

# A Role to Alleviate Burnout and Maintain Quality of Care

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## Abstract

Health care in acute care settings has become increasingly complex and stressful with rapidly evolving treatment options, a growing aging population with multiple comorbidities, and expectations to deliver high-quality care with less resources to curb rising costs. Numerous studies have documented the ever-growing problem of burnout in health-care providers working in acute care settings and increased provider interruptions leading to medical errors. From 2018 to 2019, a new advanced practice provider (APP) role was tested on a 36-bed inpatient bone marrow transplant unit at the University of Colorado to address these issues. The goal of this role was to alleviate stressors and minimize interruptions that could otherwise contribute to compromised patient care and safety. In addition to improving patient care, the goal of the role is to improve job satisfaction. A description of the role and its development and implementation at the University of Colorado Hospital, Anschutz Medical Campus, is highlighted in this article.

**B**urnout, high staff turnover, and reduced resiliency among health-care providers working in acute care settings have been well documented in the literature and are recognized nationally as key barriers to recruiting and retaining health-care providers (Burn et al., 2014; Hlubocky et al., 2016; Lederer et al., 2008). This is a significant issue among health-care providers, including advanced practice providers (APPs) who work in hematology, oncology, and stem cell/bone marrow transplant (BMT) programs (Burns et al., 2014; Dimirci et al., 2010; Neu-

mann et al., 2018; Shanafelt et al., 2014). The combination of a highly complex and acute care patient population coupled with the growing demands from institutions, payors, and patients demanding high-quality, cost-effective care has contributed to poor job satisfaction and reduced rates of staff retention.

One approach to addressing this problem is to examine how the current practice environment contributes to burnout on a systemic level and pilot new and innovative models of APP care to improve the work environment and patient care. This article describes the development, pi-

loting, and implementation of an APP role that has significantly improved job satisfaction and staff retention in a blood cancers and BMT academic hospital-based program.

The University of Colorado has had a blood disorders and BMT program since the late 1990s, which was originally staffed by an academic physician group along with medical residents and fellows in training. In 2006, the program began hiring the first APPs to help deliver patient care in both the outpatient and inpatient settings. As the program grew in size, the inpatient care model was transitioned to an all APP-run service with nurse practitioners (NPs) and physician assistants (PAs) staffing a 36-bed blood cancers and BMT unit. The inpatient APP service provides care to patients with hematologic malignancies as well as to those receiving or experiencing complications from stem cell transplants or BMTs.

Since 2015, the program has grown 20% annually, and the inpatient APP staff grew from 9 to 16 in 2018 without any significant changes to the model of care. During this growth period, the inpatient APP team also expanded services to provide 24/7 coverage (nights were previously covered by house staff), and responsibilities included performing all procedures, admissions, transfers, and discharges, as well as daily medical management of this high-risk population.

The majority of the inpatient PAs and acute care NPs are recruited from the APP fellowship program at the hospital. This is a 1-year fellowship that exposes the providers to various specialties. During the fellowship, the providers will frequently rotate with the BMT team, giving them exposure to the program and spreading awareness of the high acuity of this complex and vulnerable patient population. Of note, the remainder of the team that did not complete the fellowship consists of PAs and NPs with either hospital medicine or BMT experience. Although there are currently no family nurse practitioners (FNPs) on the team, an FNP could be hired as long as they are willing to start a post-certificate program focusing on acute care within the first 2 years of their hire date.

The original model staffed 4 to 5 APPs working the day shift from 6:00 am to 6:00 pm, 7 days per week, while maintaining individual lists of patients varying in acuity and quantity depend-

ing on the daily inpatient census (typically ranging from 30–45 patients). At 6:00 pm, the staffing would reduce to one APP who would be responsible for covering the entire BMT service overnight.

## PROPOSED ROLE DESCRIPTION AND QUALIFICATIONS

Historically, with the staffing model described previously, one of the day shift APPs was responsible for managing the team pager, triaging admissions and transfers, and evaluating staffing, in addition to managing their own patient list, which could be 9 to 10 acutely ill patients. This model was initially successful, but with the rapid growth of the BMT program, new stressors emerged that placed the quality of patient care at risk and contributed to an increasingly stressful work environment for the APP team. The APPs were being pulled in multiple directions while trying to maintain the best and safest possible patient care.

Frequent interruptions have been cited as contributing to errors in health-care delivery. In a recent literature review focusing on interruptions of nursing care and the impact on patient safety, Monteiro and colleagues (2015) noted that there is a growing need for the design and implementation of work systems that help better manage interruptions. The need for an additional position with a provider primarily responsible for team-specific needs and tasks seemed essential to maintaining the high standard of care the APP team had been delivering.

There is a paucity of existing literature on the topic of innovative APP staffing models such as the role described here. A review of current literature reveals no similar initiatives involving APPs, and the benefits of this recently developed model will undoubtedly improve processes and the quality of care at any institution utilizing it.

The APP role is called “Inpatient Consult Advanced Practice Provider” (ICAPP) and refers to an additional provider practicing in a consultant role with the BMT team. It was decided that, unlike other APPs on the team carrying individual lists of patients, the ICAPP would not carry their own list of patients. Rather, the ICAPP would act as a resource for the team, with responsibilities including carrying the team pager, triaging new patients and new consults, performing or delegating

admissions, assisting and expediting discharges, accepting transfers from outside hospitals, performing procedures, holding daily teaching sessions (including case study reviews), working on quality improvement projects, ensuring adequate staffing, acting as an experienced resource to APPs and other staff, and functioning as a night shift resource and backup.

Another driving force for the origin of the role was decreasing staff turnover and burnout. Reduced work-life balance and job satisfaction are associated with burnout in health care, and its effect on APPs and other providers has been well described in literature (Neumann et al., 2018). In a job satisfaction survey performed prior to the development of the ICAPP role, key factors identified in contributing to poor resiliency included long work hours and feelings of inadequacy stemming from not being able to maintain quality patient care with the increasing demands and complexities in this patient population. Due to frequent interruptions throughout the day by pages, consultations, admissions, discharges, and procedures, providers were working 14-hour days instead of the intended 12-hour days. While the team stated their ongoing interest and satisfaction within the field of BMT, they were frustrated by feelings of being overwhelmed with constant interruptions and the inability to deliver the high caliber of patient care that is expected.

In response, the team sought to develop a strategy within the staffing model to improve APP to patient ratios and minimize interruptions while decreasing stressors that were contributing to staff burnout. In the initial development of the role, the team felt that focusing the ICAPP role on promoting early and efficient admissions and assisting with safe discharges to prevent hospital readmissions would achieve these goals.

The goal of the ICAPP position is to perform these responsibilities while maintaining flexibility to ensure the needs of the patients, APPs, RNs, MDs, and the hospital are met in a safe and efficient manner. The concentration of the role is to assist in managing the flow of the day and to allow other team members to focus on acutely ill patients in a less chaotic environment with fewer interruptions. In addition to managing the course of the service, the ICAPP maintains an overview of

the census to ensure adequate staffing is achieved for the following days. They are responsible for reaching out to the APP and moonlighting teams for additional coverage or to cancel providers when necessary, as well as providing sick call and emergency coverage on necessary occasions.

In order to make this role as beneficial as possible to the team, strict qualifications were initially established and implemented for the ICAPP. It is an expectation that ICAPP candidates have 1 year of experience on the BMT team, have night coverage experience, worked a total of at least 70 night shifts, and possess a willingness to work modified hours as the role dictates. They must have prescriptive authority, a Drug Enforcement Administration (DEA) license, and be credentialed to perform moderate sedation and required procedures, including lumbar punctures, intrathecal chemotherapy, and bone marrow biopsies.

The ICAPP role was originally proposed as being scheduled Monday through Friday, 10:00 am to 10:00 pm, while maintaining flexibility pending the projection of the day. Additional shift schedules were also discussed with the goal of providing the best coverage for staffing, APP resource needs, and patient care. In rare circumstances, the ICAPP was expected to flex and work 1:00 pm to 1:00 am if there were multiple admissions scheduled later in the afternoon, or if the night shift provider was newer and required additional support. The team found that this has not been problematic, as individuals who agree to work ICAPP have agreed to the aforementioned expectations. Additionally, the ICAPP expectation is also to cover sick calls, including cross covering nights if the night provider called in sick, potentially altering ICAPP shift hours.

## THE PILOT

The pilot was initially implemented in December 2017. Due to lack of funding for staffing at the time and various other staffing issues, the team at the University of Colorado was only able to trial the ICAPP position for five shifts that month. Based on the five pilot shifts, the team collected feedback, conducted surveys, and discussed what would work best to meet the needs of the team. The role's responsibilities and expectations as well as a list of specific qualifications were established at this point and presented to the leadership team.

The pilot then took a pause again due to staffing issues until March 2018 when it was able to continue for 13 shifts that month. Overall, there was a 7-month pilot period during which the team obtained ongoing feedback and evaluation of the impact of the ICAPP role. After this pilot period, the ICAPP was deemed an essential component of patient care by APP, MD, and RN staff members, as well as by the leadership and administration teams. The position was approved and funded to staff full time, Monday through Friday, as of July 15, 2018.

### OVERCOMING BARRIERS AND LESSONS LEARNED

Initially, there were multiple barriers to the proposed role, including understaffing, difficulty with flexibility, varying perceptions of the role amongst APPs, and too few providers meeting the qualifications to fulfill the needs of the ICAPP role. Since implementation, the ICAPP hours have been changed to a set time of 10:00 am to 10:00 pm since it was found that modifying the shift time did not provide additional support for the team and added no significant benefit to patient care. The 10:00 am to 10:00 pm shift does, however, provide coverage during the busiest times of the day and helps support the night APP with admissions, late procedures, emergency department (ED) consults, and after-hours patient calls. The ICAPP is still responsible for flexing to cover sick calls with appropriate warning, thus occasionally altering shift times to 6:00 am to 6:00 pm and rarely to 6:00 pm to 6:00 am. This allows for adequate staffing during unanticipated staffing needs, especially when emergency/moonlighting staff is unavailable.

Additional barriers were identified regarding APP experience and competency. It was found that with the initiation of ICAPP, APP staff, especially new hires, were seeing fewer opportunities to perform procedures and admissions and gained limited experience triaging pager calls, ED consults, and patient transfers. With expanded responsibilities, the ICAPP quickly became the busiest position on the inpatient team. This contributed to issues with competency and the ability to perform required inpatient-related tasks, in addition to an often overwhelmed ICAPP provider at risk for burnout. To mitigate this, the team began

requiring all newly hired APPs to rotate with the ICAPP to obtain experience in these areas. Additionally, a specified number of procedures was required for experienced staff to maintain privileges. This also served to encourage the ICAPP to distribute a portion of admissions and procedures to floor APPs as needed. These interventions have improved, although not completely eliminated, the barriers described previously.

Although multiple surveys were conducted throughout this process, an initial survey from the team about their expectations of the ICAPP role was not conducted. Since one of the driving forces behind the development of the role was to decrease staff burnout, it would have been helpful to pinpoint the needs of the teams from their perspectives, and this is suggested to any unit looking to implement the ICAPP role. Furthermore, deficiencies in patient care were not tracked. In the future, it would be helpful to track near misses and adverse events related to patient care.

The final major barrier was staffing. This position required the hiring of two additional APPs, which is a significant financial burden. Fortunately, the administration was supportive of this initiative and funded the required additional positions. This is likely to be the biggest barrier for many institutions attempting to implement the ICAPP position, but the benefits of this role will undoubtedly pay dividends in patient care, efficiency, job satisfaction, and APP staff retention.

Following adaptation, creating objectives, and development of a formal orientation for the role, the ICAPP evolved into a highly beneficial and essential position on the team. The role is continuously evolving, and the team is constantly receiving feedback from team members to continue improving its efficacy.

### CURRENT ROLES AND RESPONSIBILITIES

Shortly after the pilot, the team realized that it was unreasonable for the ICAPP to be responsible for assisting with discharges. Due to the lack of continuity, discharge-related items were overlooked, and the ICAPP was unable to anticipate the entirety of patients' discharge needs. Another unreasonable expectation was for the ICAPP to provide daily teaching on various topics or case studies to



the team. It was decided that this was the responsibility of the whole team, including attending MDs and other learners rotating on the service.

Another aspect of the role that was modified was the required qualifications to function as ICAPP. Once the position was continually filled by the same few providers, it was evident that this would create burnout, and the position ultimately did not require a highly experienced provider to make it successful. The position was then offered to other interested staff who met all qualifications, aside from the initial night requirement, to reduce some burden on existing ICAPPs while providing opportunities for other APPs to develop in this role. A checklist of requirements essential for the role was created to ensure APPs had a smooth transition during the two-shift orientation process. There is also no longer a qualifying number of night shifts necessary to have worked prior to functioning as ICAPP, as it was deemed that adequate general experience is sufficient. The providers that excel most in this role are detail oriented, efficient, organized, flexible, and promote good communication throughout the team and with other services. The updated responsibilities for the current role compared to the pilot are listed in Table 1.

Currently, the ICAPP role is filled by qualified and willing providers. The number of ICAPP shifts worked by each provider monthly varies depending on schedule availability. The scheduling team tries to spread out the number of ICAPP shifts worked by each provider to minimize burnout.

## OUTCOMES OF ICAPP IMPLEMENTATION

An APP staff survey conducted among 12 staff members in August 2019 revealed that 100% of respondents agreed that ICAPP improves their overall job satisfaction. That survey also received

overwhelmingly positive comments such as: “Great role! Amazing addition to patient care,” “ICAPP is a must-have,” and “Having an ICAPP makes work so much better, and I am not forced to rush through seeing and studying my patients.” The physicians have also seen benefit from the ICAPP position, as it allows them to have a point person for needs throughout the day.

In that same survey, 83% of respondents agreed that having ICAPP as a resource improved the quality of patient care. One of the initial goals of the role was to minimize distractions and interruptions that could otherwise compromise patient care, which the survey demonstrated was being met.

In addition to the positive responses from the staff, evidence points to better patient care. Patients are able to arrive on the day of scheduled chemotherapy and get started earlier in the day, thus leading to an earlier discharge and shorter length of stay. Also, the ICAPP offloads admissions and procedures from the floor APPs, resulting in fewer disruptions, leading to earlier and safer discharges.

## SUMMARY AND FUTURE DIRECTIONS

According to a survey completed by the BMT APP team in August 2019, 91% of the 12 respondents felt that having ICAPP present reduced burnout and overall level of stress at work. Further analysis will need to be completed to see if the reduced burnout and overall level of stress will correlate with staff retention.

With the number of positives associated with the position, the team looks forward to continued development of the role to meet the growing needs of the program, patient population, and evolving treatment landscape while maintaining a supportive work environment for the team. Potential future directions for the role include

**Table 1. ICAPP Responsibilities**

### Pilot ICAPP responsibilities

- Carry team pager
- Perform all admissions
- Perform all discharges
- Respond to consult requests from ED
- Assist with staffing assignments
- Accept transfers from outside facilities
- Provide staffing for urgent needs/sick calls
- Maintain flexible working hours

### Current ICAPP responsibilities

- Carry team pager
- Triage and/or perform admissions
- Does NOT perform discharges
- Respond to consult requests from ED
- Assist with staffing assignments
- Accept transfers from outside facilities
- Provide staffing for urgent needs/sick calls
- Work shifts from 10:00 am to 10:00 pm

staffing the ICAPP 7 days per week, including holidays, adding a second ICAPP during high census/high acuity periods, and having the second ICAPP work at a staggered time from the first ICAPP in order to have extended consult coverage. There has also been a desire to include more teaching responsibilities for the ICAPP role to educate new APPs and residents on performing admissions, consults, and procedures, as well as learning how to triage the workload of acute care patient services.

In the future, further data could be collected to analyze the impact of the ICAPP role on various capacity metrics, including the number of scheduled admissions performed early in the day, changes in length of stays, number of discharges performed before 11:00 am, as well as any changes noted on patient satisfaction surveys. In addition, future APP surveys should continue to include information about job satisfaction, work-life balance, and overall satisfaction with the implementation of the ICAPP role. These data would be extremely useful in justifying the costs of hiring additional APPs to staff this role.

In summary, the ICAPP role has significantly improved the work environment and job satisfaction for the APP team by mitigating some of the daily work-related stressors that occur in a complex, unpredictable, and high-acuity inpatient setting. The flexibility of the role allows for a more controlled and realistic workload for the entire APP team while also taking a proactive approach to maintaining focused and safe patient care. The process of creating, piloting, revising, and finally implementing the role also served as a form of team building for the APP group. All members were actively engaged in the process, contributed significantly to the revision of the role, and developed a sense of control to define their day-to-day work environment. In addition to the positive impact on the APP team, the ICAPP role improved working relationships with other services (ED/ICU) and the RNs who work on the BMT unit while also becoming an easily identifiable resource and contact for anyone

needing immediate assistance with the care of the patients. The BMT team feels that the role has contributed to maintaining and improving quality of care and patient satisfaction while improving the quality of their work experience. ●

## Disclosure

The authors have no conflict of interest to disclose.

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