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Onboarding for Pathology Residency Programs—The Montefiore Experience

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Abstract

Onboarding is a system frequently used in the corporate world as a means of orienting incoming employees to their duties and inculcating the workplace values. The program aims to facilitate transition into new work roles and improve employee retention rates. At Montefiore, we have instituted an onboarding curriculum that is given to new anatomic and clinical pathology residents about a month prior to the start of residency. The program includes an introductory video series of basic histology and a series of anatomic and clinical case studies illustrating basic laboratory principles. This didactic content is tagged to learning objectives and short self-assessment modules. In addition, content related to the work ethos at Montefiore and the role of the core competencies and milestones in residency education are included. Finally, a broader component of the onboarding gives the incoming residents a social welcome to our area, including key information about living in the area surrounding Montefiore. The program has been well received by our residents for whom the content has helped to boost confidence when starting. We feel that the program is helpful in ensuring that all incoming residents start having received the same baseline didactic content. Transmitting this didactic content via onboarding allows our residents to begin the work of learning pathology immediately, rather than spending the first weeks of residency covering remedial content such as basic histology. Such a program may be useful to other pathology residencies, most of whom have residents from a range of backgrounds and whose prior exposure to pathology may be limited.

Onboarding is a process that has been used in the corporate world to integrate new employees into the work environment.[1] It is distinct from orientation in that it is a process as opposed to an event.[1] Indeed, some onboarding programs may span over a number of months. Most of the examples of onboarding that we have are from the corporate world; however, there are concepts that we can apply to graduate medical education. There are 2 major prongs to a successful onboarding program: (1) to impart the knowledge and skills necessary to function effectively as a member of the work team and (2) to transmit core values, work ethos, and institutional expectations.[2] With pathology, we are uniquely positioned because so many of our incoming residents are often remote from any significant exposure to histology and

pathology and may not have had any exposure to the clinical pathology aspects of practice. There is often a time lag between when pathology residents study histology and histopathology (usually first and second years of medical school) and when they begin working as residents. In order to hit the ground running, having a solid footing in histology and basic

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laboratory practices is necessary from day 1. At Montefiore, we are now in the second year of using an onboarding curriculum with incoming first-year anatomic and clinical pathology (AP/CP) residents. Our goal is to introduce core integrated AP/CP didactic content that covers material that should have been part of the residents' medical school curriculum. Exposing the incoming residents to this content prior to the start of residency helps to minimize the time spent covering remedial knowledge in July and puts incoming residents on a more even playing field, with everyone being exposed to the same content. It allows us to devote the training time from day 1 to the actual practice of pathology and builds confidence in the new residents.

The Society for Human Resource Management Foundation (SHRM), a nonprofit organization, has outlined some best practices for onboarding. Some of the key steps that are applicable to pathology residency are listed as follows: (1) implement the basics prior to the first day on the job; (2) develop a written onboarding plan; (3) make onboarding participatory; (4) engage stakeholders in planning; and (5) be crystal clear with new employees in terms of objectives, time lines, roles, and responsibilities.[2] In addition, the SHRM lists 4 areas that can be targeted during onboarding planning to maximize success. The first is self-efficacy or confidence. This involves giving trainees the skills or knowledge needed to boost their confidence as they start their new position, for example, knowledge of basic histology, basics of what each laboratory does, etc. The second is role clarity. This involves clearly defining responsibilities and expectations for the position. Examples of this include telling the residents how they will be evaluated, what role the competencies/milestones play in training, etc. The third is social integration, which involves mechanisms to establish effective working relationships early. The final targeted area is knowledge of culture whereby new trainees are shown how they will fit into the new work environment.[2] Having an onboarding process, as opposed to a single orientation event, helps to avoid information overload by presenting new information in more digestible increments.[3] An ongoing step in the onboarding process should be feedback, in both directions. Trainees should be able to self-assess and receive feedback and the program itself should also be regularly evaluated.[2] Ideally, feedback should be solicited from participants and all other relevant stakeholders.[4]

This is Montefiore's second year offering the onboarding program to our incoming residents. The first iteration was document based and sent to the residents via memory stick. This year we incorporated our onboarding materials into an online, interactive onboarding curriculum, administered up to a month prior to the residency start date with care to target each of the aforementioned 4 areas to maximize onboarding success. The Web site URL is https://sites.google.com/site/onboardmonte-path/ (Supplementary File 1). The course begins with a welcome letter from the program director, associate directors, and chief residents (Supplementary File 2). This is the official welcome from the educational leadership. In the letter, we discuss Montefiore's philosophy of care, our health-care system's mission, the history and educational philosophy of our department, and the role of the competencies and milestones in medical education ("knowledge of culture"). The residents are then directed to our Google sites Web page that includes the full onboarding curriculum (Figure 1). The development of the curriculum was a collaborative effort of the education attending physician leadership and resident leaders. The aim was to include introductory content deemed necessary to know from "day 1" on the job ("self-efficacy").

A key component of the onboarding is a set of histology video tutorials curated from Dr J. R. Manarcik's Shotgun Histology video series, which is used with his permission. These are narrated videos that take learners through the basic histology from low power to high power, focusing on the key histologic features of each organ. His collection is rather extensive; we chose to focus on some of the more common sites that we see in daily practice. Each video runs somewhere between 3 and 5 minutes. Dr Manarcik's video series is quite thorough and covers basic histology in all organ systems. In planning our program, we wanted to cover the most commonly seen specimen types, yet balance that against the possibility of overwhelming our residents with too much content. We ultimately decided to include 8 video modules covering upper and lower gastrointestinal tract, liver, pancreaticobiliary tract, breast, gynecologic, pulmonary, genitourinary, and lymph node histology. The interactive component was created by including self-assessment modules with photos that recapitulate the information covered in the videos. As the residents complete the quizzes, an autograder e-mails them instantaneous feedback on their quiz performance. Additionally, the information is sent to the site administrator who is one of our chief residents. The quizzes are 5 to 10 questions long and include histologic images.

We also wanted to cover basic laboratory principles that apply to both AP/CP rotations. We created 3 case studies that include both an anatomic pathology and clinical pathology components. These cases each begin with a set of learning objectives, followed by the case description with interspersed questions targeting key educational topics and culminating in a slide that summarizes the key points covered. The first case centers on a patient with coronary artery disease, atrial fibrillation, and possible intracranial bleed. The second case covers thyroid disease, clinical values, and surgical pathology findings. The third case follows a patient with pneumonia that eventually leads to an autopsy. The key didactic content in all of the cases includes laboratory principles such as turnaround time, test priority, and sources of error (preanalytical, analytical, and postanalytical). Some specialty-specific content such as physiology of the coagulation pathway or the proper completion of an autopsy death certificate is also included.

There is also an important acculturation component to our onboarding program. This component plays an important role in orienting our residents to their new work and home environment and showing that the program views their integration into the community to be as important as their medical or technical knowledge. Our chief residents and their colleagues have
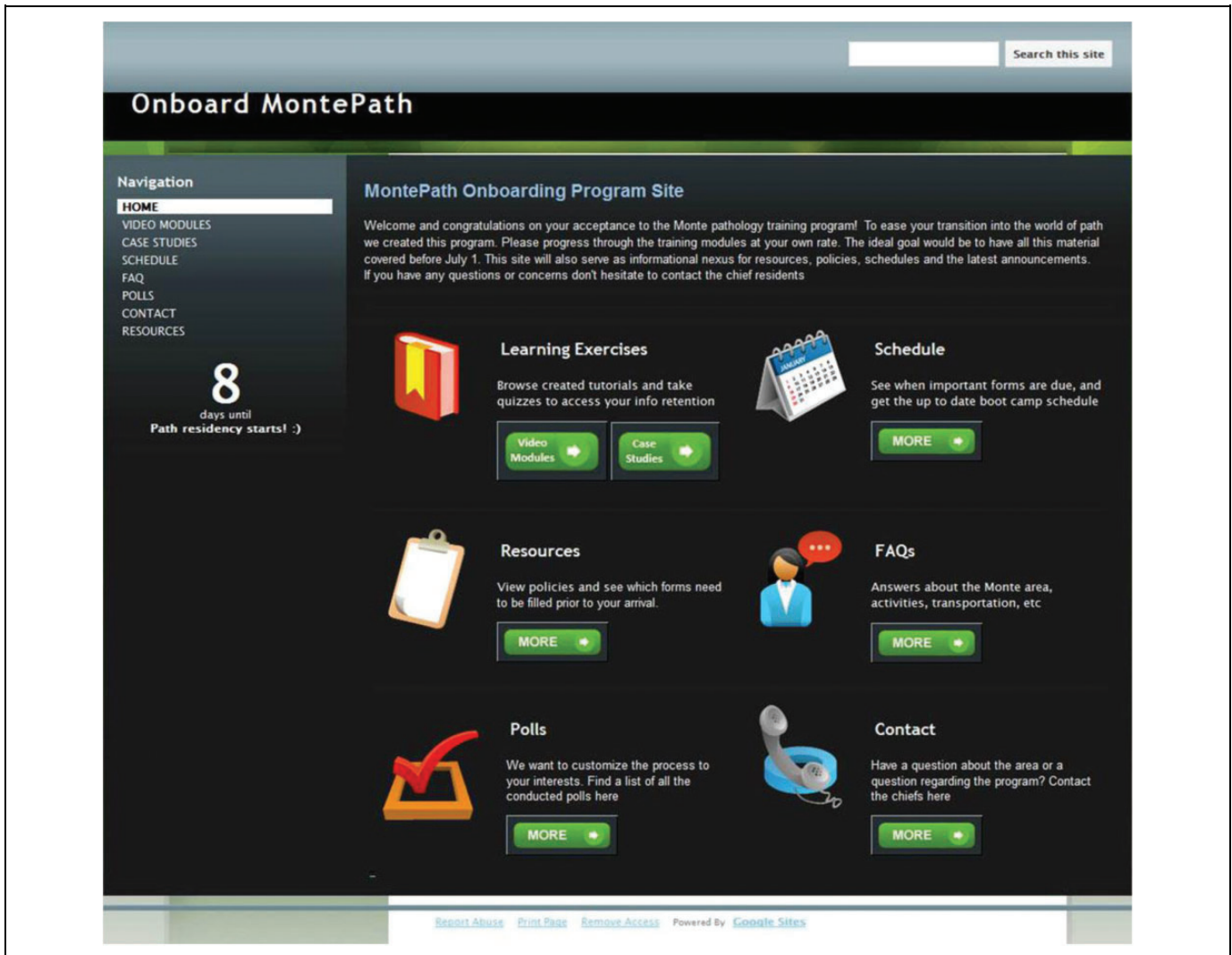
Figure 1. Montefiore onboarding Web site main page.

compiled a guide to life in the Bronx with tips on the best places to eat, shop, spend leisure time, and send your kids to school in the area (''social integration''). This information helps our residents to have a clearer picture of what life will be like for them and for their families at Montefiore. The site also familiarizes the residents with the educational leadership. It provides a direct link to our chief residents via messaging. The site also allows for communication from the leadership in the month leading to the start of residency training. The site has polling capability, which we used this year, for example, to assess the incoming residents' prior exposure to working with Excel spreadsheets. The survey results allowed us to tailor our July informatics didactic content based on their replies. Our residents are also able to see the entire July to August didactic boot camp lecture series calendar and the residency handbook, which includes milestones/competencies and examples of our resident evaluation forms (''role clarity'').

All our incoming residents completed the onboarding program. Each resident was asked to assess the Web site content

for difficulty level and ease of use and offer suggestions for improvement. Anonymous feedback from the residents upon completion of the program was favorable (Table 1). Several residents reported finding the self-assessment modules useful for evaluating their knowledge and its potential clinical relevance. Despite our initial fears of residents perceiving the onboarding as an imposition on their time, we noted that the residents were quite grateful to have been given this program. We received the following comments on the histology content: ''Overall I enjoyed it as a quick review for basic histology. Something I hadn't had in 3-4 years.'' Another resident commented, ''The videos, quizzes and every other information are so helpful. Thank you all so much for the great contribution. Personally I feel it would be even better if the videos could cover more details of the histology.'' One resident recommended adding a PDF chapter from a histology textbook for each section to enhance the experience. The case studies were similarly well reviewed. Residents mentioned that the cases ''were great'' and that ''it would be great if there are (sic) more

Table 1. Onboard Site Survey Results Summary.*

Question	Average Rating	Scale
How helpful were the Onboard site histology videos?	5	1 = not helpful; 5 = very helpful
How would you rate the difficulty of the material presented in the videos?	3	1 = too easy; 5 = too hard
How helpful did you find the histology quizzes?	4.75	1 = not helpful; 5 = very helpful
How helpful were the case studies in improving your general pathology knowledge	4.5	1 = not helpful; 5 = very helpful
How would you rate the difficulty of the material presented in the case studies?	3.25	1 = too easy; 5 = too hard
How helpful was the information in the FAQ section?	5	1 = not helpful; 5 = very helpful
Overall how would you rate the usefulness of this site?	5	1 = not helpful; 5 = very helpful

Abbreviations: FAQ, frequently asked questions.
* n = 4.

cases." The online site was found to be "very easy to use and navigate" (written communication, June and July 2015). Online availability allowed residents to review the pertinent material adjusting to their own schedule, while maintaining communication.

Our next goal with the program is to assess its impact on resident didactic knowledge. The Resident In-Service Exam (RISE) administered in the spring may be too remote from our onboarding session to accurately gauge its impact on didactic knowledge. This year we used the onboarding quizzes as a self-assessment module only and did not administer a separate test on that material at the start of residency training. In the future, we will administer a short didactic test at the beginning of residency to test the content covered in the onboarding course. Programs that use the American Society for Clinical Pathology RISE-FIRST test for residents beginning their first year of training (typically offered in June and July) might find that test to be useful in the same capacity. We have not had any residents transfer into our program from other institutions. This would likely be another opportunity to use the onboarding program, with some tweaking to assess knowledge depending on the incoming resident's level of training. Our onboarding program is the prelude to a month-long integrated AP/CP "boot camp" that reinforces the information covered in the onboarding and introduces more advanced topics through didactic lectures, slide-based conferences, and hands-on experience in the cutting room and autopsy suite.

The first months of training in pathology are usually demanding for new residents who have to acquire a large amount of knowledge and skills, which are generally not emphasized during medical school, during a short period of time. In this situation, an online onboarding program, such as the one discussed in this article, can provide several useful educational and social resources for incoming pathology residents. This type of online portal can allow residency programs ensure that their incoming house staff will begin their training with the basic knowledge and skills necessary for this transition, while introducing them to the individual culture and guidelines of each program.

Declaration of Conflicting Interests

Funding

Supplemental Material

The online supplemental materials are available at http://apc.sagepub.com/supplemental.

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