

# The Paradox of Primary Care

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Ann Fam Med 2009;7:293-299. doi:10.1370/afm.1023.

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## THE PROBLEM

Despite rising costs, health care often is of poor quality.<sup>1-4</sup> Current solutions to improving quality may do more harm than good if they focus more on diseases than on people.<sup>2,5-9</sup> Efforts to improve the parts (evidence-based care of specific diseases)<sup>10-13</sup> may not necessarily improve the whole (the health of people and populations).<sup>14-18</sup>

Expanding access to specialty care has been proposed as both a source<sup>19-21</sup> of and a solution<sup>22,23</sup> for deficiencies in quality of care. Primary care is touted as an essential building block of a high-value health care system<sup>24-28</sup> even as it is undermined by systems attempting to improve the quality, effectiveness, and value of their health care.<sup>4,29-32</sup> These contradictions plague improvement efforts in health care systems around the world, particularly the United States. This article, the third in a series to understand and improve health care, attempts to define and unravel the paradox of primary care. To make sense of this and other paradoxes affecting health care and health, it is useful to begin by considering different levels of analysis and thinking inclusively about seemingly contradictory evidence.

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## DIFFERENT LEVELS OF ANALYSIS YIELD DIFFERENT VIEWS

Quality of health care most commonly is measured by the application of disease-specific, evidence-based process-of-care guidelines.<sup>33-36</sup> This evidence fairly consistently shows that primary care clinicians deliver poorer quality care than specialists.<sup>37-67</sup>

Evidence from the Medical Outcomes Study assesses care of patients with several chronic diseases. The study finds that patients' functional health status outcomes are similar for care rendered by specialists and generalists but that generalists use fewer resources.<sup>68,69</sup> Similar outcome at lower cost represents higher value.<sup>70</sup>

A growing number of studies show that for patients with chronic somatic and/or mental illness, shared care between specialists and generalists is optimal.<sup>23,71-83</sup>

In further contrast, ecological studies comparing states in the United States find that a greater supply of generalists and a lower supply of specialists is associated with greater quality of care on multiple disease-specific quality measures.<sup>21,84</sup> Ecological studies comparing westernized countries show that more primary care (and perhaps its associated societal values and public health systems) is associated with better population health with lower cost and greater equity.<sup>85-92</sup>

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## NAMING THE PARADOX

Thus, the paradox is that compared with specialty care or with systems dominated by specialty care, primary care is associated with the following: (1) apparently poorer quality care for individual diseases, yet (2) similar functional health status at lower cost for people with chronic disease, and (3) better quality, better health, greater equity, and lower cost for whole people and populations.

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## INTERPRETATION

Two possible explanations might explain this paradox.

### Studies Are Flawed; There Is No Paradox

First, is it possible that one or all groups of these studies are fatally flawed, and there is no paradox.

Each of the bodies of work cited has inherent limitations. Studies of disease-specific quality of care typically use as outcomes evidence-based guidelines based on clinical trials that largely exclude patients with comorbid conditions.<sup>93,94</sup> Thus, measures of quality may inadequately reflect population morbidity and may not be applicable to most people.<sup>94</sup> Unmeasured confounding and selection biases appear to explain part, but not all, of the observed differences between specialty and primary care.<sup>42,95</sup> Nonetheless, the face validity of disease-specific studies is high, as it is implausible that, compared with generalists, specialists would know less about their disease of interest or would be less likely to follow guidelines based on

evidence derived from the types of patients they typically see.<sup>37</sup>

The selection factors involved in the Medical Outcomes Study have been well-articulated, as has the judgment that “no one is likely to ever do a better job.”<sup>70</sup> This study is unique in comparing care at the level of functional health status of the whole person.

Studies of shared care are limited by focusing on care of patients with chronic and recurrent illness, where conjoint generalist-specialist care is most likely to be helpful. Although largely internally valid, their generalizability to other populations is not known.

Just as the studies of care of individual diseases may be prone to the reductionist fallacy, population-level studies are prone to the ecological fallacy. In health care the reductionist fallacy is making attributions about whole people, systems, and populations from studies of individual diseases. The ecological fallacy is making attributions about individual diseases or people based on whole-person or group data.<sup>96-99</sup> As discussed below, it is likely that reductionist and ecological analyses represent separate but interacting truths.

### Different Levels of Analysis May Reveal a Complex and Interrelated Whole

A second possible explanation is that the paradox of primary care is a function of different levels of observation, with different levels revealing varied aspects of complex and interrelated factors.

A key barrier to understanding has been the failure to recognize that the driving forces for health outcomes differ by level of analysis. At the level of specific diseases, technical quality of care may be a major determinant of narrowly focused disease markers of clinical success or failure.

At the population level, however, access to care and appropriateness of care (including avoiding overtreatment),<sup>100</sup> two functions to which a strong primary care function contributes, may be major outcome drivers. For example, improved access to primary care for veterans led to significant improvements in health outcomes.<sup>101</sup> Appropriateness of care can suffer in areas with a high concentration of specialists,<sup>21,102</sup> as clinicians working at the level of specific diseases do what they were trained to do without the benefits of the generalist approach described in the prior article in this series.<sup>103</sup>

At the person level, primary care may be particularly important for those with multimorbidity, social deprivation, poorly defined or as-yet undiagnosed illness, or situations in which personal context is important.<sup>104-110</sup> Specialty care is especially important for those needing particular medical knowledge or procedural expertise for which higher volume sometimes is associated with better outcomes.<sup>111</sup> Specialty care

may be most important for individuals whose needs are dominated by a particular disease, especially if that disease is uncommon. For most people, and probably for almost everyone over time, a combination of continuing primary care and selective specialty care is needed.<sup>72-74,112,113</sup> Provision of the majority of care through ongoing person-focused, contextualized primary care relationships can allow care to be integrated and prioritized across acute and chronic illness, preventive, psychosocial, and family care.<sup>103,114</sup> That health care is not organized this way in the United States<sup>115,116</sup> may be an important factor in the high cost and low performance of the US health care system compared with other systems based on primary care.<sup>19,24,30</sup>

Not only the forces driving the outcomes, but also the important outcomes themselves may differ by level of analysis. People generally are more interested in how health care helps them accomplish what is important in their lives than they are in how it affects their disease numbers.<sup>117-119</sup> In addition, important outcomes for systems and populations, such as optimizing specialists' case mix or improving equity,<sup>120</sup> are measurable only at the system or population level. Thus, the value of primary care accrues not only from the services provided to individual patients but also from the improved functioning of health care systems,<sup>121</sup> and possibly from freeing resources to be spent on public health and the social determinants of health.<sup>122</sup> Unfortunately, this value is not captured in current performance measures,<sup>119</sup> and efforts to improve quality often place the resource burden on the primary care front line, whereas the benefits accrue to the individual patient, the health care system, and society.

### IMPLICATIONS

The implications of the primary care paradox are multiple:

- It is important to simultaneously understand and value quality of care at the level of specific illnesses, whole people, communities, and populations. These different levels may have different drivers of process and outcome. Currently, whole-person and community foci are undervalued, resulting in adverse consequences for the cost, effectiveness, and equity of health care.
- Systems of care are needed that value *both* generalist and specialist care and that foster their integration.
- Systems that integrate care both horizontally for individuals, communities, and populations and vertically for specific diseases are most likely to provide the greatest value.<sup>18,123,124</sup> Currently, vertical integration of care for disease is rewarded and supported to a greater degree than horizontal integration of

care for people and populations. This imbalance is a source of the dysfunction of the health care system.

Some of these implications may seem obvious; however, we often do not act as though they are obvious or even apparent. The natural human tendency to simplify problems, focusing on easily conceptualized and measured components,<sup>125</sup> can lead us to act in unintentionally damaging<sup>126</sup> ways that overlook what is clear when a broader perspective is taken.

Thus, it is possible that pay-for performance schemes may not improve the health of the population if they lead to a narrow focus on improving process measures for specific diseases without also creating incentives for the much more difficult-to-measure integration of care of the whole person and the development of systems that foster relationships which integrate narrow and broad knowledge to personalize care.<sup>5,8,13,103,127,128</sup>

Evidence-based assessments of quality tend to be based on measures of central tendency from clinical trials that systematically exclude the majority of people with comorbid conditions.<sup>94</sup> The resulting reductionistically biased interventions may achieve their goal, achieve their goal of improving the narrow quality measure but fail in the larger goals of improving the functional health of the individual and providing health care value to the population.

It is easier to conceptualize and measure the value of specialism<sup>22,129</sup> than of generalism.<sup>103</sup> Specialism fits with the reductionistic understanding of disease and medical care that is dominant in Western countries.<sup>17,130</sup> Generalism is better understood with broader conceptualizations of health based on systems and complexity theories.<sup>131-137</sup> The added value of a generalist approach most likely involves integrative functions based on an inclusive focus and an ability to prioritize care within a relationship-centered, whole-person, community-based context, fostering connections to more narrowly focused care when it is needed.<sup>103,114</sup> These properties affect the performance of other health system components, including efficiency and equity.<sup>19,92</sup>

An important insight from the paradox of primary care is to distinguish among complex diseases, complex patients, and complex populations. People with a single complex disease, for which successful management requires narrowly focused expertise with uncommon presentations or complicated treatment regimens, are the domain of the specialist. Complex patients, characterized by multiple chronic illnesses and competing priorities, often derive the greatest value from shared care, with selective specialist care integrated by primary care. Complex populations, such as those with large variations in wealth, education, culture, access to health care, or remoteness from health services, will rely heavily on a robust system of primary health

care and public health to achieve equity in health outcomes.<sup>138</sup> Care at all levels (diseases, patients, and populations) is best integrated by a generalist approach that prioritizes and personalizes care.<sup>103</sup> Personalization means actually knowing the person over time in their family and community contexts.<sup>24</sup> This contrasts with the current corruption and debasement of the term *personalized* to mean knowing the person's genome sufficiently to tailor pharmacotherapy.<sup>139-141</sup>

One task of health systems is to learn how to support the most effective and efficient care, and where possible, to measure outcomes for complex diseases, patients, and populations. Narrowly defined performance measures are likely to miss performance gaps for complex populations when poor access is the culprit rather than poor technical quality. Conversely, detecting overservice will be important for groups with high access and resources, as overservice is a substantial contributor to poor outcomes.<sup>100,142-144</sup> For complex patients, in whom the treatment burden for multiple illnesses may create a new set of functional limitations, more global outcomes measures may be necessary. Creating the lenses to rectify current distortions in health services' evaluative vision is an urgent priority.<sup>119</sup>

Understanding the paradox of primary care and acting on that wisdom can help us to develop systems that maximize the value of health care for individuals and for the population. The next article in this series will address how the components of health care fit together to create value.<sup>145</sup>

## CONCLUSION

The primary care paradox is the observation that primary care physicians provide poorer quality care of specific diseases than do specialists; yet primary care is associated with higher value health care at the level of the whole person, and better health, greater equity, lower costs, and better quality of care at the level of populations.

This paradox shows that current disease-specific scientific evidence is inadequate for conceptualizing, measuring, and paying for health care performance. Unraveling the paradox of primary care depends on understanding the added value of integrating, prioritizing, contextualizing, and personalizing health care across acute and chronic illness, psychosocial issues and mental health, disease prevention, and optimization of health and meaning. This added value is hard to see in assessments at the level of diseases. The added value is readily apparent, however, at the level of whole people and populations.

Systems development is needed to integrate the complementary strengths of primary and specialty

care to avoid unintended negative health and societal consequences from fragmenting efforts to improve the quality of health care. Research is needed to understand and support the complex and high-value but poorly comprehended generalist function.

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**Key words:** Primary health care; quality of care; cost of care; health; health care, value

**Funding support:** Dr Stange is supported in part by a Clinical Research Professorship from the American Cancer Society. Dr Ferrer is supported during the writing of this article by a Robert Wood Johnson Foundation Generalist Physician Faculty Scholar award.

**Acknowledgments:** The authors are grateful to David Aron, Larry Green, Chris van Weel, Paul Thomas, the UCLA/Rand Robert Wood Johnson Foundation Clinical Scholars, Robert Brook, and Fiona Walter, who contributed helpful comments on earlier versions of this work.

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