Understanding the Influence of the Junior Attending Role on Transition to Practice: A Qualitative Study

Richard Dunbar-Yaffe MDCM, MSc Peter E. Wu, MD, MSc Tatjana Kay, MSc Maria Mylopoulos, PhD Heather McDonald-Blumer, MD, MSc Wayne L. Gold, MD Lynfa Stroud, MD, MEd

ABSTRACT

Background The Junior Attending (JA) role is an educational model, commonly implemented in the final years of training, wherein a very senior resident assumes the responsibilities of an attending physician under supervision. However, there is heterogeneity in the model's structure, and data are lacking on how it facilitates transition to independent practice.

Objective The authors sought to determine the value of the JA role and factors that enabled a successful experience.

Methods The authors performed a collective case study informed by a constructivist grounded theory analytical approach. Twenty semi-structured interviews from 2017 to 2020 were conducted across 2 cases: (1) Most Responsible Physician JA role (general internal medicine), and (2) Consultant JA role (infectious diseases and rheumatology). Participants included recent graduates who experienced the JA role, supervising attendings, and resident and faculty physicians who had not experienced or supervised the role.

Results Experiencing the JA role builds resident confidence and may support the transition to independent practice, mainly in non-medical expert domains, as well as comfort in dealing with clinical uncertainty. The relationship between the supervising attending and the JA is an essential success factor, with more productive experiences reported when there is an establishment of clear goals and role definition that preserves the autonomy of the JA and legitimizes the JA's status as a team leader.

Conclusions The JA model offers promise in supporting the transition to independent practice when key success factors are present.

Introduction

The transition from residency to independent practice is a daunting adjustment for physicians. 1-3 New graduates may feel adequately prepared for the medical expert components of independent practice, but are often apprehensive about other domains, including leadership, collaboration, financial management, work-life balance, conflict resolution, and in academic centers, supervision of trainees. 1,3-8 Insufficient preparation is linked to burnout, which negatively affects patient care.^{7,9} In the Competence by Design curriculum in Canadian postgraduate residency education, ¹⁰ the Transition to Practice (TTP) stage spans the end of residency before beginning independent practice. Despite the importance of this juncture, how to optimize smooth transitions and prepare residents for all aspects of independent practice is not well-characterized. The body of literature exploring TTP is limited. The traditional cognitive apprenticeship model with graduated responsibility and tacit

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expertise development through clinical learning, though ubiquitous, has little objective support from the literature. Many recommendations propose mentorship, graded responsibility, feedback, and longitudinal assessment to determine competence and promote independence. 12

Within many residency programs, one educational model that aims to facilitate TTP is the Junior Attending (JA) role, wherein a very senior resident assumes the roles and responsibilities of an attending physician, with supervision. In Canada, the Royal College of Physicians and Surgeons requires several blocks of JA in the training experiences of many of its specialties during their final years of training. Similar models have been employed elsewhere; for example, a neurosurgical program in the United States found the JA role to be a promising experience in the TTP. ¹³

While the JA model is a potentially useful experience, minimal evidence exists on achievable learning objectives, appropriate expectations for supervising attendings, impacts on junior learner experiences, and whether it is effective in fulfilling its goals. Within our institution, informal feedback suggests substantial variation in implementation of the role. Therefore,

we aimed to understand the potential of the JA model, to determine its usefulness in the TTP stage, and to develop a framework to guide both learners and supervising attendings on how it may best facilitate achievement of educational goals.

Methods

We performed a qualitative collective case study informed by a constructivist grounded theory (CGT) analytical approach. ^{14,15} The central premise of a CGT approach to analysis is that knowledge is co-constructed by participants and researchers.

We conducted our study across 6 academic hospitals affiliated with the Department of Medicine at the University of Toronto. We selected 2 cases to enhance our understanding through comparison and contrast: in one, the Most Responsible Physician (MRP) JA role was situated in experiences as a subspecialty general internal medicine (GIM) resident leading an in-patient internal medicine team (FIGURE). In the other, the Consulting JA role was situated in experiences as a sub-specialty resident supervising infectious diseases (ID) or rheumatology team consultations and follow-ups to admitted inpatients. We intended each case to illuminate unique aspects of how the JA model can impact TTP. ¹⁶

We sampled purposively across the 2 cases, including 3 groups of participants: (1) faculty who supervise residents in the JA role; (2) residents who have done the JA role in the last 5 years (to limit the effects of historical differences in work volumes and educational settings on our findings); and (3) faculty and residents who have not participated in either aspect of the JA role.

We snowball sampled by asking participants to suggest individuals who they believed may have convergent or divergent views regarding the IA role. Sampling continued until saturation of meaning was reached and new data did not inform or challenge our framework.¹⁷ Because approximately 5 to 8 "sampling units" are usually sufficient for samples that are relatively homogeneous, 18 we anticipated the need to interview approximately 15 to 20 individuals representative of the 3 participant groups. A trained research assistant (T.K.) or one of the co-principal authors (R.D.Y., P.E.W.) conducted interviews using a semi-structured interview guide (provided as online supplementary data). Interview guides were iteratively adapted concurrently with data collection and analysis.¹⁹ We conducted 20 interviews between September 2017 and May 2020: 9 faculty JA supervisors (2 rheumatology and 7 GIM), 8 resident JAs (2 ID, 2 rheumatology, and 4 GIM), and 3 without any experience of the JA role.

Objectives

We sought to determine the influence of the Junior Attending (JA) role, in which a very senior resident takes on attending-like responsibilities with supervision, on the transition to independent practice.

Findings

Experiencing the JA role builds resident confidence and may support the transition to independent practice; more positive experiences are reported with appropriate balance between autonomy and supervision, strong team relationships, and role legitimacy.

Limitations

Our study involved physicians from 3 academic medical specialties within a single university in Canada, potentially limiting the generalizability of our findings.

Bottom Line

The JA model can help prepare residents for independent practice; further study should delineate best practices for implementation of this role in wider contexts.

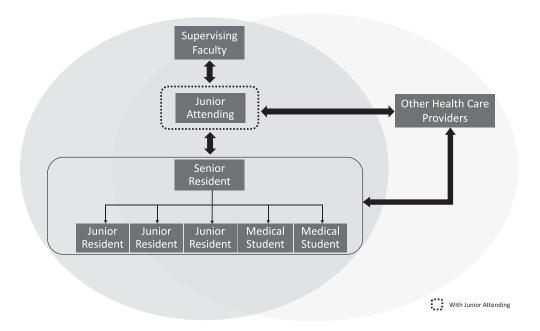
Interviews were audio-recorded, transcribed verbatim, anonymized, then analyzed using CGT.²⁰ NVivo 12.6.0 (QSR International, Melbourne, Australia) for Mac OS was used for line-by-line coding. Three team members (R.D.Y., P.E.W., T.K.) individually read and inductively analyzed the transcripts for emergent themes during the open coding process. The remainder of the team reviewed quotes and selected transcripts. We met regularly during and after data collection to discuss themes, to iteratively adjust the interview guide, and to evolve and establish the coding structure. We stopped performing interviews when they neither challenged nor added to any component of our framework.

Our team included past and current program directors in internal medicine and its subspecialties (W.L.G., L.S., H.M.B.), as well as physicians who had supervised (W.L.G., L.S., H.M.B.) and experienced the JA role (R.D.Y., P.E.W.), and an education scientist with expertise in qualitative methodology whose research area focuses on the development of expertise (M.M.). This afforded multiple perspectives on the process and analysis and ensured multiple iterative opportunities to challenge, refine, and elaborate the developed framework. We were mindful of our own experiences, and this added a dimension of reflexivity to our analysis.

This study received approval from the University of Toronto Research Ethics Board.

Results

We identified 3 major themes (see TABLE 1 for themes, subthemes, and core elements of each; see TABLE 2 for selected exemplar quotes for each theme, as numbered below): (1) the JA role facilitated a balance



FIGURE

Typical Composition of a Ward-Based, Most Responsible Physician Internal Medicine Team, or Consultant Team

Note: Junior Attendings (JAs) are senior residents within their final years of training (fourth year and above), senior residents are in their second or third
year of medical training, and junior residents are in their first year of training. Solid lines indicate the usual communication streams when a JA is present.

between independence and supervisory feedback; (2) the relationship between the supervising faculty and the JA was a central element of a successful JA experience; and (3) within a strong supervisory relationship, the JA is legitimized as a functional member of the health care team. Saturation was reached after the 18th interview.

Theme 1: The JA Role Facilitated a Balance Between Independence and Supervisory Feedback

Participants perceived that the purpose of the JA role is to give senior residents a nearly autonomous experience with a supervisory "backstop" in the form of the supervising attending. Consistently, it was considered important that the JA functioned as though they were the attending physician when interacting with the clinical team, patients, and their families. In the absence of other team members, touchpoints with their supervisor allowed for review of patients and engagement in teaching activities (TABLE 2, Quote 1).

Participants felt it was important for the JA to be recognized as the team leader by all stakeholders (trainees, other members of the health care team, patients, and families) and felt that the presence of the supervising attending during rounds could undermine the autonomy of the JA (TABLE 2, Quote 2).

Participants also reported that the JA experience could ease the transition from residency to

independent practice by allowing the JA to make independent clinical decisions with the opportunity to reflect on their implications with the supervising faculty. Participants noted parallels between progressive independence and confidence in dealing with uncertainty, which some equated with the development of expertise (TABLE 2, Quote 3).

While helpful, most participants did not feel that a JA experience was necessary for all physicians transitioning to independent practice. Many noted value in those transitioning to an academic medical practice so that JAs could familiarize themselves with issues specific to teaching hospitals (clinical supervision, recognition of learners in academic difficulty, and balancing research with clinical demands).

The JA experience differed slightly when implemented within the GIM MRP setting compared to within the consultant services. In contrast to GIM, where non-medical expert skills were considered the primary focus of JA learning, the focus for ID and rheumatology JAs leaned more toward the development of medical expertise. Residents in subspecialty GIM had completed 3 prior years of internal medicine training; whereas ID and rheumatology residents, who also had 3 years of internal medicine training, had a shorter duration of experience managing the challenging clinical cases within their areas of practice and were seeking to build content knowledge (TABLE 2, Quotes 4 and 5).

TABLE 1
Themes and Subthemes Associated With the Junior Attending (JA) Experience

Theme	Subtheme(s)	Core Elements
The JA role facilitated a balance between independence and supervisory feedback		Transitioning to independence Medical content expertise Nonclinical expertise
The relationship between the supervising faculty and the JA was a central element of a successful JA experience	Interpersonal enablers	Mutual awareness of resident skills Role definition and alignment Negotiated goals and objectives (contracting) Trust
	Tensions	Hands-on vs hands-off supervisory style (micromanagement)
		Medico-legal considerations
		Time and availability
	Skills and abilities	 Autonomous decision-making Managing uncertainty Developing/establishing leadership skills Medical content expertise
Within a strong supervisory relationship, the JA is legitimized as a functional member of the health care team	Relationships with other members of the health care team	Respect for JA autonomy and leadership Establishing the JA as the leader of the team Handling of consultations/conflicts Collaboration with other health care professions including written and oral communication Teaching and evaluation of learners Mentorship Provision of reference letters Written/oral communication

It was clear that providing the JA with appropriate autonomy with feedback was important for development of confidence in achieving independence. This relied heavily on the relationship between the JA and their supervisor.

Theme 2: The Relationship Between the Supervising Faculty and the JA Was a Central Element of a Successful JA Experience

Participants identified several key enablers in this relationship, including clear role definition through contracting discussions, a priori understanding of the goals and objectives of the experience, mutual awareness of the individual skills brought to the relationship, trust, and an acknowledgement of potential tensions associated with the relationship.

Trust was central to a positive experience because it enabled decision-making autonomy for the JA with minimal interference from the supervising faculty. Conversely, the absence of trust between the supervising attending and the JA was associated with negative experiences that could have significant repercussions for the trainee (TABLE 2, Quote 6).

Although not always possible, participants found that a pre-existing relationship between the JA and supervising attending in earlier stages of residency provided both parties with knowledge of each other's skill sets.

Unearned or blind trust was also associated with negative outcomes of the experience (TABLE 2, Quote 7).

The supervisory style of the supervising attending was most responsible for tensions in the supervising faculty-JA relationship. In general, excessive "handson" supervision, or micromanagement, was associated with negative experiences (TABLE 2, Quote 8).

Participants indicated that there was a spectrum of supervisory styles from micromanagement to complete disengagement from the supervisor and that it required negotiation and individualization on the part of supervising faculty-JA pairing. Supervision styles on either extreme of this spectrum were less productive (TABLE 2, Quote 9).

TABLE 2
Selected Quotes

Quote No.	Participant	Exemplar Quote			
	Theme 1: The JA role facilitated a balance between independence and supervisory feedback				
1	JA, ID	"its purpose is to allow a graduated transition to independent practice and help bridge the practice gap between residency and independent practice, and allowing you to have more autonomy and independence, but still have some oversight during the process."			
2	Supervisor, GIM	"I think having the senior attending there has the potential to really cramp the JA's style; it is hard to sort of function as an attending when someone is observing you. It also potentially dilutes the team's reaction to the JA as truly being in charge of the team."			
3	JA, ID	"When you're a resident, you always have somebody who you'll review with and will either agree or disagree with your plan, so your confidence in your plan doesn't have to be that strong. I mean, you want it to be, ideally you should have the most confidence possible, but someone is going to be there to tell you if that's a good idea or a bad idea, generally, there's exceptions to that. But when you're practicing on your own, you don't have that other person, it's just you. When it's just you, you need to feel comfortable with all the decisions you make and so there's a higher level of internal justification [of] evidence. You don't push yourself to get to that until you have independence."			
4	Supervisor, rheumatology	"in our specialty in particular, where we see really sick multisystem weird stuff that's rare, I think to not have more experience and going out ultimately to the community in the absence of that kind of experience is a liability for them, for our patients, and for our specialty."			
5	Supervisor, rheumatology	"when you're a PGY-4 GIM, or sometimes 5, whatever, in that JA role, you've had the 3 or 4 prior years of internal medicine where you're seeing those kinds of cases over and over again. So, the actual clinical or, in terms of CanMEDS, the clinical part of the knowledge base, the medical expert part, I think the senior GIM resident has a major leg up, because they've seen 50 cases of COPD and 100 cases of GI bleed. Not, again, the weird stuff, that's when they call us. But they're much more comfortable with the medical expert part of their role. We realized that the rheumatology residentsit can only happen in PGY-5, but even by PGY-5, their rheumatology experience is much more limited than a GIM person coming into that role."			
Theme 2		etween the supervising faculty and the JA was a central element of a successful JA			
6	JA, GIM	"I wasn't allowed to make any decision and any decision I made it would be not the right one for whatever reason. It would be nitpicked and picked apart. There would be no redeeming And when I asked for feedback—why this person didn't trust—it doesn't seem like you trust me Dr. X."			
7	Supervisor, rheumatology	"I really wastaken in by the overconfidence and much too trusting and came to find out that not everything was sewn up properly or dealt with properlyfrom a patient care perspective, which was extremely disappointing. And I was disappointed in the trainee but I was more disappointed in myself and realized then and there that I hadn't allowed myself to get to know that person well enough."			
8	Supervisor, GIM	"[Some attendings] splatter the JA against the wall and they make all the decisions for them. If you do that, that is not achieving the purpose of letting them have graded autonomy with scaffolding. That's basically replacing and that's not helpful to them."			
9	JA, rheumatology	"I think having someone really hands-on, the first time I was doing it, was really good, but then by the end of the second week I was ready for more independence. And then I transitioned to somebody who gave me tons of independence. We didn't even review every single day in person. I think I learned a lot but maybe I learned the most with the person who was in the middle, where there was some supervision but not micromanagement."			
10	Supervisor, GIM	"For sure not within the first 3 years and the reason is thatbecause a lot of them are amazing themselves but there [are] 2 reasons. One is that you're usually figuring out your own system of patient care and supervision and teaching in the first few years I think it's hard at that beginning time frame. The consequence of that is it can feel disorganized and you're going to be less comfortable as the staff attending and also giving up some of that control. It's a different skill set to know how to supervise residents and that's the skill set that the JA is getting"			

TABLE 2
Selected Quotes (continued)

Quote No.	Participant	Exemplar Quote	
11	Supervisor, GIM	"When I have a JA, I still block off my schedule as if I did not have a JA so I am always in the hospital, I am always available, I prefer to address things in real time if it is necessary. I always have my mobile, happy to get calls and texts anytime. So I—you know if there are things that are time sensitive and decisions need to be made then we will discuss as needed throughout the day."	
12	JA, GIM	"In theory, being someone who is an attending supervising trainees, I think having trainees is always more work if you're doing your job."	
Theme 3	3: Within a strong s	upervisory relationship, the JA is legitimized as a functional member of the health care	
13	Supervisor, GIM	"I do not attend patient review with juniors, and I do not attend bullets [interdisciplinary rounds], because that I think is again back to the concept of independence and that the team has to see this individual as the functioning attending physician. And if you have somebody else there, then it takes away from that kind of consistency."	
14	Supervisor, GIM	"but if there is a turf war or an argument or some point of contentionthat might be the time with the real senior attendingmight best intervene because they have the seniority."	
15	Supervisor, GIM	"I think the disadvantage is for the elective medical student who needs reference letters and I try to get around that by letting them know I will still give them a reference letter"	
16	Supervisor, GIM	"I try to remember to let the team know that they should evaluate the JA as opposed to the senior attendingbut sometimes I forget. And then I get evaluations that say didn't meet regularly with team. That sort of thing Which is the other disadvantage to having a JA—the senior attending can't get proper evaluations from the team because all the evaluations are around things like met regularly with team, provided feedback, provided teaching sessions, and if you have been away from the team you will have none of those. So, you will either have a bad evaluation or no evaluation if they end up doing the JA and so people who are junior educators or teachers that's a problem for them which is again a potential reason why junior people might not want to have a JA."	

Abbreviations: JA, Junior Attending; ID, infectious diseases; GIM, general internal medicine; PGY, postgraduate year; COPD, chronic obstructive pulmonary disease; GI, gastrointestinal.

Participants suggested that early-career faculty were not ideal candidates for supervising JAs because they were still developing their own clinical identities and might be less comfortable in providing the trainee with the autonomy required for a successful experience (TABLE 2, Quote 10).

Lack of accessibility of the supervising faculty also provoked tension in the relationship. Despite the need for autonomy, participants recognized the need for potential swift intervention from the supervising faculty (eg, for a deteriorating patient or a challenging communication issue). Therefore, having the supervisor accessible was considered important (TABLE 2, Quote 11).

Participants indicated the future-oriented intent of the JA experience as preparation for independent practice. Despite this, some participants acknowledged the external perception of having a JA as a "perk" to the supervising faculty through having most direct patient care assumed by the JA. There was a perception that the assignment of JAs to supervising faculty was treated as a form of currency, recognizing

that this could help fill vacancies in the schedule or allow faculty to concurrently attend to nonclinical or personal duties. However, many participants acknowledged that appropriate supervision and providing a valuable learning experience to the JA requires the same, if not more, time and effort, in comparison to attending without a JA (TABLE 2, Quote 12).

We further identified that a strong relationship between the supervising faculty and JAs was key to ensuring a successful experience built on appropriate trust, contracting of expectations, and a supervisory style that allowed for independence coupled with support.

Theme 3: Within a Strong Supervisory Relationship, the JA Is Legitimized as a Functional Member of the Health Care Team

In addition to the supervising faculty-JA relationship, participants described important interactions between the JA and other members of the health care team, including other learners, as well as patients and their families.

It was felt that the JA should be the designated point of contact for patients and their families to legitimize the role, promote authority, and foster independence. This was also applicable to communication with other members of the health care team. It was felt that there could be circumstances when involvement of the supervising faculty should be proactive, typically in making high-risk treatment decisions or in the event of conflict between medical services (TABLE 2, Quotes 13 and 14).

The impact of the IA on the roles and functions of other learners on the team was less clear. The role of the JA, including team leadership, can overlap with the roles and responsibilities of the second- or thirdyear (senior) resident on the team. It was suggested that there should be sufficient distance in training between the JA and the senior resident whenever possible (eg, a fourth-year JA should not be paired with a third-year senior resident on the same clinical team). Participants also felt that learners could be disappointed with limited direct contact with the supervising faculty due to the presence of a JA and its potential impact on their assessment, mentoring, career counselling opportunities, or obtaining a letter of reference. Some participants described a hybrid model for teaching and evaluation, so that the supervising faculty could participate in teaching activities and independently evaluate the other learners (TABLE 2, Quote 15).

Another potential negative impact of the JA experience is that early-career faculty might not receive teaching evaluations that are required for continuing faculty appointment and promotion (TABLE 2, Quote 16).

Finally, legitimizing the JA as a team leader, often while introducing themselves and their roles in interactions with learners, other members of the interdisciplinary health care team, and patients, was associated with positive experiences. Efforts to anticipate and mitigate challenges with learner evaluations and reference letters favorably influenced the experience.

Discussion

Our study found that the JA role offers promise in supporting the transition to independent practice, particularly in non-medical domains and in managing clinical uncertainty, and it is optimized when the relationship between the JA and the supervising faculty preserves the autonomy of the JA and legitimizes their status as team leader. While others have described such a dynamic as misrepresentative,²¹ this can be mitigated through role acknowledgement

to patients, families, and other team members and adequate supervision.

While there was a significant focus on development of medical expertise for consultant JAs, the MRP-based JAs in contrast focused on mastery of non-medical expert domains. From a reflexivity standpoint, we found this to be surprising. All but one author who had either undergone or supervised an MRP JA perceived the experience to facilitate acquisition of at least some medical expertise. The contrast in acquisition of content expertise between MRP-based vs consultant JA pairings may be attributable to the longer prior relevant clinical experience of residents in an MRP versus Consultant role before their JA experience.

It is perhaps not surprising that the participants associated confidence and autonomy with development of medical expertise and dealing with uncertainty. Though the traditional view of development of expertise focuses more on successful diagnostic reasoning or surgical skill,²² tacit knowledge of how to manage challenging clinical situations may be attainable only through direct practice.^{23,24} Such practice may be impossible to simulate at earlier levels of training due to inadequate content knowledge or underdeveloped heuristics, making it ideally suited to JA experiences that are situated toward the end of residency training and immediately prior to beginning practice.

Westerman et al⁴ studied the transition from residency to independent practice, noting that "uncharted territory" within the attending role (supervision, final responsibility, technical challenges, practice management, and financial matters) represented a chasm between resident and attending responsibilities. Like our residents, their participants felt more prepared for clinical than nonclinical components of their new roles. A study of emergency medicine trainees revealed major gaps in their ability to teach and provide feedback, a core competency of independent practice at a teaching hospital.²⁵ Similarly, a survey of preparedness for independent orthopedic practice reinforced a preparedness for clinical work but not for the managerial aspects of the independent surgeon. And paralleling the views of the Consultant JAs in our study, many junior orthopedic surgeons also felt less prepared for complex and specialist procedures, despite feeling adequately prepared for routine clinical work.26 Westerman concluded that navigating this transition would be eased by introducing trainees to some of the nonclinical tasks prior to their transition, much of which was accomplished in the IA experiences described by our participants.⁴

The literature regarding what the transition from residency to independent practice should look like is limited. The most similar description of a JA role was

from a neurosurgical training program, but this intervention lacked published detail and evaluation.¹³ In the United States under the learner-manager-teacher paradigm, the teacher position in postgraduate year 3 most closely resembles the JA experience; it is intended to separate the initial years of residency during which knowledge acquisition is paramount from the senior year of residency where teaching and other responsibilities and competencies are the focus.²⁷ An Australasian study of new geriatricians recommended the creation of a "consultant-like" role. 28 de Montbrun et al identified 4 phases in the anxiety-provoking transition from surgical resident to attending surgeon, wherein final responsibility for patient care was suddenly assumed.²⁹ A study of radiation oncologists identified similar needs among trainees and junior faculty and recommended a minimally supervised longitudinal rotation for senior residents to mitigate the gap between residency and independent practice.⁵ In support of a JA-like experience to facilitate transition to practice, recent expert consensus guidelines emphasize the importance of providing an authentic environment, encouraging progressive independence, inclusion of non-medical expert domains, and psychologically preparing trainees for independence with final responsibility.³⁰

Based on our findings, we perceive that a JA experience may lessen the intensity and anxiety of TTP. The JA role addresses most, if not all, of these shortfalls. Our participants identified mastery of nonclinical skills as major learning opportunities, and the level of unprecedented independence as a trainee likely lessens some of the "transition shock" associated with starting independent practice. Exposure to some of the nonclinical tasks during training, such as supervision of trainees, has been associated with improved confidence as a junior faculty member. I

Our study had several limitations. First, we conducted our study in GIM, ID, and rheumatology within a single university. There may be different components to the transition to independence in other specialties or at different institutions, although our literature review suggests similar themes are present in other medical disciplines. Second, our participants may not have been representative of those in nonacademic or remote centers, given most worked or trained in large urban referral centers. We attempted to mitigate this by snowball sampling participants with suspected divergent views. Third, our study focused on a Canadian experience. Regional differences in certification time, residency programs, patient expectations, care delivery, and medico-legal norms may limit generalizability. Finally, we did not correlate the quality of reported experiences to objective outcome measures in education or patient care, which could be areas for further study.

Further research priorities should evaluate provision of additional guidance and the development of best practices for both supervising faculty and JAs to ensure this educational experience is successful in supporting learners through this phase of the physician lifecycle.

Conclusions

The JA model can help prepare residents for independent practice. Critical to the optimal implementation of this role is attention to the balance between autonomy and supervision, team relationships, and role legitimacy.

References

- Westerman M, Teunissen PW, Fokkema JP, et al. New consultants mastering the role of on-call supervisor: a longitudinal qualitative study. *Med Educ*. 2013;47(4):408–416. doi:10.1111/medu.12129
- 2. Parikh AB. On the transition to attendinghood. *J Cancer Educ.* 2021;36(1):207–209. doi:10.1007/ s13187-020-01769-3
- 3. Westerman M. Mind the gap: the transition to hospital consultant. *Perspect Med Educ*. 2014;3(3):219–221. doi:10.1007/s40037-013-0104-x
- Westerman M, Teunissen PW, van der Vleuten CP, et al. Understanding the transition from resident to attending physician: a transdisciplinary, qualitative study. *Acad Med.* 2010;85(12):1914–1919. doi:10.1097/ACM. 0b013e3181fa2913
- Dahn H, Watts K, Best L, Bowes D. Transition to practice: creation of a transitional rotation for radiation oncology. *Can Med Educ J.* 2018;9(3):e89–e96.
- 6. Morrow G, Johnson N, Burford B, et al. Preparedness for practice: the perceptions of medical graduates and clinical teams. *Med Teach*. 2012;34(2):123–135. doi:10.3109/0142159X.2012.643260
- 7. Westerman M, Teunissen PW, Fokkema JP, et al. The transition to hospital consultant and the influence of preparedness, social support, and perception: a structural equation modelling approach. *Med Teach*. 2013;35(4):320–327. doi:10.3109/0142159X.2012. 735381
- MacMillan TE, Rawal S, Cram P, Liu J. A journal club for peer mentorship: helping to navigate the transition to independent practice. *Perspect Med Educ*. 2016;5(5):312–315. doi:10.1007/s40037-016-0292-2
- 9. Teunissen PW, Westerman M. Opportunity or threat: the ambiguity of the consequences of transitions in medical education. *Med Educ*. 2011;45(1):51–59. doi:10.1111/j.1365-2923.2010.03755.x

- Royal College of Physicians and Surgeons of Canada. Competence by Design. http://www.royalcollege.ca/ rcsite/cbd/competence-by-design-cbd-e. Accessed December 9, 2021.
- Kennedy TJ, Regehr G, Baker GR, Lingard LA. Progressive independence in clinical training: a tradition worth defending? *Acad Med.* 2005;80(suppl 10):106– 111. doi:10.1097/00001888-200510001-00028
- 12. Dijksterhuis MG, Voorhuis M, Teunissen PW, et al. Assessment of competence and progressive independence in postgraduate clinical training. *Med Educ.* 2009;43(12):1156–1165. doi:10.1111/j.1365-2923.2009.03509.x
- Murad GJ, Lister JR, Friedman WA, Lombard G. Enhancing competence in graduates through a transition to practice program in neurological surgery. *Clin Neurosurg*. 2010;57:141–144. doi:10.1227/01. neu.0000358678.18057.ce
- 14. Lauckner H, Paterson M, Krupa T. Using constructivist case study methodology to understand community development processes: proposed methodological questions to guide the research process. *Qual Report*. 2012;17(13):1–22.
- 15. Varpio L, Mylopoulos M, Martimaianakis MT. Qualitative Research Methodologies: Embracing Methodological Borrowing, Shifting and Importing. In: Cleland J, Durning SJ, eds. Researching Medical Education. Hoboken, NJ: Wiley-Blackwell; 2015.
- 16. Stake RE. *The Art of Case Study Research*. Thousand Oaks, CA: Sage Publications; 1995.
- Hennink MM, Kaiser BN, Marconi VC. Code saturation versus meaning saturation: how many interviews are enough? *Qual Health Res*. 2017;27(4):591–608. doi:10.1177/1049732316665344
- 18. Charmaz K. Constructing Grounded Theory. Thousand Oaks, CA: Sage Publications; 2006.
- 19. Charmaz K. Gathering Rich Data. In: *Constructivist Ground Theory: A Practical Guide*. 2nd ed. Thousand Oaks, CA: Sage Publications; 2014:22–54.
- Charmaz K. Coding in Grounded Theory Practice. Constructing Grounded Theory: A Practical Guide Through Qualitative Analysis. Thousand Oaks, CA: Sage Publications; 2009:42–71.
- Sanaee L, Nayer M, Takahashi SG. Practical solutions for implementation of. *Can Med Educ J*. 2020;11(4):e39–e50. doi:10.36834/cmej.67821
- 22. Anders KE, Charness N, Feltovich P. *Cambridge Handbook of Expertise and Expert Performance*. Cambridge, UK: Cambridge University Press; 2006.
- 23. Sternberg RJ, Horvath JA. *Tacit Knowledge in Professional Practice: Researcher and Practitioner Perspectives*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc; 1999.
- 24. Wilson KA, Burke CS, Priest HA, Salas E. Promoting health care safety through training high reliability

- teams. Qual Saf Health Care. 2005;14(4):303–309. doi:10.1136/qshc.2004.010090
- 25. Kilbertus S, Pardhan K, Zaheer J, Bandiera G. Transition to practice: evaluating the need for formal training in supervision and assessment among senior emergency medicine residents and new to practice emergency physicians. CJEM. 2019;21(3):418–426. doi:10.1017/cem.2019.8
- 26. McKinstry B, Macnicol M, Elliot K, Macpherson S. The transition from learner to provider/teacher: the learning needs of new orthopaedic consultants. BMC Med Educ. 2005;5(1):17. doi:10.1186/1472-6920-5-17
- 27. Hinchey KT, Iwata I, Picchioni M, McArdle PJ. "I can do patient care on my own": autonomy and the manager role. *Acad Med*. 2009;84(11):1516–1521. doi:10.1097/ACM.0b013e3181bb208c
- 28. Simpkins DM, Hohenberg MI, Naganathan V, White K. Help, I'm a specialist!—Perspectives of recently qualified geriatricians on the experiences and challenges of working as a consultant geriatrician. *Australas J Ageing*. 2020;39(1):73–80. doi:10.1111/ajag.12670
- 29. de Montbrun S, Patel P, Mobilio MH, Moulton CA. Am I cut out for this? Transitioning from surgical trainee to attending. *J Surg Educ*. 2018;75(3):606–612. doi:10. 1016/j.jsurg.2017.09.034
- Yardley S, Westerman M, Bartlett M, Walton JM, Smith J, Peile E. The do's, don't and don't knows of supporting transition to more independent practice.
 Perspect Med Educ. 2018;7(1):8–22. doi:10.1007/s40037-018-0403-3
- 31. Duchscher JE. Transition shock: the initial stage of role adaptation for newly graduated registered nurses. *J Adv Nurs*. 2009;65(5):1103–1113. doi:10.1111/j.1365-2648.2008.04898.x



Richard Dunbar-Yaffe, MDCM, MSc*, is a General Internist, Division of General Internal Medicine and Geriatrics, Sinai Health System and University Health Network, Toronto, Ontario, Canada, and an Assistant Professor, Department of Medicine, University of Toronto, Toronto, Ontario, Canada; Peter E. Wu, MD, MSc*, is a General Internist and Clinical Pharmacologist/Toxicologist, Division of General Internal Medicine and Geriatrics, Sinai Health System and University Health Network, Toronto, Ontario, Canada, and an Assistant Professor, Department of Medicine, University of Toronto, Toronto, Ontario, Canada; Tatjana Kay, MSc, is a Research Assistant, University of Toronto, Toronto, Ontario, Canada; Maria Mylopoulos, PhD, is a Scientist & Associate Director of Training Programs, Wilson Centre, University of Toronto, Toronto, Ontario, Canada; Heather McDonald-Blumer, MD, MSc, is a Rheumatologist, Division of Rheumatology, Sinai Health System, Toronto, Ontario, Canada, Associate Professor of Medicine, Department of Medicine, University of Toronto, Toronto, Ontario, Canada; Wayne L. Gold, MD, is a General Internist, Division of General Internal Medicine and Geriatrics, Sinai Health System and University Health Network, Toronto, Ontario, Canada, and Infectious Disease Specialist, Division of Infectious Diseases, Sinai Health System and University Health

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Network, Toronto, Ontario, Canada, and a Professor of Medicine, Department of Medicine, University of Toronto, Toronto, Ontario, Canada; and Lynfa Stroud, MD, MEd, is an Associate Professor, Department of Medicine, University of Toronto, Toronto, Ontario, Canada, Researcher, Wilson Centre, University of Toronto, Toronto, Ontario, Canada, and General Internist, Division of General Internal Medicine, Sunnybrook Health Sciences Centre, Toronto, Ontario, Canada.

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Corresponding author: Richard Dunbar-Yaffe, MDCM, MSc, Toronto General Hospital, richard.dunbar-yaffe@uhn.ca, Twitter @dunbar37

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