Viewpoint

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The top 10 things primary care physicians wish every specialist knew

Masahiro J Morikawa & Samira H Ghaniwala

Abstract

Primary care physicians often find the differences in approaches and priorities with specialists in caring patients. This article argues 10-things that generalist physicians wish every specialist knew. These are; 1) Organ-systems work together, no independently; 2) Mortality is not the only outcome measure; 3) ADL is one of the most critical prognostic indicators; 4) Effectiveness, not efficacy, matters in the real-world; 5) Mental wellness is essential to physical wellness; 6) Pay heed to illness trajectory; 7) Care for the care-givers; 8) 'Exercise and diet' trumps 'medicine and surgery'; 9) Whose definition of health matters?; And 10) Empower healthcare recipients.

Transition of care is one of the most important steps connecting hospital care to primary care. Those problems currently labelled as miscommunication might be stemming from a difference in priorities and varied interpretations of patients' problems by these two groups of providers. This article advances the discussion on the altering role of generalist physicians and the advice of their specialist colleagues, as together they face more and more changes within the practice of medicine.

Keywords: primary care, hospital medicine, specialist care,

In a contemporary medical practice caring for complex patients with utmost efficiency, primary care physicians and specialists are expected to work together to organize a seamless transfer from acute to chronic care. The job of the generalist is to sort out and integrate different recommendations from numerous specialists and apply those strategies in the care of the patient long after the index admission. During such interactions with specialists, primary care physicians often realize the impact of differing viewpoints on the overall patient care well beyond the anticipated time frame, whether acute or chronic. To that end, and to better inform such recommendations, this paper proposes the top 10 things primary care physicians wish every specialist knew when addressing problems on the busy hospital ward.

1. Organ-systems work together, not independently

As we see in examples such as the cardio-renal syndrome, hepato-renal syndrome, or hepato-pulmonary syndrome, as the patient gets sicker, the interaction of organ-systems begins to dominate. Indeed, predicting the outcome in comorbid conditions depends not only on understanding the culprit organ, but rather quantifying a complicated interaction of multiple organ-systems. For example, the ADHERE registry algorithm shows the most important predictor for in-hospital death in heart failure patients is not the cardiac function per se, but rather creatinine clearance and BUN[1]. In other words, the commonly used comments from a specialist asked to evaluate their system of expertise, 'such and such organ is fine', might soon become irrelevant and obsolete in the context of multiple complex systems.

Moreover, recent research revealed that genotype, endotype and phenotype are quite different in COPD and asthma[2]. Therefore, even though a disease may manifest in a single system, the pathophysiological process from which it arose may have been triggered in different organs.

2. Mortality is not the only outcome measure

Specialists seem to treat all-cause mortality as the most important outcome measure in most cases. Or, they choose strategies based on organ specific survival as an alternative, such as MACE (major adverse cardiac events) or creatinine-doubling time[3]. Life is far more than just being alive. Subsequently, the quality of life (QOL) measures, which capture patient-centred outcomes, provide insight into the effectiveness of interventions but also their meaningfulness to patients, and such measures are gauging previously uncaptured positive aspects of interventions[4]. The difficulty of defining well-being remains a challenge for researchers and arises from the differences brought about by cultural and societal elements which are context-bound and unique to each community.

3. ADL is one of the most critical prognostic indicators

New biological markers are numerous around here - new renal injury markers, such as NGAL or KIM, to name a few. But a quick, old-fashioned, bedside assessment can easily reveal impairments in Activities of Daily Living (ADL) at each patient visit; and ADLs by Functional Assessment Measures have been consistently shown as strong outcome predictors in acute and chronic illnesses, especially within elderly populations[5]. In fact, functional measures were deemed to be as important as other

objective measures in some prognoses[6]; for instance, in the BODE score for COPD survival prediction, the ADL measure carries the same weight as the PFT (Pulmonary Function Test). In the management of elderly patients, hospitalization[7] and initiation of haemodialysis[8] significantly influence the worsening of ADLs. In the development of a 1-year mortality index after hospital admissions among elderly patients, ADL was of pivotal importance[9].

Functional impairment is also a strong indicator for readmission: there is a dose-response correlation of severity of impairment and the risk of readmissions[10]. Intensifying the in-hospital post-ICU physical and nutritional therapy has been shown to improve many aspects of recovery[11]. In patients with numerous chronic illnesses, the number of comorbidities strongly correlates with the decline of ADL[12]. Interventions to maintain pre-hospitalization ADL is important in facilitating recovery from hospitalization, and in one study in-hospital mobility programs helped patients to maintain pre-hospitalization ADL while the usual care group experienced significant decline[13].

4. Effectiveness, not efficacy, matters most in the real-world

"Doctor, I cannot afford the medicine prescribed to me when I was discharged!" This is oft-repeated in offices of generalist physicians. If a patient cannot afford medication and therefore does not take it, the treatment lacks efficacy. In the inpatient setting, efficacy of intervention determines the outcome since patients are most likely to receive the prescribed intervention. This is not the case in the outpatient setting, and the effectiveness of an intervention depends on many other elements, such as the accuracy of diagnosis, patient compliance to the proven intervention, prescription drug coverage, access to care, and finally, efficacy of the intervention[14].

5. Mental wellness is essential to physical wellness

Health is not limited to the physical body; it also involves mental wellness. In fact, mental and physical health are inseparable. Naturally, serious illnesses affect mood and cognition: therefore, it is important to acknowledge that mental health issues lie squarely within the spectrum of physical disease management. Generalists can help patients with multiple comorbidities manage depressive symptoms through brief psychological interventions; such symptoms related to cognition and mood are expected consequences of any serious illnesses.

Studies have shown that among elderly patients without dementia at baseline, noncritical hospitalization is associated with the development of cognitive dysfunction[15]. Among elderly patients, the prevalence of cognitive dysfunction is significantly higher in ADHF (acute decompensated heart failure) admissions[16] or survivors of severe sepsis[17]. Depression and depressed mood are prevalent in patients suffering serious illnesses[18]. New models are emerging to integrate psychotherapy in multiple comorbid patients and have been proven to be effective[19].

6. Pay heed to illness trajectory

"My grandma has never been the same after her hip surgery. Please fix her!"

Primary care physicians often note a decline in the general function and cognition of their patients after index admissions to the hospital. As noted earlier, acute hospital admissions have a strong independent effect on the severity of disability amongst elderly persons[20]. The multidimensional frailty score, which incorporates ADL and cognitive function, predicts one-year mortality based on a simple scoring system[21]. Poor functional status attributes to frailty and has led to poor surgical outcomes in the elderly[22]. The prevalence of functional impairment steadily increases from 28% in the 2 years prior to death to 56% in the last month of life[23]. Studies demonstrate that gait speed is an important predictor for survival amongst the elderly[24] [25] as well as grip strength[26] [27].

Furthermore, elderly patients sustain significant impairments long after the index hospitalization[28]. Amongst elderly patients discharged from the ICU, more than 50% die within a month[29]. At one-year follow-up, critical ADL capacity, such as taking medications or shopping, was impaired in more than 70% of ICU survivors who remained ventilated for longer than 48 hours[30]. Delirium sustains a long-lasting effect even after patients are discharged from the hospital, the longer the duration of delirium, the more sustained is the cognitive impairment[31].

7. Care for the care-givers

There is increasing evidence that caregivers sustain long lasting effects from patient illnesses. Depressive symptoms increase overall for surviving spouses regardless of hospice use[32]. The RECOVER study[33] demonstrated that caregivers suffered from high levels of depressive symptoms up to 1 year after a loved one's ICU admission. In the era of chronic illnesses, it is essential to be mindful of the contributions made by caregivers in disease management. Tools are widely available for the clinician to assess caregiver burden[34]. This is important because family-support interventions have been shown to improve the quality of communication and decrease the patient's length of stay in ICU[35].

8. 'Exercise and diet' trumps 'medicine and surgery'

The COURAGE trial demonstrated that after 7 years, there is no difference between medical management and percutaneous intervention (PCI) in managing coronary disease[36]. As time progresses after the initial event, the benefits of surgical intervention become less apparent. Similarly, in the long run, intensive statin therapy has not proven to be of greater clinical significance compared to those receiving moderate levels of statin[37]. As the saying goes, in the long run, "we are what we eat." Innumerable studies have shown that diet and physical habits have a lasting effect on the health of individuals[38]. Bariatric surgery has been demonstrating dramatic and long-lasting effects on diabetes control, while the DiRECT study

demonstrated that intensive exercise and diet successfully achieved remission in nearly half of the intervention group, compared to only 4% of controls[39]. Despite the substantial increase in chronic illnesses that are closely tied to our lifestyle and eating habits, physicians of all specialties are poorly trained to provide nutritional counselling to patients[40].

9. Whose definition of health matters?

If health is defined, as defined by the WHO, is not simply the lack of illness, but "a state of complete physical, mental and social well-being," it must incorporate many other elements dictated by societal, cultural, moral and philosophical norms and values. Furthermore, the definition of health and the path to attain it should come from the society and community it reflects, since neither healthcare personnel nor the healthcare industry own health. Therefore, the definition should emerge from community interventions and multidisciplinary groups filled with varied stakeholders, rather than from the ivory tower of healthcare researchers. Therefore, medical decision-making processes are rapidly moving away from the paternalistic approach to consensus-based, collegial decisions. Shared decision-making, informed consent, discussions of different treatment options and acquiring second opinions have become standard practice and reflect the empowerment of patients, and communities, to define their own healthcare. Ultimately, as long as patients are competent, they decide their treatment after consulting with physicians, who advocate for the patients' goals in care and advise them accordingly.

10. Empower healthcare recipients

In the long-term management of chronic illness, participation of the patient is essential. And transparent communication is pivotal for better participation and shared decision-making[41]. In the new model of health, healthcare providers must play an active role in advocating for patients and promoting well-being while acknowledging that health is a dynamic concept[42]; these physicians do not simply "coordinate care." This shift from the physician-centred to the patient-centred approach, in and of itself, will be empowering for patients.

CONCLUSION

Transition of care is one of the most important steps connecting hospital care to primary care. Those problems currently labelled as miscommunication might be more than just a lack of handoff tools or timely messaging; they rather stem from a difference in priorities and varied interpretations of patients' problems by these two groups of providers. Many questions remain unanswered when facing the future of collaborative healthcare: what kind of doctors are most suited to address the complex interaction of illnesses involving multiple organs? Who can develop a new framework to capture this dynamic and complex interaction of systems, covering many organs in a single patient? Moreover, the next generation of healthcare providers will need to be trained to bear in mind this fundamental concept of patient management. As the twenty-first century progresses, discoveries within medical science will continue to advance the field further away from the current organ-based specialization to pathophysiology-based specialization. This article advances the discussion on the altering role of generalist physicians and the advice of their specialist colleagues, as together they face more and more changes within the practice of medicine.

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Author Details
MASAHIRO J MORIKAWA, MD, MPH, Department of Family Medicine & Community Health, Case Western Reserve University, US. SAMIRA H GHANIWALA, MD, Department of Family Medicine & Community Health, Case Western Reserve University, US.
CORRESPONDENCE: MASAHIRO J MORIKAWA, MD, MPH, Department of Family Medicine & Community Health, Case Western Reserve University, US.
Email: mjmkobe@gmail.com

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