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## Perspective

# Electronic consultations and clinician burnout: An antidote to our emotional pandemic?

Michelle S. Lee,<sup>1</sup> and Vinod E. Nambudiri<sup>2</sup>

<sup>1</sup>Department of Dermatology, Harvard Medical School, Boston, Massachusetts, USA, and <sup>2</sup>Department of Dermatology, Brigham and Women's Hospital, Harvard Medical School, Boston, Massachusetts, USA

Corresponding Author: Michelle S. Lee, BA, Department of Dermatology, Harvard Medical School, 25 Shattuck Street, Boston, MA 02115, USA; [Michelle\\_lee3@hms.harvard.edu](mailto:Michelle_lee3@hms.harvard.edu)

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## ABSTRACT

Health information technology is a major source of clinician burnout due to increased administrative burden and inefficient work processes. Electronic consultations (eConsults) represent a promising innovation to improve access to specialty care by reducing wait times for specialist visits and reducing unnecessary in-person specialist visits. While eConsults have clear benefits for patients and healthcare systems, their potential effects on provider burnout should be considered. Using a framework which outlines that the loss of autonomy, competence, and relatedness as the main contributing factors to clinician “amotivation” and burnout, we discuss the use of eConsults and their potential to mitigate or exacerbate burnout for primary care providers and specialists, as well as recommendations for implementation of eConsults to reduce burnout.

**Key words:** Health information technology, electronic consultations, burnout, access, specialty care, referrals

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## INTRODUCTION

Health information technology has emerged as a primary driver of modern clinician burnout, with studies showing that 70% of clinicians experience health information technology–related stress.<sup>1</sup> Although systems such as the electronic health record are designed to increase efficiency and productivity, they leave many clinicians frustrated by the increased administrative burden and inefficient work processes.

One recent innovation in health information technology is the introduction of electronic consultations (eConsults), a method of asynchronous consultation typically between primary care providers (PCPs) and specialists via a shared electronic health record or Web-based platform. Primary care clinicians can submit clinical questions and referrals to specialists and receive either clinical management recommendations or a request for an in-person specialist visit. While timely access to high-quality specialty care remains a significant challenge—especially for uninsured and rural patients—eConsults are a promising innovation that can improve patient access to

specialty care by decreasing wait times for specialty input by 17.4% and reducing unnecessary specialty in-person visits especially in safety-net health systems, with patient satisfaction rates of 78%–93%.<sup>2,3</sup> A study of electronic dermatology consultations showed that eConsults served more racial and ethnic minorities patients and Medicaid enrollees, and also decreased the rate of no-shows, demonstrating the potential to increase access, especially for underserved patients.<sup>4</sup>

The use of eConsults has become increasingly relevant during the coronavirus disease 2019 (COVID-19) pandemic, as health systems have increased volumes of consultations and referrals for infectious disease and pulmonology for COVID-19, as well as an increased need for virtual specialty care access for management of other conditions in particularly at-risk patients. However, it is essential to recognize how eConsults can affect burnout among healthcare providers, especially in an environment already encumbered by stress and uncertainty, resource scarcity, and huge upheavals in provider workflow during the COVID-19 pandemic. Indeed, while

**Table 1.** Potential mitigating and exacerbating factors of eConsults on clinician burnout

	Mitigating Factors	Exacerbating Factors
Autonomy	<p>Improved access to specialist input and decreased wait times<sup>3</sup></p> <p>Fewer inappropriate clinic visits and avoidable follow-up visits, liberating time to spend elsewhere<sup>6,7</sup></p> <p>Emphasis of value of eConsults to improve patient care to promote intrinsic motivation of clinicians<sup>8</sup></p>	<p>Increased administrative workload<sup>8,9</sup></p> <p>Shift in burden of specialty care<sup>8</sup></p> <p>Additional tests or labs required<sup>8</sup></p> <p>Specialists as “gatekeepers”<sup>8</sup></p> <p>Increased referral volume<sup>10</sup></p>
Competence	<p>Educational value of eConsult</p> <ul style="list-style-type: none"> <li>Improved knowledge and confidence in management of conditions<sup>11,12</sup></li> <li>Potential education value to medical graduate trainees<sup>13</sup></li> <li>Greatest benefit for midlevel providers, clinicians with fewer years of experience<sup>11</sup></li> </ul> <p>More appropriate allocation of specialty visits to patients who require in-person specialty care<sup>3</sup></p>	<p>eConsult as a checklist that requires less clinical judgment<sup>8</sup></p>
Relatedness	<p>Improved communication and relationships between providers<sup>12</sup></p> <ul style="list-style-type: none"> <li>Provider give support in unfamiliar situations or helps confirm diagnoses<sup>12</sup></li> </ul> <p>Improved patient relationships through better outcomes for patients and patient satisfaction<sup>14</sup></p> <p>Timely specialist input regarding patient care, minimizing wait times for specialist access<sup>3</sup></p>	<p>Specialists as “gatekeepers” to in-person visit<sup>8</sup></p> <p>Impersonal communication<sup>8</sup></p> <p>Variation in quality of specialist reviewer responses<sup>8</sup></p>

technology innovations such as eConsults can benefit patients and the overall health system, they may also negatively contribute to clinician burnout.

A recent publication in *The New England Journal of Medicine* discusses how the crisis of clinician burnout has been exacerbated by implementation of the electronic health record and performance metrics.<sup>5</sup> The authors contend that such healthcare delivery innovations often replace intrinsic motivation with extrinsic motivations, which eventually leads to “amotivation,” or burnout, by jeopardizing “autonomy, competence, and relatedness.”<sup>5</sup> The authors call for addressing these 3 factors to support the restoration of intrinsic motivation and the reversal of clinician burnout. Using this framework, we discuss the use of eConsults and their potential to mitigate or exacerbate burnout for both primary care providers and specialists (Table 1), and explore recommendations for how to minimize burnout during implementation.

## AUTONOMY

Electronic consultations have the potential to impact providers’ sense of autonomy and lead to burnout, particularly by influencing their control over time spent performing documentation and administrative duties. PCPs express concerns over the increased administrative workload of eConsults and necessary follow-up recommended by specialists, which shifts their workflow.<sup>8</sup> For example, many clinicians report that submitting eConsults can be time-consuming, requiring documentation time outside of their work hours.<sup>8,9</sup> In addition, many perceive a shift in the burden of specialty care to the PCP, as specialists often require additional tests or labs to be performed by the PCP before (or in place of) an in-person specialist visit.<sup>8</sup> Indeed, studies have shown that increased time spent per referral is associated with decreased feelings of clinical efficacy.<sup>9</sup> For specialists, eConsults can also lead to an increase in referral volume and additional administrative burden. For exam-

ple, a Veterans Administration report estimated that 27% of eConsults represented “new work,” consults that would not have occurred in the absence of eConsults.<sup>10</sup> In addition, electronic consultations can compromise provider perceptions of autonomy over clinical referrals, as some primary care clinicians view specialist reviewers as the “gatekeepers” of referrals that are not accepted for an in-person visit.<sup>8</sup> Overall, eConsults can contribute to burnout through increased administrative burden and changing workflow for providers, especially in the immediate term.

However, in the long term, eConsults have the potential to lead to decreased workload and improved efficiency, liberating providers to spend their time elsewhere, mitigating burnout, and improving autonomy. For example, eConsults increase access to specialty care through decreased wait times for patients and specialist response time, which can help PCPs have more control over when they receive specialty input. In addition, specialists have reported that eConsults decrease inappropriate clinic visits and avoidable follow-up visits, which frees up additional time.<sup>6,7</sup> Ultimately, improved efficiency with eConsults should allow for providers to control more of their time in the long term, despite the immediate increased administrative burden.

## COMPETENCE

A second contributor to clinician burnout is the replacement of valuing clinical competence with the administrative work of “checking off” boxes. Clinical competence involves having a deep fund of medical knowledge and honed clinical judgment, which reflects clinicians’ intrinsic motivation for entering the profession.<sup>5</sup> Through iterative dialogue between providers about patients’ medical management, eConsults have the potential to nurture clinical competence and reduce burnout.

The educational value of eConsult has been well-characterized, with up to 90% of surveyed PCPs reporting improved knowledge of—and confidence in—managing more specialized conditions and

exposure to new specialties and diagnoses following eConsults.<sup>11,12</sup> The greatest educational impact is seen for trainee clinicians such as residents and fellows, clinicians with 10 or fewer years of experience, and midlevel providers initiating eConsults.<sup>11</sup> In addition, eConsults can provide many educational benefits to trainees in graduate medical education programs, including lessons in value-based care and system-based practice, social determinants of health, and barriers to access to specialty care.<sup>13</sup> Most specialists also agree that eConsults are an effective way of providing education to PCPs and that eConsult questions should be used by continuing medical education providers for educational purposes.<sup>7</sup>

However, this educational benefit is challenged by the perception of some primary care providers that eConsult recommendations can yield a mere checklist of tasks to be completed, causing some to feel more like “support staff” than providers with valuable clinical judgment.<sup>8</sup> Thus, while eConsults can provide a longitudinal method of continual learning and growth, which may help combat feelings of burnout, it is important to ensure that clinicians feel valued for their clinical knowledge rather than administrative capacity.

## RELATEDNESS

A third factor affecting burnout is relatedness, or the feelings of belonging and connection in interpersonal relationships, including with other providers and patients. Because eConsults allow for iterative dialogue with specialists that allow for clarification and follow-up, they can decrease burnout by improving communication and relationships between providers, especially when specialists serve as educators.<sup>14</sup> PCPs reported overall positive perceptions of their relationships with other eConsult providers when surveyed, expressing gratitude toward specialists and the quality of their responses.<sup>12</sup> For example, eConsult specialists were able to provide support in unfamiliar situations or help confirm diagnoses.<sup>12</sup> Another study found that over 80% of specialists also felt that eConsults result in improved communication between providers and that they appreciated the feedback they receive from primary care providers.<sup>7</sup> eConsults can also improve provider relationships with patients, as improved patient access to specialty care leads to higher patient satisfaction with care.<sup>2</sup> Decreased specialist response times to evaluation, diagnosis, and intervention led to patient satisfaction ranging from 76% to 93%.<sup>2</sup>

However, eConsults may also exacerbate burnout through negative interpersonal interactions. Many primary care providers perceive specialists as “gatekeepers” to a successful referral, who instead require extensive previsit workup to avoid the need for an in-person visit.<sup>8</sup> In response, some PCPs have reported exaggerating patient symptoms or using key phrases to get a face-to-face visit approved.<sup>8</sup> Overall, there is reported variation in the quality of specialist reviewer responses and dialogues, with some providing more thorough responses and others responding more curtly.<sup>8</sup> In addition, eConsults can be seen as a more impersonal form of communication in comparison to informal curbsiding or referrals made with known colleagues. The inconsistency in the quality of communication via eConsults and their impact on provider relationships highlights the need for a more standardized protocol of communication and eConsult etiquette.

## RECOMMENDATIONS

While eConsults have the potential to either mitigate or exacerbate clinician burnout, there are numerous ways that healthcare systems and clinicians can improve eConsult implementation to help mini-

mize burnout. First, to address clinicians’ feelings of lack of autonomy and increased workload, it is essential to reduce the administrative burden of eConsults and restore clinicians’ motivation by emphasizing the mission and value of eConsults. To address administrative burden, clinicians should be given dedicated time to complete eConsults and the user interface should be optimized, including smoother integration with the electronic health record to improve navigation efficiency.<sup>15</sup> In addition, it is important to recognize that providers who believe that eConsults improve specialty care access for patients are more likely to be satisfied and less likely to experience burnout.<sup>8</sup> Therefore, health systems must secure clinician buy-in to the mission of improving specialty care access to help restore clinicians’ intrinsic motivation and autonomy to use eConsults. This includes focusing on populations and hospitals that most benefit from eConsults, including those with barriers to specialty care access such as patients in safety net hospital settings, underinsured individuals, and racial and ethnic minorities.

Second, eConsults should be introduced early in clinical training environments so that clinicians are less likely to feel disruption to their workflow and gain efficiency. Initial adoption may be led by particular physician champions eager to engage with the technology, followed by broader uptake across a physician organization. To ensure development of clinical competence, health systems leadership should emphasize the educational benefit of eConsults to both primary care providers and specialists. Appropriate training should be given to primary care providers on how to submit eConsults, including the type of information to include, and to specialists on how to structure responses that foster continual learning to help PCPs learn to manage a wider range of conditions. In addition, eConsults should be incorporated as a tool in graduate medical education and early training to learn more about health systems, management of a wide range of conditions, care coordination, and barriers to access to specialty care.<sup>8</sup>

Third, to promote positive feelings of relatedness between providers, eConsult training should include discussions of the PCP–specialist relationships within eConsult, and the expectations of the roles of both primary care providers and specialists to prevent perceptions of specialist “gatekeeping.” eConsults represent a unique opportunity to explore methods of technology-mediated interprofessional communication and derive best practices that ensure appropriate resource utilization of clinicians’ scarcest resource: time.

Finally, it is essential to consider barriers to eConsult implementation. A previous study showed that key barriers for PCPs and specialists included increased workload and workflow change, privacy concerns, technical challenges, and lack of adequate reimbursement.<sup>16</sup> There are also systems-level barriers including differing licensure requirements across jurisdictions, need for ongoing infrastructure and resources, and concerns over privacy.<sup>16</sup> One consistent theme among surveyed providers is that having a compensation model for providers’ time facilitates eConsult implementation, whereas the lack of adequate reimbursement is a significant barrier.<sup>16,17</sup> Health systems leadership can help align incentives to ensure successful eConsult adoption by allowing salaried clinicians more dedicated time to complete eConsults and providing fee-for-service clinicians appropriate reimbursement rates closer to those for in-person visits.<sup>17</sup> Providing adequate reimbursement and aligned incentives can help overcome low intrinsic motivation from increased administrative burden. A final barrier is integrating eConsult platforms across diverse systems, especially given that many academic medical centers deliver specialty care for patients referred from community clinics that may not share the same EHR.<sup>17,18</sup>

eConsults represent a unique health information technology innovation with the potential to help mitigate long-term clinician burnout and improve the provision of specialty care to patients who need it most. While this time of tremendous upheaval in the medical system represents a unique catalyst for the adoption of eConsults, we must ensure that its implementation allows for a sustained positive change with the mission to better serve our patients remaining at the core. It is only when we reconnect with our own intrinsic motivation that we clinicians have a chance of overcoming our own emotional pandemic.

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MSL and VEN were involved in the design, drafting, and revision of the work, and agree to be accountable for all aspects of the work.

## DATA AVAILABILITY STATEMENT

No new data were generated or analyzed in support of this research.

## CONFLICT OF INTERESTS STATEMENT

The authors declare no competing interests and no funding sources.

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