

# Bringing value, balance and humanity to the emergency department: The Right Care Top 10 for emergency medicine

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The emergency department (ED) is a unique practice environment that functions simultaneously as a place for high-acuity care of life-threatening illness and injury and also as a safety net for patients with chronic untreated disease. Patient presentations reflect not only pathophysiological derangements in individuals but also the consequences of social dysfunction as well as of healthcare itself, the latter related to the contrasting harms of poor access (in many cases) and excessive intervention (in many others). As changes in the larger healthcare system lead to more frequent use of the ED, clinicians have less time to spend with increasingly sick patients, resulting in more testing and less listening,<sup>1</sup> as well as burnout among providers and medical harm and financial cost for patients.<sup>1–3</sup>

In attempting to address overuse in medicine, the Choosing Wisely campaign asked medical specialty societies to develop lists of diagnostic and therapeutic interventions that are being undertaken too frequently, leading to waste and harm.<sup>4</sup> While different individuals and groups might not agree on every item identified, the ‘top 5’ lists that emerged from this process reflected in part an attempt to avoid controversy and left some important items—indeed some critical ‘elephants in the room’—unmentioned. While specialty societies do undertake advocacy work to address the health needs of the public, they also have a fundamental duty to advocate for and protect the interests of their specialty. Furthermore, healthcare dollars that are ‘wasted’ are of course not actually thrown away but rather end up in someone’s pocket; thus, there is clearly a conflict of interest when specialty societies address the overuse of extremely lucrative medical procedures that provide substantial income to their members.

The Right Care Alliance (RCA) is a US-based collaborative effort of healthcare practitioners and patients to address systemic issues of both overuse and underuse in our healthcare system. It was formed in 2015 by the Lown Institute, a healthcare think tank, in response to the realisation of a need for an advocacy arm. Unlike the Choosing Wisely campaign, which focuses specifically on overuse reduction, the RCA promotes healthcare tailored to the needs and values of patients. As the name ‘Right Care’ implies, we do not believe that overuse can be addressed separately from underuse, as these are the inter-related consequences of a profit-driven

healthcare market. The Emergency Medicine (EM) Council is a subgroup of the RCA composed primarily of emergency physicians and nurses. In May 2016, the RCA asked its specialty councils to create their own ‘top 10’ lists.<sup>5,6</sup> The councils were charged to identify not merely interventions that are overused but also others that need to be used more widely, if we are to achieve both better and more equitable health outcomes and financial savings.

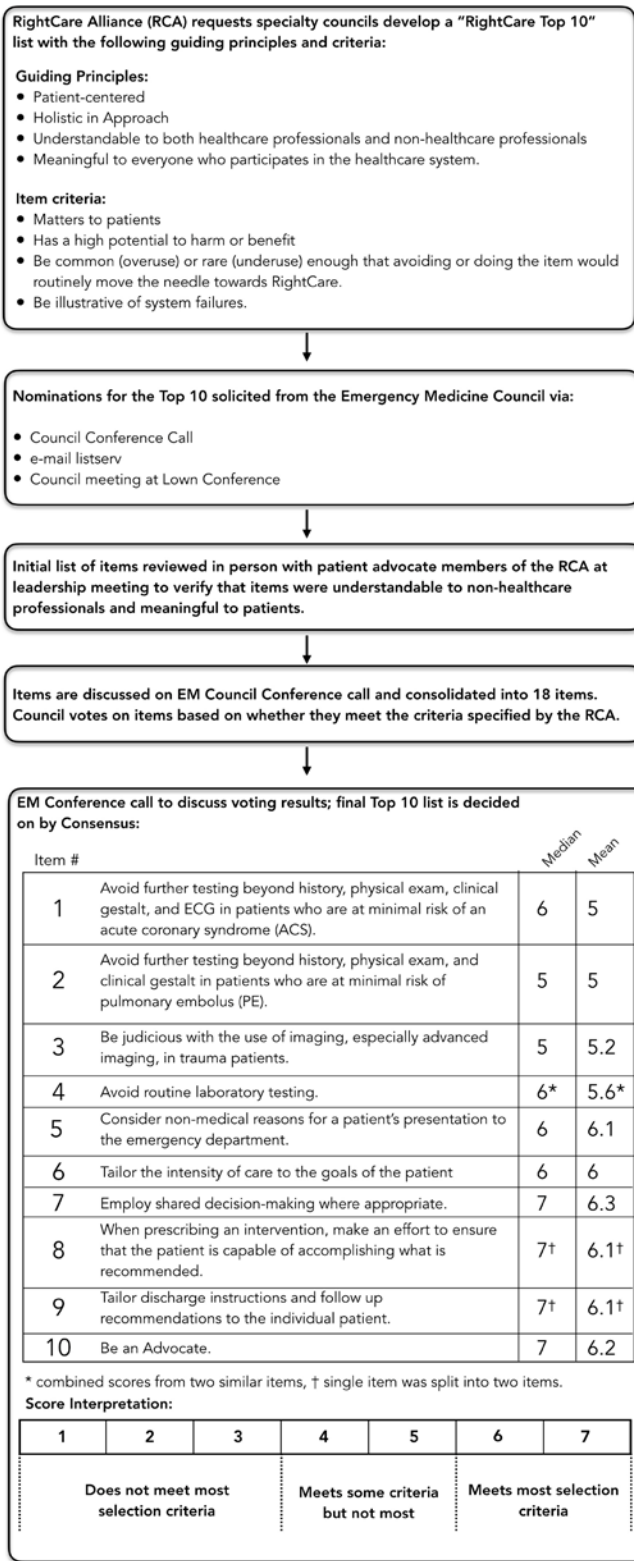
## METHODS

In May of 2016, the RCA requested that each of the 15 specialty councils derive a top 10 list that each specialty area should follow in order to provide right care. The guiding principles were that the list should be ‘patient-centred, holistic in approach, understandable to both healthcare professionals and non-health care professionals, and serve as a meaningful list to everyone who participates in the healthcare system’. Criteria for item inclusion were that they should (a) matter to patients, (b) have high potential to harm or to benefit, (c) be common (overuse) or rare (underuse) enough that avoiding or doing the item routinely would move the needle towards the right care, and (d) examine or illustrate how it ties to system failures. It was required that members of the Community Engagement Council (now renamed the Patient Council) review and provide input to all lists. The EM Council list was derived through use of a Modified Delphi process (see figure 1). In the first round of the process, the EM Council chair (EW) solicited initial list items from the 125 members of the Council through conference call, e-mail and in-person meeting at the national Lown Conference held in 2016. This list of items was then reviewed with Community Engagement Council members/patient advocates at an RCA leadership conference in January 2017 to meet the requirement that it should be understandable and meaningful to patients. The resulting list was reviewed on an EM Council conference call where members discussed the intention of each item and consolidated redundant items, resulting in an initial list of 18. Following this, explanatory descriptions for each list item were written by EM Council leadership before the entire EM Council was given the opportunity to vote on each item using a Google form survey. Council members were asked to rate items based on whether they met the criteria initially specified by the RCA (items a–d



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**Figure 1** The derivation process for the RCA Right Care Top 10 for EM. EM, Emergency Medicine; RCA, Right Care Alliance.

mentioned earlier) on a scale from 1 to 7, where a score of 1–3 indicated that the item does not meet most selection criteria; a score of 4–5 indicated that it met some criteria but not most; and a score of 6–7 indicated that it met most selection criteria. Members were encouraged to leave commentary as to their rationale for support for or against the item. Seventeen members (not

including the Council chair, who served as a moderator and did not vote) of the Council voted. Overall, items addressing social determinants of health scored more favourably. The numeric results of the survey and associated commentary were shared with Council members who were then given an opportunity to give feedback by e-mail or on a subsequent conference call. A smaller group was selected to incorporate Council feedback and distill the list into the final 10 items (median score range 5–7) by consensus. During this process, some of the items were consolidated (routine labs in general, combined with routine labs for medical clearance of psychiatric patients, item 4), and some were divided into two separate items (assessing patient ability to adhere to recommendations was divided into making sure that patient can follow recommendations (item 8) and tailoring discharge instructions to the patient (item 9)). Item explanations were further edited by the authors based on Council member commentary and review of the evidence.

### THE RIGHT CARE TOP 10 FOR EMERGENCY MEDICINE

The EM ‘Right Care Top 10’ list has two overriding principles, as follows:

1. ‘The quixotic search for certainty’ describes the all too common attempt by clinicians to find the last few patients who may be in danger even though an evaluation has shown that risk is minimal. Along with this fear of missing even a single patient with a serious problem, most clinicians have been taught to believe (incorrectly) that ‘tests’ are more ‘objective’ than clinical judgement and, thus, that doing more is ‘safer’ and more ‘evidence based’. However, the medical literature emphasises the supposed importance of avoiding missing even a single case of disease, while it pays little, if any, attention to the harms that accompany such an effort.<sup>7</sup> Even if there is some small benefit in finding the few cases that would otherwise be missed after routine evaluation (in most cases based on clinical gestalt alone), this fails to consider the diminishing returns that inevitably occur as we endeavour to lower the miss rate from ‘too many’ to ‘a few’ to ‘rarely’ to ‘never’. More importantly, when further testing is done in a population of patients who can be classified as minimal risk, based on gestalt, this almost cannot fail to cause more harm than benefit—even if the tests themselves are ‘non-invasive’—because of the downstream consequences of false positives, ‘incidentalomas’ and overdiagnosis.<sup>8</sup> The first four items in our list stress the need to avoid this temptation to try to achieve certainty, and to capture every last patient who ultimately proves to have a dangerous condition.
  2. Medical care is not the sole, or even the most important, determinant of health outcomes. Social determinants—including, but not limited to, food insecurity, homelessness and addiction—are profoundly important to the health of a great many patients. These issues must be addressed as part of the larger healthcare system, but it is also critical that ED clinicians pay attention to and address social factors in their patients, individual by individual. Items 5–10 focus on our role in addressing the larger needs of our patients as human beings, rather than merely a set of symptoms or medical problems.
1. *Avoid further testing beyond history, physical exam, clinical gestalt and ECG in patients who are at minimal risk of an acute coronary syndrome (ACS).* Many patients present with a chief complaint that prompts initial consideration of ACS as part of the differential diagnosis but are easily determined to be at minimal risk based on the initial clinical evaluation.

Therefore, expand the traditional classification system of risk ('low, medium, high') to include the largest group: *those who are at 'minimal risk'*.

Many patients present with a chief complaint that prompts initial consideration of ACS as part of the differential diagnosis but are easily determined to be at minimal risk based on the initial clinical evaluation. Therefore, expand the traditional classification system of risk ('low, medium, high') to include the largest group: *those who are at 'minimal risk'*. Decide which patients qualify as minimal risk based primarily on history, physical exam, clinical gestalt, and ECG. In this group, do no further testing. Establish clinical follow-up to allow for early identification of the rare patient in this minimal risk category whose condition changes such that risk is now understood to be increased. There is evidence that clinicians are very good at identifying this minimal-risk group, because when they select patients to be admitted to an observation unit, they choose a group whose risk of a major adverse cardiac event is less than 1%.<sup>9-11</sup> While several recently published studies present evidence that emergency physicians cannot conclusively rule out ACS based on suspicion alone, these studies use suspected cardiac chest pain identified by the treating physician as requiring investigation for ACS as inclusion criteria.<sup>12-13</sup> Indeed, the overall prevalence of ACS is high (~17%) in both UK-based studies, especially in comparison with other studies evaluating the prevalence of ACS in the US ED population (~5%).<sup>14</sup> The patients we describe as minimal risk, in whom we do not suspect ACS, but in the shared experience of Council members often receive testing regardless, would not be expected to meet these inclusion criteria. Subjecting the entire group to further interventions in a quixotic attempt to identify the rare patient who will have a cardiac event does more harm than good.<sup>15-16</sup> It is impossible to achieve 'zero-risk' certainty, and even when minimal-risk patients undergo serial troponin testing and advanced cardiac imaging, as well as admission for observation, the rare outlier case may still be missed. Clinicians should be empowered to not test for the disease that they do not suspect.

2. *Avoid further testing beyond history, physical exam and clinical gestalt in patients who are at minimal risk of pulmonary embolus (PE).* Similar to ACS, many patients present with symptoms that appropriately prompt initial consideration of PE as part of the differential diagnosis, but are easily determined to be at minimal (if any) risk based on the initial clinical evaluation based on history and physical and clinical gestalt. In this group, do no further testing but give them return precautions that focus on the clinical findings that would change your pretest probability of disease and clinical workup.

Clinical judgement/gestalt of an experienced provider has been shown to perform at least as well as the Wells criteria.<sup>17</sup> In the initial studies of the Wells criteria, the low-risk group had a chance of PE of about 10%, but over time, in multiple subsequent studies, the use of the same 'objective' criteria has led to a rule-in rate of less than 5%, and as low as 2%, in the group labelled 'low risk', suggesting indication creep for PE workups, which are now applied to a much lower-risk group.<sup>18-20</sup> Moreover, many of the small subsegmental PEs that are found by such testing may be clinically inconsequential and represent overdiagnosis.<sup>21-22</sup> No algorithm or approach can identify every last patient who has PE, but the enormous amount of testing currently undertaken in the quixotic search for certainty has not resulted in benefit to

patients but has increased harm.<sup>23</sup> Thus, a judicious approach that values the thoughtful and careful history and physical exam and does no further testing for those patients in whom the clinical gestalt suggests minimal risk is not merely appropriate, but will lead to overall population benefit.

3. *Be judicious with the use of imaging, especially advanced imaging, in trauma patients.* In response to technological advances, evaluation of trauma patients has come to rely increasingly on imaging, including almost ubiquitous use of whole-body CT (WBCT) imaging even when there is a low pretest probability of significant injury.<sup>24</sup> While such an approach may identify a greater number of injuries overall, not all these injuries are clinically important (ie, require intervention).<sup>24-26</sup> Though a recent meta-analysis has suggested a potential mortality benefit for early WBCT,<sup>27</sup> the study was limited to patients with severe injury (Injury Severity Score >16) and included predominantly retrospective studies that are almost certainly confounded by inflation of ISS based on the performance of the test alone.<sup>28</sup> A retrospective study of paediatric patients not included in the above-mentioned meta-analysis did not find a mortality benefit for WBCT over selective imaging,<sup>29</sup> and a prospective study of patients at lower risk of trauma<sup>30</sup> found that WBCT has low yield of finding clinically significant injury compared with a selective imaging approach. WBCT imaging comes with additional harms, including costs, increased radiation exposure (a particular concern in young individuals who represent a higher proportion of trauma patients), delays in care for other ED patients waiting to be scanned and increased detection of incidental but unimportant findings that nevertheless lead, in turn, to more tests and interventions. Rather than doing *routine* pan-scan imaging, clinicians should develop a more judicious approach based on history and physical exam findings, particularly in patients who are alert, not intoxicated, and can be evaluated and observed.<sup>31</sup>
4. *Avoid routine laboratory testing.* Abandon the notion of routine 'basic labs' or 'screening labs' in favour of a thoughtful and judicious approach to testing. Individual laboratory tests should be performed when there is clinical suspicion of a specific medical illness and the test is likely to contribute to a change in treatment plan. There is abundant evidence that routine use of many different types of laboratory tests, for a large variety of ED patients, has low utility and is not cost effective.<sup>32-48</sup> Reflexive ordering of 'routine labs' incurs significant cost and, more importantly, potential harm due to downstream testing, without evidence that it improves patient outcomes.
5. *Consider non-medical reasons for a patient's presentation to the ED.* Patients come to the ED for reasons whose origin is biomedical, psychological or social, or a combination of any of these. Patients with chest pain, for example, may actually be suffering from post-traumatic stress disorder secondary to having witnessed gang-related violence in their home country or to economic instability due to their immigration status. Other patients present because inability to afford prescription medications has led to a complication from an underlying chronic disease: given the current ever-rising costs of healthcare, many patients are forced to choose between paying for needed medication and other essentials such as food and housing.<sup>49</sup> It has long been recognised that the ED often acts as a social welfare institution within our society.<sup>50-52</sup> We frequently fail to recognise our patients' unmet social needs, such as homelessness, food insecurity and economic instability, unless we ask.<sup>53-55</sup> Still, it is important to recog-

nise that single providers, no matter how well intentioned, cannot meaningfully address these issues in the absence of a systemic plan in the ED, in the hospital and in the larger community. However, emergency providers can participate in or lead an interdisciplinary team involving social workers, medical case workers and community partners to connect patients with appropriate resources. Successful examples of ED-based programming to address unmet social needs include hospital-based violence intervention programmes,<sup>56 56</sup> health advocate programmes<sup>57</sup> and community paramedicine initiatives.<sup>58–60</sup>

6. *Tailor the intensity of care to the goals of the patient.* Patients and clinicians do not necessarily have shared objective criteria for determining the best course of action, and clinician assumptions about patient preferences are often inaccurate.<sup>61–63</sup> This is particularly a danger in the ED, where acuity is high and clinicians may feel time is limited. However, in fact, establishing patient goals early during an ED encounter may actually decrease length of stay by avoiding extensive testing that is not desired by patients, especially for low probability diagnoses.<sup>64–67</sup> Early establishment of patient care goals is also essential for patients with a serious illness or those who may be a candidate for aggressive resuscitation<sup>68</sup> and can help facilitate appropriate involvement of a palliative care team; quality of life is improved when such a team is involved early after the initial ED evaluation.<sup>69</sup>
7. *Employ shared decision-making (SDM) where appropriate.* In circumstances where several different treatment options are reasonable and none is clearly ‘superior’, encourage SDM by supporting the patient in making an informed decision based on the best available evidence and the patient’s own values and preferences. SDM respects patient autonomy and can reduce low-value care.<sup>70 71</sup> More importantly, SDM is an ethical imperative<sup>72</sup> that emergency physicians view favourably.<sup>73 74</sup> It places patient-centred outcomes above resource use.<sup>75</sup> ED studies of SDM for low-risk chest pain, thrombolysis for stroke and other conditions demonstrate proof of concept<sup>76–78</sup> and provide tools for clinical decision support. In a study where laymen were asked to evaluate an ED scenario with a missed diagnosis, respondents said they would be less likely to sue when SDM was part of the provider–patient interaction.<sup>79</sup>
8. *When prescribing an intervention, make an effort to ensure that the patient is capable of accomplishing what is recommended.* Patients are routinely blamed for lack of adherence to treatment recommendations and labelled with the pejorative term ‘non-compliant’.<sup>80 81</sup> However, many factors influence patients’ ability to adhere to treatment plans.<sup>82</sup> Most ED discharge processes do not recognise this, and many discharge recommendations are not reasonable, or even possible, from the perspective of at least some patients. Beyond ensuring that patients understand discharge instructions (see item 9), we should actively inquire about anticipated barriers to adherence.<sup>83</sup> Does the patient have the money to purchase the prescribed medication<sup>84</sup> or a means to refrigerate it when that is necessary? Can he or she return for the prescribed follow-up appointment? Involvement of the case manager (or social worker or community partner) may be of great value, helping with transportation or funding of medications, for example, to make it possible for a proposed treatment plan to be achieved.
9. *Tailor discharge instructions and follow-up recommendations to the individual patient.* Discharge instructions are an essential component of patient–clinician communication. Howev-

er, ED discharge instructions are often suboptimal. Written instructions commonly require a reading level inappropriately advanced for some patients, are not specific to the patient’s complaint and/or are not available in the patient’s native language.<sup>85</sup> Verbal discharge instructions are often incomplete and provide patients with minimal opportunity to ask questions.<sup>86</sup> Too often, the discharge instructions are brisk, standardised and relegated to nursing or other staff.<sup>87</sup> As a result of all of these issues, many patients leave the ED with little understanding of their diagnosis, care plan, specific time frame for follow-up (if needed) or what to do if their condition changes, deteriorates or fails to improve.<sup>87 88</sup> Considering discharge instructions to be a critical piece of the ED visit can help ensure that communication occurs. This includes the use of language assistance for limited English proficiency patients and tailored to the health literacy level of the patient.<sup>89</sup> It is important to empower patients to feel comfortable seeking re-evaluation, but routine follow-up, as often suggested by standardised forms, is not automatically necessary in many cases.

10. *Be an advocate.* Traditional medical education emphasises the importance of advocacy for patient care, but this is largely restricted to within the borders of a hospital or medical clinic. However, the health and well-being of patients start outside the borders of the hospital, with public safety measures, stable housing, food security, access to preventative medicine and limiting exposure to violence. ED clinicians are everyday witnesses to the downstream effects of public policies that not only impact the social determinants of health but also financially incentivise the treatment of resultant illness rather than the prevention of disease. As such, we have a duty to step outside hospital borders to educate the public and advocate for policies that improve the health of our society.

## CONCLUSION AND FUTURE DIRECTIONS

The RCA is working to change the conversation about American healthcare, advocating for access for all individuals to high-quality care without financial hardship, eliminating overuse and underuse, and championing the partnership between the patient and clinician. The EM Council’s top 10 list seeks to serve as a starting point to focus ED clinicians in achieving the goals of the RCA. While other lists exist, and we agree with many Choosing Wisely areas of focus, we seek to move the needle even further. In what is ultimately an impossible attempt never to miss a single case with a life-threatening diagnosis, we paradoxically cause a great deal of harm to the overall population through overtesting and contribute to the untenable rising cost of healthcare. When we fail to spend the time needed to understand the context of our patients’ lives outside of the ED, we miss the opportunity to improve the patient’s health. While some problems are big and may take decades to fix, microchanges in our daily practice—listening more, ordering more thoughtfully—are possible today. One patient at a time, one shift at a time, one ED, one hospital and one community at a time, we as clinicians need to help drive the change. We do not need more research to show unnecessary testing is occurring; we need effective means to implement change and support clinicians in putting the best interests of their patients first.

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