000 when a physician’s editorial described the significant emotional impact and suffering of a professional colleague in the aftermath of a medical error. While examining quality of care issues surrounding medical errors, the tremendous impact of medical errors on professional colleagues was recognized. Wu (2000) noted that “although patients are the first and obvious victims of medical mistakes, doctors are wounded by the same errors: they are the second victim” (Wu, 2000, p. 726). The term ‘second victim’ has since been used in healthcare literature to describe the severe emotional reactions and long lasting distress following a medical error. Wu (2000) speculated that every experienced clinician understands the shocking realization of making a health care mistake. The second victim initially struggles about what to do, whether to tell anyone, and what to say about what has just transpired under his/her watch. The second victim experiences intense emotions and feels susceptible, vulnerable and exposed. The event plays itself over and over in the second victim’s mind in a haunting manner. As a result, the second victim frequently questions their competence and fear being publicly discovered (Wu, 2000).

Feelings of inadequacy and failure in the aftermath of a medical error tend to be exaggerated when the perception of health care providers is one of perfection. Realizing one’s imperfection is a devastating experience for the clinician who has erred. Failure to meet the perfectionist model intensifies the mental anguish and emotional suffering of the clinician (Crigger, 2004). One source of reinforcement of the perfection model in health care is in formal training programs. Human fallibility versus perfection is not deeply
integrated within many health professional training programs, so training and response to medical errors consequences is under-developed in many programs of study (Goldberg, Kuhn, Andrew, & Thomas, 2002)

A few years later, Wolf (2005) described the unique, evoked responses to the second victim experience as emotional, social, cultural, spiritual, and physical in nature. The anxiety that accompanies the error was described as tremendous. Second victims were noted to be quite fearful and distressed by real or imagined consequences related to the mistake (Wolf, 2005). Following adverse event discovery clinicians frequently lose confidence in their clinical abilities and fear being judged as careless or incompetent. The associated stress that accompanies the error can remain with the clinician throughout their careers as similar situations trigger return of the memory. Observing the loss of professional respect, emotional distress, feelings of guilt, and inadequacy among second victims, additional exploration to understand the consequences of errors on affected clinicians was strongly endorsed (Rassin, Kanti, & Silner, 2005).

Detailed within a case study format, one nurse’s intense reaction to a fatal intravenous infusion pump error underscored the significance of the personal impact of adverse clinical events on clinicians. The nurse, described as a casualty in the battlefield of caring, struggled with an intense and prolonged period of self-blame, guilt and extreme remorse. She described the tremendous amount of emotional energy involved in fear and worry (VanderZyl & Hohneke, 2006). A wide variety of psychosocial and physical symptoms have been experienced by clinicians suffering as second victims (Scott, Hirschinger, & Cox, 2008). Table 2.1 exemplifies the broad range of symptoms reported by second victims.
Clinicians experiencing serious harm events tend to have the event and specific event details engraved permanently in memory and can easily recall the incident throughout their professional careers (Serembus, Wolf, & Youngblood, 2001). Many authors propose that second victims never fully recover from the adverse event while others suggest that second victims experience permanent changes and may never return to pre-event baseline clinical performance (Levinson & Dunn, 1989; Wolf et al., 2000; Cohen & McKay, 1984). It was common for clinicians experiencing a serious medical error to remember specific event details, even when the event occurred 10 or 20 years ago. As observed by the authors, frequently the emotional recounts of the adverse event were so intense that they brought tears to the eyes of both the storyteller and the listener. The emotionally laden stories tended to include expressions of shame, isolation and lack of closure (Conway & Weingart, 2009). Many second victims second-guessed themselves and some contemplated whether they were right for health care. Many shared eerily similar statements or comments about their experience (Scott, Hirschinger, & Cox, 2008). Refer to Table 2.2.

<table>
<thead>
<tr>
<th>Physical Symptoms*</th>
<th>Psychological Symptoms*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diarrhea</td>
<td>Anger and Irritability</td>
</tr>
<tr>
<td>Difficulty Concentrating</td>
<td>Depression</td>
</tr>
<tr>
<td>Eating Disturbances</td>
<td>Extreme Sadness</td>
</tr>
<tr>
<td>Fatigue</td>
<td>Fear</td>
</tr>
<tr>
<td>Headache</td>
<td>Feeling Numb</td>
</tr>
<tr>
<td>Muscle Tension</td>
<td>Flashbacks</td>
</tr>
<tr>
<td>Nausea/Vomiting</td>
<td>Frustration</td>
</tr>
<tr>
<td>Rapid Breathing</td>
<td>Isolation</td>
</tr>
<tr>
<td>Rapid Heart Rate</td>
<td>Self Doubt</td>
</tr>
<tr>
<td>Sleep Disturbances</td>
<td>Uncomfortable returning to work</td>
</tr>
</tbody>
</table>

*Symptoms listed alphabetically
Table 2.2. Common Second Victim Phrases

<table>
<thead>
<tr>
<th>Phrase</th>
</tr>
</thead>
<tbody>
<tr>
<td>“...a sickening realization of what has happened.”</td>
</tr>
<tr>
<td>“This will change me forever.”</td>
</tr>
<tr>
<td>“I don’t deserve to be a nurse.”</td>
</tr>
<tr>
<td>“This has been a career-changing event for me.”</td>
</tr>
<tr>
<td>“I’m going to check out my options at Wal-Mart. I can’t mess that up!”</td>
</tr>
<tr>
<td>“I came to work today to help someone, not to hurt them.”</td>
</tr>
<tr>
<td>“This will change the way I come to work from now on.”</td>
</tr>
<tr>
<td>“This event shook me to my core. I’ll never be the same again.”</td>
</tr>
</tbody>
</table>

Clinicians who feel guilty after a medical error may have also experienced feelings of fear – fear for their professional reputation, their job, their professional license and their own future, in addition to that of their patient. Given the nature of emotions provoked by medical error, tendencies to isolation can be particularly harmful for the clinician. The clinician may be unwilling or unable to talk about the event which also decreases the likelihood of achieving resolution. This type of avoidance only compounds ultimate clinician harm (Delbanco & Bell, 2007).

The second victim experience extends beyond the boundaries of the individual’s professional life and can also impact the personal life. In a study of 1,318 physicians in Norway, results verified that involvement in adverse events severely impacted the clinician’s personal life. Findings revealed that 17% of respondents with a serious medical error reported a negative impact on their private life; 11% reported that the event made it more difficult to work as a physician, and 6% reported needing professional counseling (Aasland & Forde, 2005).

An additional study with more than 3,000 physicians confirmed that emotional distress is prevalent immediately following an adverse event. Increased anxiety about future errors was reported most frequently (61%), followed by loss of job confidence
(44%), decreased job satisfaction (42%), and sleeping difficulties (42%). Experiencing at least one of these reactions was significantly more likely if participants were involved in a serious rather than minor medical error (Waterman et al, 2007).

The relationship of medical errors on quality of life, professional burn-out, depression, and empathy was explored in a longitudinal study of 184 internal medicine residents and revealed predictable sequencing. In the study, self-perceived major errors were associated with significant decreases in quality of life measures. Depicted in Figure 2.1, resident physicians feeling responsible for a serious medical event enter a vicious cycle of personal impact. Many participants noted burn-out, depression, and empathy. The distracted and suffering clinicians provided sub-optimal clinical care. A strong potential for increased future errors was also identified (Schwappach & Boluarte, 2009). Disrupting the cycle by targeted interventions could help mitigate future suffering as well as potential for increased medical errors. These findings are critically important to render aid to the second victim and should be used as a cornerstone for the formal development of interventional strategies to address the unique needs of second victims.

Figure 2.1. Reciprocal Cycle of Error Involvement
The impact of medical errors and unanticipated clinical events on caregivers was explored in a University of Missouri Health System qualitative research project designed to increase understanding of the second victim phenomenon (Scott et al., 2008). The definition for the term second victim was formalized to serve as a guide for identification of study participants. The following consensus definition of a second victim was developed as follows: “second victims are healthcare providers who are involved in an unanticipated adverse patient event, in a medical error and/or a patient related injury and become victimized in the sense that the provider is traumatized by the event.” (Scott et al., 2009, p. 326).

**Second Victim Recovery Trajectory**

Regardless of gender, professional background or years of experience, every participant in the initial University of Missouri study easily recalled the immediate and ongoing impact of their specific career jolting event (Scott et al., 2008). In many cases, participants were able to describe specific details of the adverse event in exquisite detail even many years after the event. Participants were noted to have developed their own unique way of coping, yet each described a predictable recovery trajectory. Collectively, the emotionally charged accounts revealed a predictable recovery trajectory. During iterative analyses of the data, six stages emerged to describe the recovery trajectory. As depicted in Figure 2.2, stages were identified and named as follows: 1) chaos and accident response; 2) intrusive reflections; 3) restoring personal integrity; 4) enduring the inquisition; 5) obtaining emotional first aid; and 6) moving on. The sixth or outcome stage, entitled moving on, led to one of three paths that the clinician would take and included dropping out, surviving or thriving (Scott et al., 2009).
The second victim experiences different concerns, worries and fears within each of the recovery stages. An understanding of second victim recovery through the perspective of the various stages may be a platform for design and formalization of a formal support network within different institutions. Specific details for each of the stages are as follows:

**Stage 1: Chaos and accident response** begins the moment that an adverse event or unanticipated outcome is detected or identified. The stage can be described as chaotic and confusing scenarios of both external and internal turmoil that ultimately led to the realization and a basic understanding about what had transpired. As a result, during the immediate aftermath, there is a period of rapid inquiry. Frequently there are more questions than answers which produce even more anxiety for the second victim. Simultaneously, the patient might be unstable and require intensive care and monitoring. The second victim is frequently distracted, immersed in self-reflection, while also trying to manage a patient in crisis.

**Stage 2: Intrusive**
reflection is described as a time of haunted re-enactments in which the victims described the inability to stop thinking about the event or their personal reactions. The victims described this phase as a way to help them make sense of what transpired hoping that the repeated thoughts would provide additional insights. The victim re-evaluates the situation repeatedly with ‘what if’ questions and attempts to find answers to the many questions surrounding the event. Feelings of internal inadequacy began to emerge during this stage as well as periods of self-isolation where intense reflection on case events occurred. **Stage 3: Restoring personal integrity** is characterized by the second victim seeking support from an individual with whom they have a trusting relationship such as a colleague, supervisor, personal friend or family member. Sadly, many didn’t know to whom they should turn because they felt that no one could relate to their experience or understand the personal impact the event had on them professionally and personally. The biggest challenge for the second victim during this phase is getting through personal reflections such as ‘what will others think of me’ and ‘will I ever be trusted again’. During this stage, there is a strong fear of being considered a weak link among the team. **Stage 4: Enduring the inquisition** is a stage that causes significant stress for the clinician. During this period, the second victim frequently interacts with many departmental and institutional leaders to describe the adverse event or unanticipated outcome. Interacting with unfamiliar individuals can be unsettling, and there is a fear that the institution will react to the event in unclear ways. Specifically, the second victim worries about repercussions from the event which may affect job security and licensure. The
fear of potential litigation is also a consideration. Anxiety related to this fear can last for years after the event. **Stage 5: Obtaining emotional first aid** is characterized by the second victim attempting to seek emotional support. Many second victims expressed concerns about not knowing who was a ‘safe’ person to confide in. Approximately one-third of second victims sought support from loved ones while others noted that loved ones just couldn’t comprehend their professional life and should be protected from this type of profound harm. Only a small majority reported receiving support from co-workers, supervisors, or department chairs. Fear of compromising an individual patient’s personal health information or concern about medical-legal breaches regarding care augment the personal suffering and encourage the clinician to suffer in silence. **Stage 6: Moving on – Dropping out, surviving or thriving** is critically important for individual second victim career implications. During this outcome stage of recovery, there is a push internally (from the second victim) and externally (from co-workers, colleagues, supervisors) to “move on” and put the event behind them. This is a unique stage for recovery as it has three possible paths: dropping out, surviving, or thriving. The **Dropping out** path involved changing the professional role in some manner as a direct result of the clinical event. Potential career modifications identified were moving to a different practice location, changing professional roles, or leaving the profession. The second possible path in the sixth stage of recovery is **surviving**. In this scenario, the individual performs at the expected performance levels and is ‘doing okay’ but continues to be plagued by the event and never returns to pre-event baseline performance levels. Second
victims who took their unfortunate clinical experience and helped to design practices to avoid future errors or brought something good from the unfortunate clinic experience were experiencing the *thriving* stage. Individuals who thrived were frequently active participants in the design of post event corrective action plans to prevent future errors from occurring. From an institutional perspective, the objective for second victim recovery in the thriving stage is the ultimate goal. Understanding the different needs of second victim support and the characteristics for each stage of the recovery trajectory can help facilitate the development of formal institutional response plans for addressing the unique needs of second victims (Scott et al., 2009).

**Second Victim Support – Assisting Recovery**

A study of 254 internal medicine house officers was conducted to examine how house officers coped with medical mistakes in an effort to gain insights into how formal training programs could support trainees. Key themes that seemed to aid in the recovery included accepting responsibility for the clinical event, development of a response plan of action to address health system weaknesses, seeking social support, emotion self-control, and distancing (Wu, Folkman, McPhee, & Lo, 1991). Professionals who accepted responsibility for the event were more likely to make constructive changes in their practice, as well as experience more distress. Another exploratory study of 26 resident physicians identified that the ability to cope with adverse events and unanticipated outcomes seemed dependent on the combination of reassurance and opportunities for learning. Again, findings re-enforced the profound impact of adverse events of residents (Engel, Rosenthal, & Sutcliffe, 2006). Eleven general internists participated in a one on
one interview that explored how physicians think and feel about medical errors as well as their beliefs and manners of coping influence their emotional responses to errors. Findings revealed that the physicians addressed medical errors in predictable ways with two primary types of coping strategies: problem-based and emotion-focused. In the first strategy, participants learn from their mistake and attempt to introduce practice modifications to prevent future errors. Emotion-focused coping strategies address respondent’s feelings and emotional responses to the event (Christensen et al., 1992).

A qualitative research project conducted with the assistance from medical sociologists was designed to explore support recommendations after 30 memorable family practitioner errors. Findings validated the premise that medical errors have detrimental impacts on clinicians. As a result of this research, four specific clinician needs were identified: 1) the need to talk to someone; 2) the need for validation of decisions made during patient’s care; 3) the need for professional reaffirmation of competence, and 4) the need for reassurance of self-worth (Newman, 1996). In the study, physicians were more likely to receive support from their families than from their peers. Additional findings inferred that there was a disparity among the physician’s need for help, the extent to which their needs were fulfilled and their willingness to offer help to a colleague.

Coping with the trauma of medical error or unanticipated clinical event is best accomplished with the support from others. Sharing the information about the experience with a trusted friend, family member or co-worker is an initial step to recovery. Additional self-care activities identified by the author who could help in second victim
recovery included physical exercise, relaxation, yoga, art or prayer (VanderZyl & Hohneke, 2006).

Collectively, research findings demonstrate that the most important consideration for second victim recovery from the adverse event is the social support that is rendered. Emotional support can be offered by colleagues, friends/family members or the health care organization. Intervenotional support could be effective countermeasures to alleviate the suffering of the second victim. This support is critical to mitigate many of the psychosocial and physical symptoms experienced by the second victim (Dekker, 2013).

**Institutional Guidance – Response Plan Interventions**

As clearly evidenced in the literature, medical errors have a significant and potentially long-lasting impact on healthcare clinicians. Given the significant burden on the clinician’s mental and physical health, well-being and clinical performance, health care facilities should be accountable to provide staff with formal and informal systems of support (Schwappach & Boluarte, 2009). Creating supportive and nurturing work environments that allow open and frank discussion of medical errors within medical professional teams is an important step in addressing second victim recovery (Pollack, Bayley, Mendiola, & McPhee, 2003). It has been determined that the true test of a health care institution’s patient safety culture comes immediately after an adverse event and how the involved clinician(s) are cared for (Clancy, 2012).

There are few identified strategies or protocols used by professionals or institutions to deal with the emotions generated by medical errors and unanticipated clinical outcomes (Smith & Forster, 2000). In the absence of formal mechanisms for healing, clinicians sometimes find dysfunctional ways to protect themselves such as
drinking, smoking, and poor eating habits. Denham (2007) proposed formalization of second victim “rights” so that automatic institutional responses are stimulated as soon as a second victim is identified. “These basic rights, guaranteed by one’s workplace, are summarized using the acronym – ‘TRUST - Treatment that is just, Respect, Understanding and compassion, Supportive care and Transparency and the opportunity to contribute to learning” (Denham, 2007, p. 107). More than two decades after the original second victim articles were first published, the need for institutional commitment and support to address second victim has not been fulfilled. Some authors felt that most facilities probably have untapped internal resources that could be engaged to support second victims (White et al., 2008).

Interventional procedures to help second victim recovery have been handled in a variety of manners as described in the literature. Understanding identified coping strategies of second victims might be an effective approach to addressing their individual needs. In observations of medical residents experiencing a harmful outcomes in patient care, Mizrahi (1984) identified three distinct coping mechanisms used which included event denial, discounting of the clinical scenario and personal distancing from the event and individuals involved in the event. Years after the event, residents described experiencing intense worries and remorse surrounding the precipitating clinical event. These emotions neither easily nor automatically resolve themselves (Mizrahi, 1984). Health care organizations should develop a crisis management plan that includes clinician support before the services are actually needed (Conway, Federico, Stewart, & Campbell, 2011). Formal education programs should create awareness of the inevitability of error in complex health care systems. Support initiatives for second victims need to be
established and widely communicated so that clinicians are aware of available resources, are receptive to accepting a peer’s support, and familiar with accessing services for themselves and others.

Recognizing that inadequate or ineffective emotional support for the second victim may possibly lead to further clinician suffering with possible long term career implications, development of formalized interventional support networks should be designed. If individual clinician needs are not effectively addressed in a timely manner, it is quite possible that excellent clinicians may leave the profession prematurely (Rossheim, 2009). Majority of the second victim literature contains author’s hypotheses of possible interventions to help mitigate the suffering experienced by second victims. Only a few studies have investigated specific second victim’s needs for coping with and recovering from an adverse clinical event or unanticipated outcome.

Health care clinicians who perceive their health care institutions as unsupportive in the aftermath of an adverse event were four times more likely to report increased stress after being involved in a serious medical error (Schwappach & Boluarte, 2009). A decisive factor in long-term clinician recovery following an event is institutional readiness, monitoring and immediate response to address the second victim phenomenon. Institutionally developed programs that screen at-risk professionals immediately after events complimented by deployment of appropriate support could affect their recovery and possibly career outcomes. Programmatic evaluation will be essential for ongoing refinement of institutional support strategies. An understanding of the second victim phenomenon complemented with effective monitoring in the aftermath of high risk clinical events provides a unique opportunity to enable second victims to return to full,
rewarding professional roles. Health care institutions need to formalize second victim support networks across every work site to ensure that every health care clinician, student, or volunteer are aware of and monitored for second victim reactions.

**Emotional Support for Second Victims**

Historically, second victims have often suffered in silence. It is now a moral imperative to change the current culture of disregard for these suffering clinicians to one of support and nurturing. Based on second victim research studies, it is becoming increasingly evident that health care institutions should formalize a second victim support network across every health care worksite to ensure that every health care clinician, student or volunteer is monitored for second victim reactions (Scott et al., 2011).

Collectively, research regarding the second victim phenomenon clearly suggests that health care organizations should provide an infrastructure of support for clinicians who suffer both personally and professionally. However, an integrated review of the second victim literature revealed no consensus of how to design a support program for clinicians suffering after an unanticipated clinical event (Seys et al., 2012). After years of analysis and personally experiencing the second victim phenomenon, one physician researcher concluded that health care facilities should offer comprehensive and predictable emotional support for every clinician involved in an unanticipated clinical event (VanPelt, 2008). Many patient safety advocates feel that it is now a “moral imperative to create and deploy a readily accessible and effective support infrastructure for all health care providers to begin the moment that events causing anxiety and stress are discovered and extending through years of protracted litigation as necessary (Scott et al., 2010, p. 239). Even though the literature strongly endorses the provision of support for second
victims, specific program components required for effective emotional recovery have not been systematically evaluated (Scott et al., 2010).

Waterman’s study of over 3,000 physicians in the United States revealed that 90% of the respondents stated that their health care organization did not provide adequate support for stress due to medical errors (Waterman et al., 2007). Health care organizations are only starting to recognize the benefits of support services to assist health care personnel in the aftermath of an unanticipated clinical event or outcome. Just a few health care organizations have formally implemented a clinician support program to provide emotional support and care of the health care second victim in an organized and effective manner (Vincent, 2010). One of the most advanced clinician support “programs is the second victim support team (the forYOU Team) developed by Susan Scott and colleagues at the University of Missouri” (Wachter, 2012, p. 295). Exploration of the impact of the interventional support infrastructure of the forYOU Team on the health care clinicians’ perceptions and attitudes relating to patient safety is the focus of this research study.

The forYOU Team – A Comprehensive Support Infrastructure

The second victim support system at University of Missouri Health Care (MUHC), known as the forYOU Team, was specifically designed to address the unique needs of the health care clinician suffering the aftermath of an adverse event. The team was designed based on internal research that helped delineate what clinicians would like to have in a support system from their health care organization (Scott et al., 2010). The team was specifically designed to increase awareness of the second victim phenomenon within the organization, to ‘normalize’ the psychosocial and physical impact for the
individual second victim, to provide continual surveillance within the health care environment for prompt detection of possible second victims, and to render immediate emotional support once a clinician has been identified as a potential second victim (Paparella, 2011). The forYOU Team is a peer to peer support team specifically designed to address the unique needs of health care second victims. The team serves as a rapid response team to care for MUHC providers, staff, students and volunteers emotionally impacted by an unanticipated clinical event (Scott et al., 2011). The primary goal of the support team is to assist healthcare providers to understand what is known about the second victim phenomenon and help second victims return to pre-event levels of clinical performance following an adverse or unanticipated patient outcome. Objectives of the forYOU team include minimizing the human toll and suffering after unanticipated adverse clinical events occur by assessing second victims for signs of emotional trauma; providing a 'safe zone' for providers to receive support from those peers who have been formally trained to mitigate the impact of an adverse clinical event and continually monitoring forYOU team encounters/deployments to assure maximum program effectiveness and functioning.

Deployed in 2009, the forYOU Team addresses the unique needs for any MUHC clinician, staff member, student or volunteer impacted by the second victim phenomenon using a three-tiered model of comprehensive support (Scott et al., 2011). The forYOU Team provides a form of 'emotional first aid' specifically designed to provide crisis support and stress management interventions for particularly stressful clinical events such as traumatic clinical events, failure of rescue efforts following prolonged intervention, adverse patient outcome related to medical error, the death of a child, and any other event
that is unusually emotionally challenging and stressful in our healthcare environment. It also provides additional resources for leadership and management teams to help support providers experiencing a second victim response to a clinical event.
CHAPTER THREE

Manuscript – An Interventional Design of Second Victim Support

Title

Second Victim Support - The First Five Years

Abstract

The Institute of Medicine’s report, *To Err is Human – Building a Safe Health System*, projected that as many as 44,000-98,000 individuals die annually in United States hospitals from preventable medical errors (Kohn, Corrigan, & Donaldson, 2000). Adverse medical events not only cause harm to patients, they also result in emotional suffering among countless well-intending clinicians, placing them at risk for a potential career jolting crisis known as the second victim phenomenon. Previous research has yielded insights into the definition, signs/symptoms, and high risk clinical events that possibly evoke this occupational stress for health care clinicians. However, there has been minimal focus on supportive interventions for the individual suffering clinician.

In 2009, University of Missouri Health Care (MUHC) patient safety researchers designed an interventional strategy using supportive interactions between the second victim and an interventionalist supporter within the context of a caring moment. This manuscript provides an overview and insights into lessons gleaned from the first five years of clinician support using this interventional approach through the efforts of the MUHC peer support infrastructure known as the forYOU Team.

Introduction

The second victim phenomenon is a potentially dangerous consequence of any health care role. It is estimated that as many as half of all health care providers could
experience the impact of the second victim phenomenon at least once during their career (Seys et al., 2013). Historically, the vast majority of the health care workforce have been suffering in silence from career related anxiety, stress and sometimes even shame and/or guilt as a result of adverse clinical events within the health care setting (Devencenzi & O’Keefe, 2006; Wolf, 2005; Aasland & Forde, 2005). It has been recognized that if the clinician’s needs are not addressed promptly and appropriately, second victims can face sequelae that can negatively affect their long term careers (Wears & Wu, 2002).

Provision of emotional support for health care clinicians who may be suffering as second victims is critical for an individual’s psychosocial and physical recovery after an event (Dekker, 2013). Despite growing confirmation that unexpected clinical events, particularly those relating to medical errors, can have ominous emotional consequences, most clinicians do not receive adequate emotional support from their respective health care institution (Hu et al., 2011). Without appropriate emotional support during this critical period, some excellent health care providers may experience long term consequences of the event such as leaving their chosen profession prematurely or experiencing prolonged personal suffering (Scott, 2013).

A growing body of evidence advocates that a formalized strategy to address the suffering of second victims needs to become an institutional priority for every health care facility (Conway, Federico, Stewart, & Campbell, 2011). Health care institutions are encouraged to proactively anticipate needs of second victims and create interventions to sustain a healthy recovery that reduces the impact of a stressful event on the health care clinician and restore the clinician’s psychosocial and physical health (Conway, Federico, Stewart, & Campbell, 2011; White, Waterman, McCotter, Boyle, & Gallagher, 2008).
Proposed elements of emotional support that allow health care organizations to meet the needs of health care providers after adverse clinical events have emerged in recent years. Frequently cited elements of supportive models include the presence of social support systems for individual and teams of clinicians, guidelines to govern the overall handling of adverse clinical events, and an accompanying educational campaign to ensure providers are preemptively aware of post event practices (Hall & Scott, 2012; Conway & Weingart, 2009; White et al., 2008).

University of Missouri Health Care (MUHC) implemented an evidence-based emotional support infrastructure for second victims using these key elements. This ‘first of its kind’ innovation offers immediate emotional and social support for second victims based on internally conducted research using the insights of recovering second victims (Scott et al., 2011). The second victim support intervention, known as the forYOU Team, was specifically designed to increase awareness of the second victim phenomenon in an attempt to ‘normalize’ the psychosocial and physical impact on the second victim, to provide continual surveillance for possible second victims within clinical settings, and to render immediate emotional support once a clinician is identified as a potential second victim (Paparella, 2011).

The vast majority of the second victim literature focuses on describing the second victim experience as an attempt to demystify this possible career ending phenomenon. One area that requires further exploration is the actual provision of second victim support and what lessons can be learned from the experience of implementing a formal support infrastructure for the second victim. Furthermore, this gap in the literature provides an opportunity for the nurse researcher to describe insights into a population of second
victims who have received formal support through the efforts of the University of Missouri Health Care’s forYOU Team during the past five years.

**forYOU Team Intervention – A Second Victim Caring Moment**

University of Missouri Health Care is an integrated academic health care system with six hospitals and over 50 primary and specialty clinics throughout mid-Missouri and employs almost 6,000 faculty and staff. In 2009, the MUHC second victim support infrastructure was deployed.

Based on previous MUHC second victim research, it was readily apparent that an intervention was necessary to offer social support for individual clinicians identified as possible second victims. To design a theoretical framework for second victim support, a deductive approach utilizing two theoretical models (The Theory of Transpersonal Caring and Critical Incident Stress Management Model) was applied. Jean Watson’s Theory of Transpersonal Caring provided a practice model that focused on human caring within the context of a compassionate relationship (Watson, 2008). The Critical Incident Stress Management Model, from the science of traumatology, is an interventional response that provides immediate psychological support in the wake of a traumatic event typically in a community-based setting (Everly et al., 2002). The second victim interventional model integrates components of both theoretical models explaining and maximizing the effectiveness of interventional strategies for the mitigation of second victim suffering.

This new model, referred to as The Second Victim Transpersonal Care Model, proposes a structure for mitigating individual clinician harm following a significant clinical event under the construct of a second victim caring moment.

The Second Victim Transpersonal Care Model is comprised of adapted constructs of a caring moment within the context of second victim supportive care. The second victim
caring moment integrates provision of comfort measures, alleviation of pain, suffering, and promotion of well-being and healing using interventional procedures within the context of a caring moment. This intervention entails continuous observational surveillance of colleagues during high-risk clinical events by colleagues or peers trained in the second victim phenomenon. Monitoring professionals at risk for experiencing a second victim response immediately after an unanticipated clinical event with instantaneous deployment of supportive techniques by a colleague or peer trained in the second victim phenomenon is critically important. The interventionalist familiar with the second victim phenomenon helps to ensure that the dyadic encounter will ultimately contribute to clinician recovery.

Requisites of a one-on-one encounter include the presence of a dyadic meeting that involves authentic caring presence with intentional acts of caring by a trained second victim peer supporter. The encounter must also include the transference of information regarding the second victim phenomenon and various self-care, stress management tactics to help the clinician achieve a healthy recovery from the experience. The encounter is purposefully orchestrated by the interventionalist as soon as possible victimization has been identified within the context of the clinical environment.

The four basic elements of the one-on-one interventional encounter include introduction (establishes interventionalist as a peer member on the forYOU Team and provision of basic information of the second victim phenomenon), exploration (gaining an understanding of concerns and emotions experienced at that moment by the second victim), information normalizing (validation of the clinicians normal reactions to the abnormal clinical situation and provision of additional information into the second victim
phenomenon via brochures or articles), and follow-up (establishing if additional support is needed or required by professional counseling services and determining when interventionalist will contact the second victim again). These elements have been identified as necessary to accomplish an effective, caring moment encounter connecting the second victim and interventionalist in a revered connection that promotes comfort and healing for the suffering clinician. A ‘just in time’ cognitive aid to remind new peer supporters of the various components of the caring moment helps guide them with initial one-on-one interventional encounters is included in Table 3.1. The aid is only a reference guide. A vital outcome of the caring moment intervention is optimization of second victim recovery. The caring moment serves as the basic underpinning of the institution’s forYOU Team.
Table 3.1. Caring Moment Guide

<table>
<thead>
<tr>
<th>INTRODUCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Introduce self as a forYOU Team member and explain role</td>
</tr>
<tr>
<td>□ Provide insights into the second victim experience</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EXPLORATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Ask how the clinician is doing and really listen to response. It will help guide your conversation. (Note: if a response is ‘I’m fine’, keep talking chances are they aren’t really fine!)</td>
</tr>
<tr>
<td>□ Be a good listener! Let them talk about how the event has personally impacted them and allow time for the clinician to express their feelings. (Supportive presence is important)</td>
</tr>
<tr>
<td>□ Be ‘present’ for your colleague – Practice active listening skills that allow the second victim to share their story</td>
</tr>
<tr>
<td>□ Offer support as appropriate</td>
</tr>
<tr>
<td>□ Do not try to fix their concerns - your supportive presence as a caring colleague is what you need to provide</td>
</tr>
<tr>
<td>□ Offer emotional first aid as the conversation transpires</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>INFORMATION NORMALIZING</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ If you have experience with a similar patient event, share it. ‘War stories’ are powerful healing words</td>
</tr>
<tr>
<td>□ Silence is okay but may be uncomfortable for you. Allow the clinician time to gather their thoughts about their feelings - Silence allows them to gather their thoughts</td>
</tr>
<tr>
<td>□ Follow the clinician’s lead. If they want to talk, encourage them. If they don’t want to talk, don’t force them</td>
</tr>
<tr>
<td>□ Avoid inappropriate use of humor to ease your own discomfort</td>
</tr>
<tr>
<td>□ Explain to the clinician that psychosocial and physical responses are normal reactions to an abnormal situation</td>
</tr>
<tr>
<td>□ Help to normalize the experience by providing the informational forYOU Team pamphlet to the clinician.</td>
</tr>
<tr>
<td>□ Also provide forYOU Team Staff and Family pamphlet to the clinician</td>
</tr>
<tr>
<td>□ Determine what stress management strategies have helped them in the past and encourage them to use those tactics</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FOLLOW-UP</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Arrange a follow-up meeting with the second victim as indicated</td>
</tr>
<tr>
<td>□ Consider referral to a professional counselor resource if they need additional support</td>
</tr>
</tbody>
</table>

Second Victim Interventional Support – The forYOU Team

The forYOU Team provides confidential peer to peer support to clinicians reacting to a stressful clinical event within the health care setting and addresses the various unique needs for every clinician using a three-tiered model of comprehensive support (Scott et al., 2011). The forYOU Team is an example of an evidence-based model of support that provides continual surveillance of health care clinicians for prompt
detection of possible second victims and renders immediate emotional support once a
clinician has been identified as a second victim.

There are two social support interventions offered by the forYOU Team, which
includes the one-on-one second victim caring moment encounter and team support
meetings or debriefings when an entire team is impacted by the unanticipated clinical
event. Both use the same basic elements of interventional support surrounding the
concept of a caring moment. Group debriefings are facilitated by a team of senior
forYOU Team leaders who have received additional training in group crisis intervention
using the Critical Incident Stress Management Model. The interventions are based on the
knowledge that individual clinician’s needs may require a different intensity or duration
of support during their emotional recovery. Supportive interventions for the suffering
clinician range from immediate one-on-one caring moments to professional counseling
services for the second victim who has emotional supportive needs that exceeds the
capacity of the interventionalist (Scott et al., 2010).

To provide a comprehensive network of support to address the different needs of
clinicians, patient safety researchers designed an integrated three-tiered model of
intervention (Scott et al., 2010). The first tier is immediate, basic ‘emotional first aid’
and can be seen as basic emotional care rendered to the clinician by colleagues or
supervisors from the same department or unit as the second victim. Individual unit
leaders and managers are accountable for the monitoring of their staff after a potentially
distressing clinical event is identified and have been educated on the second victim
phenomenon and immediate supportive interventions. The second tier is comprised of
the second victim caring moment in which peers trained in the second victim
phenomenon monitor colleagues for signs of duress and actively intervenes as indicated. Initially the forYOU Team embedded the specially trained peer supporters within clinically high-risk departments throughout the MUHC system. As the team has evolved, and four training classes later, peers are embedded throughout the MUHC network of hospitals and ambulatory clinics regardless of the nature of risk the individual clinical department. The third tier ensures prompt availability and access to professional counseling and guidance for those clinicians requiring support beyond the capabilities of their trained peers. The Scott Three-Tiered Model of Second Victim Support is depicted in Figure 3-1.

Figure 3.1. The Scott Three-Tiered Interventional Model of Second Victim Support

The Caring Moment Intervention

Emotional support is rendered in the form of a caring moment or encounter. The interactions ideally occur as soon as possible after the clinical event occurs; however, there were occasions when encounters occurred several hours to days after case identification by the peer supporter. The caring moment is considered confidential and is
conducted without judgment. Peers are instructed to focus on the second victim’s personal response to the event and not on the specific clinical details of the event. If the interaction lasts greater than 15 minutes, the supporter is requested to complete an encounter form. After the initial meeting with the second victim, the supporter is encouraged to touch base with the second victim in the immediate future to ascertain that the clinician is progressing in his/her emotional recovery. All follow-up encounters are also captured on the same encounter form.

The encounter form, designed with guidance from MUHC’s general counsel, provides a basic overview of the second victim caring moment. To help protect this document from future legal implications supporters are requested to complete the encounter form in a ‘de-identified’ manner with no case specific information. Specific details regarding the clinical event evoking the second victim response were purposefully omitted from the document. The forYOU Team interventions for both one-on-one encounters and team briefings are captured on an encounter form which is later transcribed into a secure Access database by one of the MUHC forYOU Team Leaders. An example of the encounter document is included in Table 3.2. Team performance is monitored on a regular basis and reported to MUHC executive leadership in the form of a performance dashboard.
A conceptual model of second victim interventional support is included in Figure 3.2.

The goal of the intervention is to help the second victim return to pre-event levels of clinical performance following the unanticipated clinical event, preferably as ‘thriving’.
Results – forYOU Team Activities: A Five Year Review

During the first five calendar years of service, the forYOU Team rendered emotional support to 1,027 MUHC clinicians within the context of a tier two intervention. There is not a system in place, at this time, to capture tier one interventions originating within the local work environment of the clinician. However, on 44 occasions local leadership contacted forYOU Team leaders requesting ‘just in time’ guidance on the support of a clinician. Majority of second victim support has been provided in the form of group briefings accounting for 59% (n=611 clinicians) of the team’s interventional efforts. A total of 80 group briefings have been convened during this time. One-on-one interactions accounted for the remaining 41% (n=416 clinicians) of the interactions. Table 3.3 depicts forYOU Team Interventions during each of the five calendar years.
Table 3.3. Overview of forYOU Team Interventions

<table>
<thead>
<tr>
<th>Year</th>
<th>One-On-One Encounters</th>
<th>Group Briefings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year One</td>
<td>53</td>
<td>82</td>
</tr>
<tr>
<td>Year Two</td>
<td>88</td>
<td>165</td>
</tr>
<tr>
<td>Year Three</td>
<td>88</td>
<td>163</td>
</tr>
<tr>
<td>Year Four</td>
<td>109</td>
<td>144</td>
</tr>
<tr>
<td>Year Five*</td>
<td>78*</td>
<td>57*</td>
</tr>
<tr>
<td>Totals</td>
<td>416</td>
<td>611</td>
</tr>
</tbody>
</table>

*Only represents 8 months of data

Fifty-four percent of clinicians who received support were registered nurses/licensed practical nurses (n=555). Medical staff (attending physicians, fellows, and resident physicians) represented 226 or 22% of the supported clinicians. Twelve percent of those receiving support were licensed allied health care professionals such as respiratory therapists, pharmacists, social workers, physical therapists, paramedics, and occupational therapists. The remaining twelve percent represented unlicensed members of the health care staff and include such hospital personnel as students, volunteers, clerical personnel, dietary staff, plant engineering, environmental services, and receptionists.

Clinical reasons for activation of the forYOU Team services were varied but could be categorized into three distinct groups. The vast majority (53%) of activations was related to unforeseen patient outcomes and was not related to medical error. Thirty-two percent of the activations responded to a ‘personal’ crisis experienced by an individual health care team member or an entire team which impacted their clinical care abilities. Examples of these activations included unexpected deaths of co-workers, incidents of violence in the workplace, emergency vehicle accidents, and natural disasters impacting the geographic region of the hospital. Activations related to this type of event
were primarily addressed using the group briefing process. Only 15% of the activations were related to medical error. Due to the sensitive nature of the medical error event type, a one-on-one caring moment is utilized as the primary intervention as opposed to a group briefing.

Length of the supportive interventions is dependent on the type of intervention that is deployed. Group briefings tend to be longer in length and are pre-scheduled at a convenient time for team members as opposed to the spontaneity of the one-on-one interactions. The delayed scheduling of a group briefing helps to ensure that the majority of personnel involved in the event are able to participate. Group briefings average eight individuals per session. Group briefings ranged in length from 15 – 120 minutes with the average lasting 62 minutes. One-on-one interactions were more proximal to the actual incident and averaged 22.2 minutes in length. One-on-one interactions ranged in length from 20 – 65 minutes. Approximately one-third of the one-on-one encounters had follow-up conversations to ensure clinician recovery.

A total of 154 or approximately 15% of the clinicians supported by the forYOU Team members required support from the specialized services of professional counselors offered in the third tier of the Scott Tiered Model of Support. Majority of referrals to this tier were for the services of the employee assistant program (EAP) with 38%. Approximately one-fourth of the individuals requested guidance from the MUHC risk manager or patient safety officer while 23% preferred to use the professional services of their own personal counselor. The remaining 14% chose to seek support from a clinical health psychologist or chaplain.
Risk factors that contributed to a second victim response were also captured on the encounter form. One of the more common reasons for activation of the forYOU Team services was pediatric cases – especially those involving the patient’s death. Other identified triggers for evoking the second victim reaction included multiple patients with bad outcomes within a short period of time, first death experiences, any patient that somehow ‘connects’ the staff member to his/her own family, organ donation cases, young adult serious injury, and high profile patients who are known from within the community. In approximately six percent of the cases, none of the above risk factors was observed. Table 3.4 provides an overview of reasons for activation of the forYOU Team services.

Table 3.4. Risk Factors Evoking Second Victim Response

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>forYOU Team Activations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pediatric case (21 years and younger)</td>
<td>84</td>
</tr>
<tr>
<td>Unexpected patient demise</td>
<td>67</td>
</tr>
<tr>
<td>Multiple patients with bad outcomes within short period of time</td>
<td>66</td>
</tr>
<tr>
<td>Patient known to staff; long term patient</td>
<td>56</td>
</tr>
<tr>
<td>Young, adult patient with serious diagnosis/bad outcome</td>
<td>49</td>
</tr>
<tr>
<td>Death of a colleague</td>
<td>46</td>
</tr>
<tr>
<td>Patient that reminds staff of a family member; ‘patient connection’</td>
<td>39</td>
</tr>
</tbody>
</table>

Discussion

During the past five years of service, the forYOU Team has significantly influenced MUHC’s system-wide response to unanticipated clinical events and has provided a new infrastructure for post-event clinician support. This collective experience re-enforces that there are numerous challenges to providing clinician support within the context of a busy clinical environment. It has also provided keen insights about provision of emotional support to clinician’s experiencing the second victim phenomenon. In high-acuity areas of health care, there is minimal protected time for clinicians to comprehend
and process what has transpired under their watch before they must move on to the next task. The strategic placement of colleagues and peers trained within the clinical care areas for support of the second victim allows for real-time emotional support for the clinician.

Despite continued efforts of MUHC forYOU Team leaders, to disseminate information about the second victim phenomenon and the support services available, there continues to be a perceived stigma related to a health care clinician seeking guidance and support as a sign of weakness. It is difficult to acknowledge, even confidentially, that the clinician might be distressed by the clinical event and needs help (DeWit, Marks, Natterman, & Wu, 2013). As a result, many clinicians will not actively seek support but instead suffer in silence.

An additional observation gained from implementation of the forYOU Team is that not all clinicians respond in the same manner. No two clinicians will respond in the same manner, including individuals who are involved in the same clinical event. As a result, it is important for health care organizations to offer a variety of resources for clinicians when the institution’s support infrastructure is initially designed. Health care organizations have invaluable resources within their existing manpower with key social support skills that could easily be deployed; however, few hospitals have harnessed the collective energies of these supportive individuals. The forYOU Team capitalizes on the professional talents of the professional counseling resources in two distinct ways. First, professional counseling resources are readily available for addressing second victim interventions in the more complex social support needs of a second victim that the peer supporter cannot meet. Tier three experts also actively participate in initial and on-going
education of peer supporters. Guidance from these individuals helps the peer supporters gain insights for future caring moments.

It is not surprising that most clinicians have not heard the term ‘second victim’. However, when the individual understands the description of the second victim phenomenon, most readily relate to it and can often recall specific events experienced by themselves or colleagues. Awareness of the second victim phenomenon helps ‘normalize’ the pain and suffering that is experienced by the clinician and can help move recovery forward. As a result, it is strongly recommended that the first intervention at any health care facility should be an educational campaign to introduce the second victim concept.

An additional finding from the forYOU Team experience is the intense fear of the unknown among clinicians involved in unanticipated clinical events. Majority of clinicians yearn for information about the health care organization’s response plan to the clinical event and specific details regarding what to expect from the investigation process. Clinicians also seem to worry about specific issues related to their chosen profession. Medical staff tends to worry about the litigation process while other licensed professionals panic about the loss of their jobs and deeply fear the loss of their professional licensure. Understanding these fears and proactively addressing them during post-event caring moments helps decrease the overall stress experienced by the clinicians and allows them to progress towards recovery.

An additional unexpected result of the team’s efforts has only become apparent within the last three years of the service. As the MUHC forYOU Team matures, its team leaders have started serving as ‘just in time’ mentors to assist departmental leaders
understand the different nuances of providing clinician support in the aftermath of an unanticipated clinical event. The impact and value of providing clinician support are gaining traction within MUHC and is slowly evolving the patient safety culture within the institution. Over time ‘curbside consults’ have been increasingly requested by departmental managers so that they can personally give support and guidance for their respective team member. This noteworthy development in the current practice of unanticipated event reviews helps demonstrate leadership’s commitment to care of the caregiver during this stressful time and represents a milestone in the MUHC journey to enhance the overall patient safety culture. To date, the service has been asked to provide consultation to 44 cases. These consultations are not contained in the one-on-one or group briefing totals noted in the results section.

One final lesson gleaned from this five year journey is the fact that institutions should ‘cast a large net’ when identifying potential individuals impacted by an adverse clinical event. Approximately 12% of the total interventions have been for these types of ‘behind the scenes’ individual health care workers. Student learners, clerical and other supportive personnel tend to be overlooked and perhaps even forgotten when support is offered to entire teams. These individuals play an important role to the successful functioning of the health care team and should be considered when supportive interventions are designed and planned.

**Conclusion**

Every day, well-meaning health care clinicians working in clinically complex environments face the harsh reality of unanticipated and sometimes tragic patient outcomes. As a result, a large portion of the health care workforce has been suffering in
relative silence unsupported as they endure this now recognized acute occupational stress known as the second victim phenomenon. Health care facilities should proactively develop a comprehensive plan and deploy a readily accessible and effective support infrastructure for all health care clinicians which provide immediate support and assistance to clinicians experiencing the second victim phenomenon (Conway et al., 2011).

Organizational awareness of the second victim phenomenon and an institutional response plan are critical steps in protecting the institution’s health care clinicians. Interventional support should begin the moment the clinical event causing anxiety and stress is discovered. Social support initiatives should be established, and information about them disseminated widely throughout each health care institution so that individual clinicians are proactively aware of what type of support is available, what can be expected, and how to access help in the aftermath of unanticipated clinical events. Clinician support must become a predictable, required part of the health care organization’s operational response to unanticipated, harmful clinical events.

Health care clinicians are an important resource, and when they are involved in an unanticipated clinical event which harms the patient, they should be provided with the social support and resources they to need to ensure optimal professional recovery. As peer support programs are implemented within health care organizations, it is incumbent on health care researchers to study the impact of these support resources on different health care clinicians, the content of the interactions between the second victim and supporter, and the interventional strategies to impact the overall recovery trajectory of the
affected clinician. Rigorous evaluations of support programs will help advance our collective knowledge regarding the effectiveness of second victim interventional support.
References


CHAPTER FOUR

Manuscript – Second Victim Experience and Patient Safety

Attitudes/Perceptions

Title

Second Victim Support – Implications for Patient Safety Attitudes/Perceptions

Abstract

Although recent publications have enhanced our understanding of the second victim phenomenon there are still many unanswered questions that remain. The vast majority of the second victim literature focuses on describing the second victim experience in an attempt to demystify this possible career ending phenomenon. One area that needs further investigation is the influence that the second victim support (or lack thereof) might have on clinician’s overall attitudes and perceptions related to patient safety and their work environment. This gap in the literature has provided an opportunity for the nurse researcher to identify the potential impact of the second victim experience on long term patient safety perceptions and attitudes with implications for generalized patient safety efforts within a health care organization. This study reviewed the impact of second victimization and perceived provision of support in the context of three unique hospital types within one academic health care system over a period of approximately six years.

The purpose of this study was to explore the impact of second victim interventional support on the patient safety perceptions of clinicians at University of Missouri Health Care (MUHC). Data from baseline and post intervention deployment assessments were reviewed to identify what, if any, impact could be attributed to
interventional support of second victims. The following research questions were addressed in this study: 1) During the four study periods, is second victim prevalence different at any of the three individual facilities? 2) During the four study periods, is second victim support different at any of the three individual facilities for clinicians who have been second victims? 3) Over time is there a difference in clinician perceptions relating to patient safety (overall patient safety grade and 12 dimensions) among the three groups of survey respondents (non-second victims, second victims with support, and second victims without support) within the three study locations?

**Background**

Provision of emotional support for health care clinicians who may be suffering as second victims is critical for an individual’s psychosocial and physical recovery after an unanticipated clinical event (Dekker, 2013). A few constructive models of emotional support that allow health care organizations to meet the needs of health care providers after adverse clinical events have emerged in recent years (Seys et al., 2012; Conway, Federico, Stewart, & Campbell, 2011; Scott et al., 2010). Identified elements of these successful models include the presence of support systems for individual and teams of clinicians, policies or guidelines to govern the handling of adverse clinical events, and an accompanying educational program to ensure providers are preemptively aware of post event practices (Hall & Scott, 2012).

University of Missouri Health Care (MUHC), an academic health care system, implemented an emotional support infrastructure for second victims in 2009. The second victim support intervention is called the ‘forYOU Team’. This ‘first of its kind’ team offers immediate emotional and social support for second victims using an evidence-
based three-tiered model of comprehensive support (Scott et al., 2011). The forYOU Team addresses the unique needs of every clinician and serves as one of the MUHC patient safety initiatives to influence the maturation of the patient safety culture (Scott et al., 2010).

Patient Safety Culture

The Institute of Medicine’s (IOM) seminal report, *To Err is Human – Building a Safe Health System*, recommended that health care organizations “develop a culture of safety such than an organization’s care processes and workforce are focused on improving the reliability and safety of care for patients” (Corrigan, Donaldson, Kohn, McKay, & Pike, 2000, p. 14). Significant efforts have been made to influence the safety culture within hospitals since the release of this report; however, much work is still needed (Kohn, Corrigan, & Donaldson, 2000; Wachter, 2012). In 2007, The Joint Commission incorporated a regulation for all accredited hospitals to conduct an assessment of patient safety on a regular basis using a valid and reliable tool (Pronovost & Sexton, 2005).

A necessary first step is to gain a better understanding of the institution’s overall patient safety culture. A health care organization’s culture of safety is a compilation of health care clinicians’ attitudes, values, beliefs, and perceptions regarding organizational practices that directly or indirectly influence patient safety (Reason, 2000). Every health care clinician in the organization contributes to the safety culture in their own unique way (Vincent, 2006). Achieving a safe and informed culture is dependent on leaders at every level of the health care organization (Henriksen, Battles, Keyes, & Grady, 2008).
Self-report surveys have been designed to obtain perceptions of the working environment from the perspective of all staff from the front line staff to administrative personnel (Colla, Bracken, Kinney, & Weeks, 2005). Assessment of the culture of safety at both the ‘local’ or departmental level and facility level helps to identify areas of the organization that are in need of improvement in general patient safety concepts (Singla, Kitch, Weissman, & Campbell, 2006). Culture surveys, administered on a regular basis, are intended to track changes in patient safety perceptions and to evaluate the impact of various patient safety interventions. There are a number of patient safety culture survey assessment tools available for the health care industry (Colla et al., 2005).

MUHC Patient Safety Journey

To address increasing consumer and regulatory expectations for patient safety considerations, a team was selected to oversee a transformation of the MUHC safety culture. The team’s work included the development and implementation of an electronic adverse event reporting system, coordination of safety event investigations, and management of root cause analyses for the health care system. Event investigations revealed that, in the aftermath of unanticipated patient safety events, clinicians were frequently experiencing significant personal and professional emotional distress. The safety team recognized that they were observing the impact of the ‘second victim phenomenon’ (Wu, 2000).

During the same time period, MUHC’s safety team was preparing to conduct a baseline assessment of the MUHC patient safety culture using the Agency for Healthcare Research and Quality Hospital Survey on Patient Safety (AHRQ-HSOPS) instrument (AHRQ, 2013). To quantify the prevalence of the second victim phenomenon, the
following item was created using the second victim definition and added to the AHRQ-HSOPS instrument: “In the last 12 months, were there any patient events that caused you personal problems such as anxiety, depression or concerns about your ability to do your job? If the chosen response was ‘yes’, then question two was added as follows: “Did you receive support from anyone with MUHC?”

Findings from this initial 2007 assessment revealed that approximately one of every seven MUHC staff members reported having experienced a patient safety event within the past year that caused personal problems such as anxiety, depression, or concerns about the ability to perform one’s work. Approximately one-third of these individuals received institutional support to assist with their emotional recovery (Scott et al., 2009). These findings led to a two year research effort to design supportive tactics for clinicians suffering as second victims (Scott et al., 2010; Scott et al., 2009; Scott, Hirschinger, & Cox, 2008).

**The Second Victim Phenomenon**

The second victim phenomenon is potentially a dangerous side effect of any health care provider role. It is estimated that half of all health care providers will experience the impact of the second victim phenomenon at least once during their career (Seys et al., 2013). Historically, the vast majority of the health care workforce has been suffering from career related anxiety and stress as a result of adverse clinical events within the health care setting (Wolf, Serembus, Smetzer, Cohen, & Cohen, 2000). Most health care professionals are unsure of to whom they can safely turn for support and/or guidance (DeWit, Marks, Natterman, & Wu, 2013). Some worry that seeking emotional support is a stigma representing personal or professional weaknesses (Dekker, 2013). As
a result, many often suffer in silence. If not addressed promptly and properly, second
victims can face long term career sequelae such as leaving the chosen profession
prematurely. It is becoming evident that a formalized approach to address the suffering
of second victims needs to become an institutional priority for every health care facility
(Carr, 2009). An effective support strategy is one that is designed to reduce the impact of
a stressful event on the health care clinician with a goal of return to normal working
baseline. Health care institutions should proactively anticipate needs of second victims
and design interventions to sustain a health recovery (White, Waterman, McCotter,
Boyle, & Gallagher, 2008).

**Intervention - MUHC’s forYOU Team**

Introduction of the forYOU Team as an intervention for provision of clinician
support following an unanticipated clinical outcome was one of several interventional
strategies that MUHC chose to enhance the existing organization’s culture of patient
safety. The MUHC interventional strategy, the forYOU Team, was specifically designed
to address the unique and diverse needs of clinicians suffering as second victims. The
guiding principle of the forYOU Team is the understanding that each clinical event is a
unique experience with each clinician requiring individualized types and intensity of
confidential emotional support to help facilitate second victim recovery. The forYOU
Team model allows for interventional support from basic emotional first aid to
comprehensive, professional counseling services based on the individual needs of each
clinician experiencing the second victim phenomenon.

Members of the forYOU Team provide emotional support by using a three-tiered
methodology. Each tier of the second victim interventional model uses increasing
institutional resources to help ensure that the emotional needs of the suffering clinician are met. While some clinicians may only need the resources available from one tier of support, others might need resources from all three tiers to help promote professional and personal recovery from the clinical event. The three-tiered model of second victim interventional support is depicted on Figure 4.1.

Figure 4.1. The Scott-Three Tiered Interventional Model of Second Victim Support
Research Design and Methods

Design

Upon approval from the University of Missouri-Columbia Health Sciences Institutional Review Board, a cross-sectional analysis of existing MUHC Patient Safety Culture Survey findings was conducted. Survey results from four surveys (2007, 2009, 2012 and 2013) for three MUHC facilities (University Hospital, Women’s and Children’s Hospital, and Missouri Rehabilitation Center) were reviewed. This study was designed to establish the prevalence of MUHC second victimization across time, to identify the impact of interventional strategies on perceived staff support, and to monitor for group differences among three clinician types (non-second victims, second victims with support and second victims without support). The Agency for Healthcare Research and Quality Hospital Survey on Patient Safety (AHRQ-HSOPS) survey instrument was used exclusively during these four survey periods.

Procedure

Sample

The sample included MUHC clinicians who voluntarily completed the AHRQ-HSOPS survey and identified that they worked in one of the three MUHC facilities which participated in all four surveys. The clinicians participating in the study were divided into two professional types – nursing personnel (registered nurses and licensed practical nurses) and allied health professionals which included non-nurse and non-physician clinicians, such as pharmacists, respiratory therapists, paramedics, social workers, dieticians, etc.

The three MUHC health care facilities that participated in all four surveys were
University Hospital, Women’s and Children’s Hospital, and Missouri Rehabilitation Center. The specific patient populations and work environment of different health care facilities are important considerations when factoring the potential impact that they can have on the individual clinician in terms of evoking a possible second victim response. University Hospital (UH), the highest acuity facility and largest hospital within the MUHC system, is the only Level I Trauma Center in central Missouri and has 268 inpatient beds including five specialty intensive care units. Women’s & Children’s Hospital (WCH) houses 136 inpatient beds, 25 well baby nursery cribs, an emergency room, 12 operating rooms, and a birthing center which includes a 42-bed Level III neonatal intensive care unit. The WCH overall patient acuity and length of stay is varied, but both can be quite high. Missouri Rehabilitation Center (MRC), a 63-bed long-term acute care hospital and smallest hospital in the study, provides stroke rehabilitation, ventilator weaning, medically complex treatment, and orthopaedic rehabilitation. It tends to have lower patient acuity and higher lengths of stay.

**Instrument**

The Agency for Healthcare Research and Quality Hospital Survey on Patient Safety (AHRQ-HSOPS) instrument, one of the most popular tools for assessing patient safety culture, was used to collect the MUHC data (Wachter, 2012). The survey asks health care clinicians to rate the safety culture within their respective units, as well as the overall organization. This tool assesses health care clinician opinions, attitudes and perceptions about patient safety issues, medical error event reporting, and institutional responses to adverse events. The AHRQ-HSOPS tool has been deemed to be psychometrically sound in evaluating the various identified dimensions within the context
of patient safety and has been used in relatively large populations of front-line health care providers (Sorra & Dyer, 2010).

The AHRQ-HSOPS tool has 44 questions that are embedded into one of 12 safety culture dimensions. The survey tool measures seven unit-level aspects of safety culture and three hospital-level aspects of the safety culture. A five point Likert Scale is used for all questions feeding into one of the 12 dimensions. The survey tool includes an outcome variable, not included in any of the dimensions, that asks respondents to provide an overall safety grade for their local department or work unit. Refer to Table 4.1 for a listing of the specific dimensions and associated questions.

Table 4.1. Overview of AHRQ-HSOPS Patient Safety Culture Dimensions

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Safety Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Teamwork within units</td>
</tr>
<tr>
<td>2</td>
<td>Supervisor/Manager Expectations &amp; Actions Promoting Patient Safety</td>
</tr>
<tr>
<td>3</td>
<td>Management Support for Patient Safety</td>
</tr>
<tr>
<td>4</td>
<td>Organizational Learning - Continuous Improvement</td>
</tr>
<tr>
<td>5</td>
<td>Overall Perceptions of Patient Safety</td>
</tr>
<tr>
<td>6</td>
<td>Feedback &amp; Communication About Error</td>
</tr>
<tr>
<td>7</td>
<td>Frequency of Events Reported</td>
</tr>
<tr>
<td>8</td>
<td>Communication Openness</td>
</tr>
<tr>
<td>9</td>
<td>Teamwork Across Units</td>
</tr>
<tr>
<td>10</td>
<td>Staffing</td>
</tr>
<tr>
<td>11</td>
<td>Handoffs &amp; Transitions</td>
</tr>
<tr>
<td>12</td>
<td>Nonpunitive Response to Errors</td>
</tr>
<tr>
<td>Overall safety grade</td>
<td>'Give your work area/unit an overall grade on patient safety.'</td>
</tr>
</tbody>
</table>

To assess the occurrence of the second victim phenomenon at MUHC, two additional questions were added to the original AHRQ-HSOPS instrument (“In the last 12 months, were there any patient events that caused you personal problems such as anxiety, depression or concerns about your ability to do your job?”). If the clinician responded with a ‘yes’ to this question, then a subsequent question was asked “Did you receive support from anyone within the MUHC system?” Both questions have been
incorporated as a standard survey item for all MUHC culture surveys. These specific questions are used to monitor second victim prevalence and associated perceptions of clinician support over time at MUHC.

The AHRQ-HSOPS survey has been administered to MUHC health care clinicians a total of four different times (prior to implementation of MUHC forYOU Team intervention, five months post deployment of the intervention, three years post deployment and four years post deployment). The survey was administered in 2007, 2009, 2012 and 2013. An overview of survey distribution dates and forYOU Team activities is included in Table 4.2.

Table 4.2. Timeline – Culture Surveys and forYOU Team Activities

<table>
<thead>
<tr>
<th>Dates</th>
<th>AHRQ Administered</th>
<th>forYOU Team Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006, November</td>
<td>MUHC system-wide group convened to address second victim support</td>
<td></td>
</tr>
<tr>
<td>2007, May</td>
<td>Initial AHRQ Culture Survey (Baseline Prevalence data)</td>
<td>forYOU Team deployed</td>
</tr>
<tr>
<td>2009, April</td>
<td>2nd AHRQ Survey</td>
<td>forYOU Team deployed</td>
</tr>
<tr>
<td>2009, September</td>
<td>3rd AHRQ Survey</td>
<td>forYOU Team – 2nd class</td>
</tr>
<tr>
<td>2010, May</td>
<td></td>
<td>forYOU Team – 3rd class</td>
</tr>
<tr>
<td>2011, May</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012, March</td>
<td>3rd AHRQ Survey</td>
<td></td>
</tr>
<tr>
<td>2013, August</td>
<td>4th AHRQ Survey</td>
<td></td>
</tr>
<tr>
<td>2013, September</td>
<td></td>
<td>forYOU Team – 4th class</td>
</tr>
</tbody>
</table>

Study

An analysis of the MUHC patient safety culture survey results from 2007, 2009, 2012, and 2013 was conducted. Purpose of this study was to determine the prevalence of the second victim phenomenon at MUHC, the incidence of support for MUHC clinicians and to investigate the impact of the second victim experience on patient safety attitudes and perceptions.
Design

A cross-sectional, longitudinal study of existing MUHC Patient Safety Culture Survey results was analyzed to assess second victim prevalence among participants, prevalence of emotional support across time after implementation of the forYOU Team intervention, and the impact or influence of the second victim experience (with support and without support) on the clinician’s overall perceptions of patient safety.

The AHRQ-HSPOS survey data was stratified by year, facility, professional type, and second victim experience (second victim with support, second victim without support and non-second victim). The dependent or outcomes variables include the overall patient safety grade and the 12 specific safety dimensions captured within the AHRQ-HSPOS survey tool. The independent variables for this study are the three clinician groups (second victim with support, second victim without support and non-second victim).

Baseline patient safety culture data prior to implementation of the forYOU Team (intervention), five months after the intervention was deployed and two additional post deployment assessment points were evaluated to determine if there were differences in either the overall patient safety grade or the individual 12 patient safety dimensions across the three distinct clinician groups (second victim with support, second victim without support and non-second victim).

Because of the timing for the distribution of the system-wide AHRQ-HSPOS survey tool forYOU Team deployment, baseline data will be considered those data elements collected in 2007 and 2009. Impact of forYOU Team interventional supportive efforts will be established by comparing 2007/2009 staff responses with 2012 and 2013 responses.
Study Limitations

There are a few study limitations. Initial consideration is the fact that the study is limited to those subjects who were motivated to complete the initial 15 minute survey. Historically, MUHC patient safety culture survey response rate has varied between 52 to 61%. As a result, study findings will not represent 100% of MUHC clinicians.

The question which identifies the second victim status (“In the last 12 months, were there any patient events that caused you personal problems such as anxiety, depression or concerns about your ability to do your job?”) has some imposed restrictions. The question just inquires about the past 12 months. It is quite possible that individuals who respond in a negative manner may actually represent one of two different groups – individuals who have never experienced the second victim phenomenon and those that have experienced the second victim phenomenon but not in the past twelve month time frame. As a result, the third category of responses (non-second victim) may reflect a hybrid of responses not consistent with one type of response. For this reason, interpretations for results of this clinician category will be cautiously applied.

An additional potential limitation is the fact that only individuals employed at one of the three MUHC facilities participating in each of the four study periods will be represented in the study. This restricts both the number of potential participants as well as the professional type of clinicians to be analyzed.

Data Analysis

MUHC Patient Safety Culture Survey results from 2007, 2009, 2012, and 2013 were reviewed. Sample size for the four respective years was 1054, 1203, 758, and 1213.
A total of 4,228 participants were included in this study. Only the survey responses meeting inclusion criteria were included in the analysis.

**Inclusion Criteria**  Three MUHC facilities have participated in each of the four surveys. These facilities include University Hospital (UH), Missouri Rehabilitation Center Center (MRC) and Women’s and Children’s Hospital (WCH). Responses from individuals identifying these facilities as their primary work setting were included in the study. The forYOU Team has been in place in each of these facilities since its inception in 2009.

**Exclusion criteria**: Additional facilities were included in survey distribution as they joined the MU Health Care System. A total of six health care facilities now comprise MUHC. Responses from individuals identifying themselves as members of an MUHC facility not represented in the three original facilities were excluded from the study. An additional exclusion will be individuals representing the medical staff with job titles of attending physician, fellow physician, and resident physician who did not have the opportunity to participate until the 2012 and 2013 surveys. Since these individuals did not have an opportunity to participate in all four surveys, responses from these professional types were also excluded from the analysis.

**Method of Analysis**

MUHC’s AHRQ-HSPOS data was stratified by year, facility, professional type, and second victim experience (non-second victims, second victims with support and second victims without support). Descriptive statistics using simple count and proportions were used to characterize the above data elements. Mean group scores for
each of the 12 safety dimensions and overall safety grade were calculated for each of the three second victim groups. A chi-square analysis was performed to determine rates that were compared across facilities and across time. Comparisons between groups were performed using logistic regression. For dimension scores, groups were compared using analysis of variance. Pairwise comparisons were performed using a Tukey adjustment for multiple comparisons.

Since the research questions involve a total of 13 variables (12 survey dimensions and the overall safety grade), a large number of statistical tests were required. Given the relatively large number of samples, the ability to detect relatively small differences between groups was possible. For this reason, a smaller level of significance than the typical 0.05 was used. For this analysis, the threshold of p value <.001 was used. To assist in determining clinical relevance or meaningfulness on this large data set, a mean score difference of >0.40 was established a priori. Statistical support from a biostatistician at the Biostatistics Unit at the University of Missouri-Columbia was recruited to perform data analysis.

Results

A total of 4,228 clinicians participated in the four surveys within the three hospital settings. Nursing personnel accounted for 2,227 (53%) of the total respondents. Allied health professionals accounted for 2,001 (47%). A breakdown of professional type by facility is included in Table 4.3.
Table 4.3.  Professional Types Participating by Facility – All Years

<table>
<thead>
<tr>
<th>MUHC FACILITY</th>
<th>PROFESSIONAL TYPE</th>
<th>TOTALS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Nursing Personnel (RN/LPN)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Allied Health Professionals (Non-nurse/Non-physician)</td>
<td></td>
</tr>
<tr>
<td>University Hospital (UH)</td>
<td>1314</td>
<td>1220</td>
</tr>
<tr>
<td>Women’s and Children’s (WCH)</td>
<td>754</td>
<td>496</td>
</tr>
<tr>
<td>Missouri Rehabilitation Center (MRC)</td>
<td>159</td>
<td>285</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td><strong>2227</strong> (53%)</td>
<td><strong>2001</strong> (47%)</td>
</tr>
</tbody>
</table>

Approximately one-fourth of the respondents (n=1040) self-identified as second victims by answering favorably to the second victim phenomenon screening question embedded in the AHRQ survey across time. Fifty-three percent of the second victims represented nursing personnel.

There was a difference in second victim prevalence across the three facilities between survey periods with frequency of second victimization increasing as time evolved. For example, WCH initial second victim prevalence was 15% of the respondents. The prevalence increased to 40% by the 2012 survey. Refer to Table 4.4.

When considering each facility independently, there is no statistical difference across years for MRC, but there is a difference for WCH and UH. For WCH, partitioning shows no difference between 2007/2009 or between 2012/2013 data, but shows a highly significant difference between the combined years 2007/2009 and 2012/2013. For UH, partitioning shows no difference between 2007/2009, a significant difference between 2012/2013 (p=0.0030) and reveals a highly significant difference between the compared years 2007/2009 and 2012/2013 (p<0.0001). Partitioning of the overall data across all facilities shows no difference between 2007/2009 (p=0.6838), a marginal difference.
between 2012/2013 (p=0.0780), but highly significant difference between 2007/2009 and 2012/2013 combined (p<0.0001).

Table 4.4. Second Victim Prevalence

<table>
<thead>
<tr>
<th>Survey Year</th>
<th>University Hospital (UH)</th>
<th>Women’s and Children’s (WCH)</th>
<th>Missouri Rehabilitation Center (MRC)</th>
<th>TOTALS</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Second Victim YES</td>
<td>Second Victim NO</td>
<td>Second Victim YES</td>
<td>Second Victim NO</td>
<td>Second Victim YES</td>
</tr>
<tr>
<td></td>
<td>n (%)</td>
<td>n (%)</td>
<td>n (%)</td>
<td>n (%)</td>
<td>n (%)</td>
</tr>
<tr>
<td>2007</td>
<td>96 (15.58)</td>
<td>520 (84.42)</td>
<td>51 (15.45)</td>
<td>279 (84.55)</td>
<td>19 (17.59)</td>
</tr>
<tr>
<td>2009</td>
<td>111 (15.06)</td>
<td>626 (84.94)</td>
<td>45 (14.20)</td>
<td>272 (85.80)</td>
<td>26 (17.45)</td>
</tr>
<tr>
<td>2012</td>
<td>139 (30.68)</td>
<td>314 (69.32)</td>
<td>86 (40.19)</td>
<td>128 (59.81)</td>
<td>23 (25.27)</td>
</tr>
<tr>
<td>2013</td>
<td>285 (39.15)</td>
<td>443 (60.85)</td>
<td>136 (34.96)</td>
<td>253 (65.04)</td>
<td>23 (23.96)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>631 (24.90)</td>
<td>1903 (75.10)</td>
<td>318 (25.44)</td>
<td>932 (74.56)</td>
<td>91 (20.50)</td>
</tr>
</tbody>
</table>

Prevalence of second victim support varied according to each facility (Table 4.5).

When considering individual facilities MRC and UH are primarily responsible for difference over times. There is no difference across time for WCH. For MRC, partitioning shows no difference between 2007/2009, a marginally significant difference between 2012/2013 (p=0.0161) but shows a significant difference between the combined years 2007/2009 and 2012/2013 (p=0.0073). For UH, partitioning shows no difference between 2007/2009, no difference between 2012.2013 but shows a highly significant difference between the combined years 2007/2009 and 2012/2013 (p=0.0001).
Table 4.5. Second Victim Support Prevalence

<table>
<thead>
<tr>
<th>Survey Year</th>
<th>University Hospital (UH)</th>
<th>Women’s and Children’s (WCH)</th>
<th>Missouri Rehabilitation Center (MRC)</th>
<th>TOTALS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Support YES</td>
<td>Support NO</td>
<td>Support YES</td>
<td>Support NO</td>
</tr>
<tr>
<td></td>
<td>n (%)</td>
<td>n (%)</td>
<td>n (%)</td>
<td>n (%)</td>
</tr>
<tr>
<td>2007</td>
<td>38 (39.58)</td>
<td>58 (60.42)</td>
<td>17 (33.33)</td>
<td>34 (66.67)</td>
</tr>
<tr>
<td>2009</td>
<td>38 (34.23)</td>
<td>73 (65.77)</td>
<td>16 (35.56)</td>
<td>29 (64.44)</td>
</tr>
<tr>
<td>2012</td>
<td>74 (53.24)</td>
<td>65 (46.76)</td>
<td>31 (36.05)</td>
<td>55 (63.95)</td>
</tr>
<tr>
<td>2013</td>
<td>158 (55.44)</td>
<td>127 (44.56)</td>
<td>59 (43.38)</td>
<td>77 (56.62)</td>
</tr>
<tr>
<td>TOTALS</td>
<td>308 (48.81)</td>
<td>323 (51.19)</td>
<td>123 (38.68)</td>
<td>195 (61.32)</td>
</tr>
</tbody>
</table>

Analysis of the 12 patient safety dimensions and overall safety grade across time for the three clinician groups was conducted with results displayed on Table 4.6. For individual dimensions, the supported second victim mean scores are quite similar to non-second victims, there is a striking difference observed between the non-supported and supported second victims mean scores. As demonstrated on Table 4.6, the differences were all highly statistically and clinically relevant. In most (but not all) cases the unsupported second victim scores were lower than the supported victims or the non-victims. The mean score for MUHC second victims with support was higher than the AHRQ national benchmark mean in all twelve dimensions but was lower for the overall safety grade. When comparing the MUHC second victims without support mean scores to the AHRQ national benchmark, MUHC scores were lower than the national mean in ten of the 12 dimensions and the overall patient safety score.
Supported second victims respond in meaningfully different ways than non-supported second victims. The information is readily obvious as captured in Figure 4.2 depicting responses from all three facilities across time. The x-axis represents the 12 safety dimensions plus the overall patient safety grade. The Y-axis represents the mean score. It is interesting to note the relative similar responses among the second victims with support and the non-second victims in this depiction. There is also a striking difference in the mean scores among the non-supported second victims (red dotted line).

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Dimension Title</th>
<th>Mean Scores [Range 1-5]</th>
<th>AHRQ National Benchmark Mean [Range 1-5]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Second Victim Support YES</td>
<td>Second Victim Support NO</td>
</tr>
<tr>
<td>1</td>
<td>Teamwork within units</td>
<td>4.14</td>
<td>3.42*</td>
</tr>
<tr>
<td>2</td>
<td>Supervisor/Manager Expectations &amp; Actions Promoting Patient Safety</td>
<td>3.93</td>
<td>3.07*</td>
</tr>
<tr>
<td>3</td>
<td>Management Support for Patient Safety</td>
<td>3.67</td>
<td>2.82*</td>
</tr>
<tr>
<td>4</td>
<td>Organizational Learning - Continuous Improvement</td>
<td>3.84</td>
<td>3.10*</td>
</tr>
<tr>
<td>5</td>
<td>Overall Perceptions of Patient Safety</td>
<td>3.53</td>
<td>2.71*</td>
</tr>
<tr>
<td>6</td>
<td>Feedback &amp; Communication About Error</td>
<td>3.50</td>
<td>2.85*</td>
</tr>
<tr>
<td>7</td>
<td>Frequency of Events Reported</td>
<td>3.26</td>
<td>2.87</td>
</tr>
<tr>
<td>8</td>
<td>Communication Openness</td>
<td>3.73</td>
<td>2.98*</td>
</tr>
<tr>
<td>9</td>
<td>Teamwork Across Units</td>
<td>3.31</td>
<td>2.72*</td>
</tr>
<tr>
<td>10</td>
<td>Staffing</td>
<td>3.28</td>
<td>2.61*</td>
</tr>
<tr>
<td>11</td>
<td>Handoffs &amp; Transitions</td>
<td>3.01</td>
<td>2.61*</td>
</tr>
<tr>
<td>12</td>
<td>Nonpunitive Response to Errors</td>
<td>3.33</td>
<td>2.43*</td>
</tr>
<tr>
<td>Overall Safety Grade</td>
<td>‘Give your work area/unit an overall grade on patient safety.’</td>
<td>3.58</td>
<td>3.01*</td>
</tr>
</tbody>
</table>

*Clinically significant difference – mean score difference >0.40 (SV + support to SV –Support)
The data was also broken down by year. The two baseline years (2007 and 2009) were relatively similar. As time progressed and the forYOU Team efforts matured with increasing peer supporters, the noticeable differences in the unsupported second victim (red dotted line) became increasingly obvious. Refer to Figures 4.3.
This longitudinal study highlights the importance of clinician support as well as the impact that this support affords future patient safety perceptions and attitudes. It also showcases the impact that unsupported clinicians have on their respective unit safety culture perceptions as well as those at the facility-wide level. To illustrate the impact that support (or lack thereof) can have on overall individual unit safety scores, a table representing eight MUHC units participating in the study was developed (Table 4.7). This table reflects the significance of second victim prevalence and perceived levels of support on the unit’s overall patient safety grade. It appears that supported second victims help to drive the overall patient safety grade higher within units and facilities that have higher levels of perceived support. And conversely, unsupported second victims can significantly drive the overall patient safety scores lower.
Table 4.7. MUHC Patient Safety Culture Survey – Specific Unit Exemplars

<table>
<thead>
<tr>
<th>Unit</th>
<th>Responses (n)</th>
<th>Second Victim Prevalence %</th>
<th>Second Victim Support %</th>
<th>Departmental Overall Safety Grade Mean Score</th>
<th>MUHC Overall Safety Grade Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>40</td>
<td>68%</td>
<td>26%</td>
<td>3.40</td>
<td>4.10</td>
</tr>
<tr>
<td>B</td>
<td>51</td>
<td>64%</td>
<td>13%</td>
<td>2.64</td>
<td>4.10</td>
</tr>
<tr>
<td>C</td>
<td>25</td>
<td>56%</td>
<td>71%</td>
<td>4.17</td>
<td>4.10</td>
</tr>
<tr>
<td>D</td>
<td>45</td>
<td>56%</td>
<td>72%</td>
<td>4.22</td>
<td>4.10</td>
</tr>
<tr>
<td>E</td>
<td>38</td>
<td>53%</td>
<td>25%</td>
<td>3.32</td>
<td>4.10</td>
</tr>
<tr>
<td>F</td>
<td>51</td>
<td>39%</td>
<td>75%</td>
<td>4.11</td>
<td>4.10</td>
</tr>
<tr>
<td>G</td>
<td>71</td>
<td>36%</td>
<td>70%</td>
<td>4.62</td>
<td>4.10</td>
</tr>
<tr>
<td>H</td>
<td>27</td>
<td>30%</td>
<td>71%</td>
<td>4.17</td>
<td>4.10</td>
</tr>
</tbody>
</table>

Discussion

The impact of MUHC’s interventional support of second victims, the forYOU Team, is captured in this longitudinal study. Patient safety researchers have come to appreciate the fact that the second victim phenomenon is potentially a serious consequence in any health care provider role for the individual clinician. However, this study reveals that the impact of the second victim experience and the provision of support (or lack thereof) on the individual clinician may extend beyond that of the individual clinician into the working environment at the department level and possibly facility-wide level.

Although the second victim prevalence appears to be increasing over time among each of the three different MUHC facilities, it might be a function of increased awareness and attention density that has been given to the entire second victim concept within MUHC. Increased awareness of the second victim phenomenon within health care facilities tends to ‘normalize’ the physiological and psychosocial responses experienced by the clinician and permits them to realize that it is quite acceptable to receive support during this frequently tumultuous time of a clinician’s career.
One consideration highlighted by this study is the fact that the second victim phenomenon is influenced by the patient population, acuity, length of stay and other unique nuisances that accompany an individual health care facility. This finding suggests that the spectrum of acuity differences between facilities may influence second victim prevalence. An important deliberation for a health care facility as they design supportive interventional strategies is to consider facility-specific unique traits to help guide the development of potential interventions.

The University Hospital results reveal that attention density on the topic to increase awareness of the second victim phenomenon helps to ‘normalize’ the experience. This increased awareness coupled with leadership endorsement at the local departmental level extending to the executive suite can make a tremendous difference in overall clinician perceptions regarding a safe working environment. The local and executive level endorsements at one facility (UH) have quickly spread to other MUHC facilities.

There were three research questions addressed in this study. The initial question was designed to explore prevalence as follows: ‘during the four study periods, is second victim prevalence different at any of the three individual facilities’? When comparing the 2007/2009 with 2012/2013, there was a statistical difference in the prevalence of second victims at MUHC. The author does not believe that this indicates an increase in the actual incidence of second victims but that the concept of second victimization and the need for care for the caregiver has become an expectation of post event response.

The second research question was as follows: ‘during the four study periods, is second victim support different at any of the three individual facilities for clinicians who
have been second victims?’ As above with prevalence, there were statistically significant

differences in the perception of support in the aftermath of an unanticipated clinical
event. With additional diffusion of more and more peer supporters within the clinical
working environment, support has become much more available for the clinician. An
ultimate goal of the forYOU Team is that peer responders will be available in every
clinical department throughout the MUHC system so that the clinician does not have to
seek support on his/her own. The forYOU team hopes to ensure that emotional support is
available pre-emptively upon identification of a potential second victim.

The third and final research question was as follows: ‘over time, is there a
difference in clinician perceptions relating to patient safety (overall patient safety grade
and 12 dimensions) among the three groups of survey respondents (non-second victims,
second victims with support, and second victims without support) within the three study
locations?’ Individuals who were identified as part of the second victim without support
group were statistically different than their counterparts in the other two groups.
Consistently, this group had much lower overall mean scores than the national average.
Impact of these lower scores definitely contributes in a negative manner to the overall
patient safety environment. Individual departments or units with high levels of support
(regardless of second victim prevalence) scored much higher on overall patient safety
scores. As a result, for those clinical areas striving to increase their overall patient safety
scores, a wise investment would be the proactive development of a second victim
interventional strategy.
Conclusion

This study reports on findings from an analysis of second victimization and perceived social support in three different hospital types within an academic health setting over a period of approximately six years. The knowledge gained from this research exemplifies the importance of second victim support within the context of the health care work environment. The results suggest a direct relationship between second victim support and future clinician perceptions of patient safety within the context of the local work environment. For health care facilities attempting to enhance their overall patient safety culture, strong consideration should be given to development of a formalized approach to emotional support for health care clinicians in the immediate aftermath of any unanticipated clinical event.

This study underscores the importance of clinician support in the aftermath of unanticipated clinical events. An organizational understanding and awareness of the second victim phenomenon, together with peer and supervisory surveillance in the aftermath of high-risk clinical events, provides a unique opportunity to enable second victims to receive the emotional support that they desperately desire. Health care organizations have a moral and ethical obligation to clinicians to ensure that emotional support strategies are designed to mitigate second victim suffering. Clinician support interventions should be designed to address second victim responses of varying severity, ranging from simple peer interactions to prolonged professional support in more severe clinical safety events that involve a protracted litigation process.
References


Summary

The 1999 Institute of Medicine’s (IOM) *To Err Is Human: Building a Safer Health Care System* was a call to action for health care to critically review care practices, systems, and processes to address the growing concern relating to preventable patient deaths in the United States. Even though patient safety has always been a core value for health care professionals, it wasn’t until the release of this document that the patient safety movement truly gained traction within health care organizations across the country. The science of patient safety now drives the health care movement to explore care practices to determine opportunities to enhance care at the bedside. The goal of the patient safety movement is to redesign systems of care and improve processes so that care will be rendered the context of a safer environment.

The science of patient safety is just now appreciating the enormous complexity that modern health care offers with potentially serious implications for both patients and their caregivers. Today’s health care delivery system has best been described by United Kingdom’s Sir Cyril Chantler as follows: “*Medicine use to be simple, ineffective, and relatively safe. Now it is complex, effective, and potentially dangerous*” (Chantler, 1999, pg.1180). As depicted in Chantler’s quote, despite health care’s best attempts to improve the safety of health care, errors in care delivery and complications of modern medicine continue to occur on a regular basis.

These unanticipated clinical events have a devastating impact on the ‘first victim’ of health care – the patient and their family members. Only within the past decade has
the impact of such events on the health care provider been recognized. Every day, health
care professionals practice their art and science within enormously complex
environments and experience unexpected patient outcomes. Health care clinicians
involved in unanticipated clinical events, especially involving serious harm, are deeply
affected by the experience and have become known as the ‘second victim’.

There has been tremendous growth in patient safety efforts and medical error
analysis within United States healthcare environments within the past decade. A similar
growth is noted in the field of second victim research. We now collectively have
anecdotal and documented knowledge which clearly defines the detrimental impact of the
second victim phenomenon. Almost every practicing health care clinician has a personal
story of second victim impact yet support for health care’s clinicians continues to go
largely unaddressed within healthcare institutions. Continued progress has been made on
behalf of healthcare’s second victims but it has been quite slow. Second victims need
timely and predictable forms of emotional support from their health care organization in
the aftermath of an unanticipated clinical event.

A comprehensive adverse event response plan for staff members who may be
suffering as second victims is vital for restoring psychosocial and physical health after an
event. Based on findings from the literature, an important key to clinician support is to
have the critical support resources available for the affected clinician in an expeditious
manner. Support initiatives should be established and disseminated widely throughout
each institution so that individuals will know what is available, what can be expected, and
how to quickly access assistance in the aftermath of unanticipated clinical events.
It is of the essence that as an industry, health care leaders assume ownership for the career devastating second victim phenomenon in order to heal our existing health care workforce and prevent future staff harm. Additional research is necessary to expand our existing understanding of the career jolting second victim experience. It is imperative that an improved understanding of effective monitoring and support strategies be developed and rigorously evaluated to ensure appropriate mitigation of future second victim suffering. This study will serve as a roadmap for development of interventional tactics for the second victim and can stimulate future research studies on the topic of second victim interventional support and guidance.

There is now a growing body of evidence demonstrating the need for health care institutions to formalize a second victim support network across every worksite to ensure that every healthcare clinician, student or volunteer is monitored for potential second victim reactions. Institutions should design a structured response plan that results in ongoing surveillance for potential second victims and acts to mitigate emotional suffering immediately upon second victim identification. The forYOU Team interventional strategy offers a peer-to-peer support model with specially trained colleagues/peers embedded in high-risk clinical environments provides opportunities for continual surveillance as well as the capability for immediate basic emotional first aid.

Introduction of the MUHC forYOU Team as an all-inclusive intervention for clinician support following an unanticipated clinical event was an interventional strategy to augment the existing organization’s patient safety efforts in an attempt to enhance the overall culture of patient safety. The intervention was just one tactic deployed by MUHC to help create a safety culture that value and even expects time spent on caring for the
caregiver in the aftermath of an unanticipated clinical event. After deployment, the forYOU Team soon began impacting clinician insights and perceptions of support and care following adverse patient events as evidenced by this longitudinal data. As a result, the culture of patient safety at MUHC has evolved. Replication of this longitudinal study in other health care facilities is an important step in determining if implementation of a formal clinician support structure truly impacts overall safety perceptions and attitudes of clinicians as significantly as this study suggests.

**Significance of Dissertation Work**

Even though much remains to be learned about the optimal strategies to recognize and intervene in supporting clinicians, enough knowledge is now available for all health systems to be putting foundational pieces of support programs in place. Assistance should be made available to address second victim responses of varying intensity and need. Widespread deployment and enhancements of such support systems in the years ahead should serve both our clinicians and our patients well.

There were three explicit aims for this study which included the following: 1) quantify second victim prevalence at MUHC over the six year study period (2007-2013), 2) evaluate for changes in perceived institutional support for the second victim during the study period (2007-2013), and 3) examine differences in the overall patient safety perceptions (overall safety grade and individual dimensions) among the three clinician groups (non-second victims, second victims with support, and second victims without support). Findings from this research revealed statistically significant and clinically relevant differences for all three aim statements. The results suggest that the five year forYOU Team interventional strategy for provision of immediate second victim support

84
is an effective approach to addressing the second victim population within the context of
the MUHC academic health care setting.

This study helps reveal that a comprehensive event-response plan for health
clinicians suffering as second victims extends beyond the boundaries of the individual
clinician and can help significantly influence the overall perceptions of a department
specific patient safety culture. This research also provides new insights for patient safety
researchers on the impact of one academic health care system’s interventional approach
to second victim support. However, future research is needed as new interventions are
proposed, formed and deployed so that the most robust interventional strategy can be
introduced throughout the modern health care environment.

**Future Directions**

Clinicians experiencing the second victim phenomenon each have unique needs to
help them successfully navigate the six stages of recovery. Based on the findings from
this study, not addressing these needs by not offering institutionally endorsed clinician
support interventions could influence not only the future career potential for countless
clinicians but it could also adversely impact the overall patient safety culture
advancements of the organization. From the five year tenure of the MUHC forYOU
Team, we have learned that a basic element for institutional support of the second victim
includes specifically trained colleagues and peers embedded within the context of the
local department to provide immediate and targeted support immediately after an
unanticipated clinical event occurs.

Future research opportunities to advance the knowledge of second victim
emotional support are quite rich. In fact, there is potential for a strong research trajectory
within this topic domain. A next step to advance second victim recovery effectiveness knowledge is to design and deploy next generation forYOU Teams at a variety of health care settings outside the MUHC network to systematically evaluate the impact. Six hospitals across the United States have been trained in basic forYOU concepts and each has deployed a support network designed to address the unique needs of their respective facilities and patient safety cultures. A longitudinal study of the impact of this intervention will help guide future standards development for health care facilities throughout the United States health care system and beyond.
Appendix A. MUHC ‘Modified’ 2013 AHRQ-PSOS Survey Instrument

<table>
<thead>
<tr>
<th>2013 Patient Safety Culture Assessment Survey - Inpatient</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Instructions:</strong></td>
</tr>
<tr>
<td>If most of your clinical services are in one facility, please select that facility for this survey. If you usually work in more than one facility, or if your work involves patients in more than one facility, you will select “system-wide.”</td>
</tr>
<tr>
<td>If questions or you prefer to complete a hard copy version of the survey, call 604-2373.</td>
</tr>
<tr>
<td><strong>1. What facility do you spend the MAJORITY of your weekday?</strong></td>
</tr>
<tr>
<td>[ ] Bon Festus</td>
</tr>
<tr>
<td>[ ] B.C. Children's Hospital</td>
</tr>
<tr>
<td>[ ] B.C. Rehabilitation Centre</td>
</tr>
<tr>
<td>[ ] Lions Gate Hospital</td>
</tr>
<tr>
<td>[ ] University Hospital</td>
</tr>
<tr>
<td>[ ] Women's and Children's Hospital</td>
</tr>
<tr>
<td>[ ] System-Wide</td>
</tr>
</tbody>
</table>
2013 Patient Safety Culture Assessment Survey - Inpatient

Your Work Area(s)

9. Think about your hospital work area(s)/unit(s)....

<table>
<thead>
<tr>
<th>Excellent</th>
<th>Very Good</th>
<th>Acceptable</th>
<th>Poor</th>
<th>Fail</th>
<th>Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9. In the last 12 months, were there any patient events that caused you personal problems such as anxiety, depression, or concerns about your ability to do your job?

- Yes (If answer yes, go to question 10)
- No (If answer no, skip to question 10)

Page 3
11. Did you receive support from anyone within the MSRC system?
- Yes
- No

12. Have you attended MSRC’s “Crew Training” course (aviation safety course taught by pilots)?
- Yes
- No
- Don’t know/remember

## 2013 Patient Safety Culture Assessment Survey: Inpatient

### 13. How much do you agree or disagree with the following statements?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>People support each other in this unit.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>We have enough staff to handle the workload.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>When one of us feels that the work needs to be done quickly, we work together to get the work done.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In this unit, people back each other with respect.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff in this unit work together better than is needed for patient care.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>We are actively doing things to improve patient safety.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>We see more agency/temporary staff than is best for patient care.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff tend to feel their mistakes are held against them.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mistakes here led to positive changes here.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>It is justified to share that more serious mistakes don’t happen around here.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>When an area in the unit gets really busy, others help out.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>When an event is reported, I think the person is being written up, not the problem.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>After we make changes to improve patient safety, we evaluate their effectiveness.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>We work is “user-friendly” (easy to do too much, low quality).</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient safety is more important to get done than some other things.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>We feel that mistakes are made and that personnel feel it.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>We have patient safety problems in this unit.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Our procedures and systems are good at preventing errors than happening.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Communications

14. How often do the following things happen in your work area(s)/unit(s)?

<table>
<thead>
<tr>
<th>Event</th>
<th>Rarely</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>We get feedback about changes put into place based on event reports.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff will bring up if they see something that may negatively affect patient care.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>We have team meetings to discuss how things happen in the unit.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff tend to question the decisions or actions of those with more authority.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In this unit, we decide ways to prevent errors from happening again.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff are afraid to ask questions when something does not seem right.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Frequency of Events Reported**
### 2013 Patient Safety Culture Assessment Survey - Inpatient

15. In your hospital work area(s)/unit(s), when the following mistakes happen, how often are they reported?

<table>
<thead>
<tr>
<th>Mistake Description</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>When a mistake is made, it is caught and corrected before affecting the patient.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>When a mistake is made, it is caught and corrected after affecting the patient.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>When a mistake is made, but has no potential to harm the patient. How often is it reported?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reporting mistakes leads to improvement in the patient care work environment.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A mistake occurs, staff are blamed.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>When something doesn’t seem right about the patient’s care, I ask questions of experienced members of the team, regardless of their authority.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Your Supervisor/Manager

16. How much do you agree or disagree with the following statements about your immediate supervisor/manager or person to whom you directly report?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>My supervisor/manager says a good word when someone sees a job done as it should.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My supervisor/manager actively seeks opportunities for improving patient safety.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>When I’m under pressure, my supervisor/manager works as to work faster, even if it means taking shortcuts.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My supervisor/manager provides prompt support if an event is something.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My supervisor/manager extols patient safety problems that happen over your care.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Your Hospital within University of Missouri Health System

### 2013 Patient Safety Culture Assessment Survey - Inpatient

17. How much do you agree or disagree with the following statements about your hospital (University Hospital, Ellis Fischel, etc...)?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital management provides a work climate that promotes patient safety.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospital units do not coordinate well with each other.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Things fall between the cracks when transferring patients from one unit to another.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>There is good communication among hospital units that need to work together.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Registered nurse provides critical information to help with verbal handoffs.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information is not always available during shift changes.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>It is sometimes difficult to work with staff from other hospitals.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Problems often occur in the exchange of information across hospital units.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The safety of hospital management allows that patient safety is a top priority.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospital management seems interested in patient safety only after an adverse event happens.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospital staff work together to provide the best care for patients.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shift changes are problematic for patients in the hospital.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Patient Safety Network (PSN) System

18. In the past 12 months, how many event reports have you filled out and submitted in the PSN? Mark ONE answer.

- [ ] 0 event reports
- [ ] 1 to 10 event reports
- [ ] 11 to 20 event reports
- [ ] 21 to 30 event reports
- [ ] 31 event reports or more
2013 Patient Safety Culture Assessment Survey - Inpatient

19. Please indicate your agreement or disagreement with the following statements about the Patient Safety Network (PSN)?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I find PSN is easy to use.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSN is useful in my patient care and management processes.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I view PSN as a tool to assist in delivering safe care.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The PSN has made my work life easier or more manageable.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use of PSN makes work enjoyable or enjoyable.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The PSN makes work enjoyable or enjoyable.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have the PSN in front of me when managing patients or activities.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All admitting PSN reports, supervision, and follow-up actions are made appropriate to me.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Background Information

20. How long have you worked at University of Missouri Health System?

[ ] Less than 1 year  [ ] 1 to 5 years  [ ] 5 to 10 years  [ ] 10 to 20 years  [ ] 20 years or more

21. How long have you worked in your current work area/unit?

[ ] Less than 1 year  [ ] 1 to 5 years  [ ] 5 to 10 years  [ ] 10 to 20 years  [ ] 20 years or more

22. Typically, how many hours per week do you work at University of Missouri Health System?

[ ] Less than 20 hours per week  [ ] 20 to 24 hours per week  [ ] 25 to 30 hours per week  [ ] 30 to 35 hours per week  [ ] 35 to 40 hours per week  [ ] 40 to 44 hours per week  [ ] 45 to 50 hours per week  [ ] 50 to 54 hours per week  [ ] 55 hours or more

Background Information

2013 Patient Safety Culture Assessment Survey - Inpatient

22. What is your position at University of Missouri Health System? Check one category that best applies to your job.

[ ] Administration (Management/Finance, Risk Management, Human Resources, Compliance)
[ ] Ambulatory
[ ] Care Coordination (Social Worker, Case Coordinator)
[ ] Care Team Associate - Clinical (Nurse, Technician, Unit Clerk)
[ ] Care Team Associate - Support (Transporter, Housekeeper, Unit Secretary)
[ ] Clinical Support Off-Administrative Assistant
[ ] Dentist
[ ] Diane/Patient/Staff Nurse
[ ] Emergency/ED
[ ] Other (please specify): ____________________________

24. In your staff position, do you typically have direct interaction or contact with patients?

[ ] YES. I typically have direct interaction or contact with patients.
[ ] NO. I typically do not have direct interaction with patients.

25. How long have you worked in your current specialty or profession?

[ ] Less than 1 year  [ ] 1 to 5 years  [ ] 5 to 10 years  [ ] 10 to 20 years  [ ] 20 years or more

Your Comments

26. To participate in the culture survey, please enter your name here. This information will be maintained separately from your survey data. Your responses will remain anonymous.
<table>
<thead>
<tr>
<th>27. Please feel free to write any comments regarding patient safety and our health care system.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
## Appendix B. AHRQ-HSOPS Survey Dimensions and Associated Questions

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Dimensions</th>
<th>AHRQ-HSOPS Associated Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Teamwork within units</td>
<td></td>
<td>People support one another in this unit.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>When a lot of work needs to be done quickly, we work together as a team to get the work done.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>In this unit, people treat each other with respect.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>When one area in this unit gets really busy, others help out.</td>
</tr>
<tr>
<td>2 Supervisor/Manager Expectations &amp; Actions Promoting Patient Safety</td>
<td></td>
<td>My supervisor/manager says a good word when he/she sees a job done according to established patient safety procedures.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>My supervisor/manager seriously considers staff suggestions for improving patient safety.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Whenever pressure builds up, my supervisor/manager wants us to work faster, even if it means taking shortcuts.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>My supervisor/manager overlooks patient safety problems that happen over and over.</td>
</tr>
<tr>
<td>3 Management Support for Patient Safety</td>
<td></td>
<td>Hospital management provides a work climate that promotes patient safety.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The actions of hospital management show that patient safety is a top priority.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hospital management seems interested in patient safety only after an adverse event happens.</td>
</tr>
<tr>
<td>4 Organizational Learning - Continuous Improvement</td>
<td></td>
<td>We are actively doing things to improve patient safety.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mistakes have led to positive changes here.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>After we make changes to improve patient safety, we evaluate their effectiveness.</td>
</tr>
<tr>
<td>5 Overall Perceptions of Patient Safety</td>
<td></td>
<td>Patient safety is never sacrificed to get more work done.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Our procedures and systems are good at preventing errors from happening.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>It is just by chance that more serious mistakes don't happen around here.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>We have patient safety problems in this unit.</td>
</tr>
<tr>
<td>6 Feedback &amp; Communication About Error</td>
<td></td>
<td>We are given feedback about changes put into place based on event reports.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>We are informed about errors that happen in this unit.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>In this unit, we discuss ways to prevent errors from happening again.</td>
</tr>
<tr>
<td>7 Frequency of Events Reported</td>
<td></td>
<td>When a mistake is made, but is caught and corrected before affecting the patient, how often is this reported?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>When a mistake is made, but has no potential to harm the patient, how often is this reported?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>When a mistake is made that could harm the patient, but does not, how often is this reported?</td>
</tr>
<tr>
<td>8 Communication Openness</td>
<td></td>
<td>Staff will freely speak up if they see something that may negatively affect patient care.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Staff feel free to question the decisions or actions of those with more authority.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Staff are afraid to ask questions when something does not seem right.</td>
</tr>
<tr>
<td>9 Teamwork Across Units</td>
<td></td>
<td>There is good cooperation among hospital units that need to work together.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hospital units work well together to provide the best care for patients.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hospital units do not coordinate well with each other. (negatively worded).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>It is often unpleasant to work with staff from other hospital units.</td>
</tr>
<tr>
<td>10 Staffing</td>
<td></td>
<td>We have enough staff to handle the workload.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Staff in this unit work longer hours than is best for patient care.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>We use more agency/temporary staff than is best for patient care.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>We work in &quot;crisis mode&quot; trying to do too much, too quickly.</td>
</tr>
<tr>
<td>11 Handoffs &amp; Transitions</td>
<td></td>
<td>Things &quot;fall between the cracks&quot; when transferring patients from one unit to another.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Important patient care information is often lost during shift changes.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Problems often occur in the exchange of information across hospital units.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Shift changes are problematic for patients in this hospital.</td>
</tr>
<tr>
<td>12 Nonpunitive Response to Errors</td>
<td></td>
<td>Staff feel like their mistakes are held against them.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Staff worry that mistakes they make are kept in their personnel file.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>When an event is reported, it feels like the person is being written up, not the problem.</td>
</tr>
</tbody>
</table>
Appendix C. Institutional Review Board (IRB) Approval Notification

From: IRB, HS
Sent: Friday, October 11, 2013 8:49 AM
To: Scott, Susan D. (Clinical Effectiveness)
Cc: Handke, Christine A.
Subject: HS IRB Project #1209656

Project Number: 1209656
Review Number: 138989
Project Title: Second Victim Phenomenon Exposure and Resultant Impact on Patient Safety Perceptions and Attitudes
Principal Investigator(s): Scott, Susan Dunnell
Primary Contact: Scott, Susan Dunnell

Your review above has been approved. Please log into the eIRB to access any approved documents.

Sincerely,

[Signature]

Mel Beck, PhD
Chair
Bibliography


96


Vita

Susan Elizabeth Donnell Scott was born to William Howe ‘Jack’ and Elizabeth ‘Tudie’ [Posch] Donnell on April 29, 1957. After attending public schools in Festus, Missouri, she attended Maryville College in St. Louis where she earned her Associates Degree in Nursing. She began her professional nursing career as a pediatric office nurse until she relocated to Columbia, Missouri to continue her formal education. Working full-time in the Neonatal Intensive Care Unit (NICU) at University of Missouri Health Care, she studied part time at the Sinclair School of Nursing at University of Missouri. In 1988, she graduated with her Bachelors of Science in Nursing Degree. Promoted to NICU’s Assistant Manager, she realized that continuing education in graduate school would provide her with the knowledge and skills necessary to provide strong, effective leadership for this population of nursing personnel. In 1994, after five years of part-time study, she received her Masters in Nursing Science with an emphasis in Nursing Administration. Shortly, after starting a new professional role as Patient Safety Officer for University of Missouri Health Care, she realized the devastating impact that the second victim phenomenon can have on clinicians. This realization fueled her desire to pursue her doctoral degree to help understand this harmful phenomenon and to help design interventional strategies to mitigate the harmful impact of the experience for the clinician. She married Gary Joseph Scott and is the mother of two daughters, Katherine Elizabeth [Scott] Pauley and Erin Louise Scott. She is presently employed at University of Missouri Health Care as Manager of Patient Safety and Risk Management.