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# Cognitively Impaired Physicians: How Do We Detect Them? How Do We Assist Them?

Anothai Soonsawat, M.D., Gen Tanaka, M.D.,
Marcia A. Lammando, R.N., B.S.N., M.H.S.A., Iqbal Ahmed, M.D.,
James M. Ellison, M.D., M.P.H.

Our older physicians, an increasing number of those in practice, constitute a valuable buman resource in the medical profession. Professional satisfaction, increasing life expectancy, concerns regarding financial security, and reluctance to retire are among the many reasons a physician might choose to extend practice into later adulthood. Despite the benefits of experience and expertise acquired by older physicians, cognitive changes associated with normal or pathological aging have been shown to have a significant negative effect on physician performance. Age-based cognitive assessment of physicians has been adopted in some countries and by some U.S. healthcare institutions for patient protection and improvement of physician quality of life, but there is no general guideline for the assessment and assistance of cognitively impaired late career physicians in the United States, Self-reports and reports from peers are an inadequate safeguard, leaving impaired physicians and their patients at risk. In this discussion, we will describe cognitive aging, the effects of cognitive aging on physician performance, some current monitoring systems, and recommendations for identifying and assisting physicians found to be impaired. (Am J Geriatr Psychiatry **2018**; ■■:■■**-**■■)

**Key Words:** Physician, deficit, impairment, competence, cognitive, quality improvement **Article Highlights** 

- Aging is associated with cognitive changes, sometimes sufficient to affect physician performance.
- Health care institutions and the public are becoming aware that our aging health care workforce is not subject to mandatory testing or retirement.
- In this review, we explore evidence of age-associated cognitive changes, their effects on physician performance, and resources available for assessment and assistance of aging physicians. We also make recommendations for a more consistent approach to this concern in the United States.

Received October 2, 2017; revised January 6, 2018; accepted January 16, 2018. From the Bangkok Mental Health Rehabilitation and Recovery Center (AS), Bangkok Hospital, Bangkok, Thailand; Department of Psychiatry (GT), Oregon Health and Science University School of Medicine, Portland, OR; LifeGuard Program (MAL), The Foundation of the Pennsylvania Medical Society, Harrisburg, PA; Department of Clinical Transitional Medicine (MAL), Texas A&M Rural & Community Health Institute, College Station, TX; Departments of Psychiatry and Geriatric Medicine (IA), University of Hawaii, Honolulu, HI; Department of Psychiatry (IA), Uniformed Services University of the Health Sciences, Tripler Army Medical Center, Honolulu, HI; Christiana Care Health System (JME), Wilmington, DE; and the Department of Psychiatry and Human Behavior (JME), Sidney Kimmel Medical College, Thomas Jefferson University, Philadelphia, PA. Send correspondence and reprint requests to Dr. James M. Ellison, Swank Foundation Endowed Chair in Memory Care and Geriatrics, Christiana Care Health System, 501 W 14th St, Wilmington, DE 19801. e-mail: James.M.Ellison@Christianacare.org

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#### Cognitively Impaired Physicians

Late-career physicians are an invaluable resource to the medical community and the public. Many clinical, educational, and research contributions are made by physicians in their later years. Through years of experience, a physician's effectiveness can be enhanced through acquisition and refinement of experience, knowledge, patient management skills, and clinical judgment. Many physicians continue to practice into their 70s and 80s as a consequence of professional satisfaction, increased life expectancy, concerns regarding financial security, and reluctance to retire. Aging, however, is also usually accompanied by changes in health and function that can impact professional performance and patient safety.

The number of older physicians is currently increasing. The Federation Physicians Data Center reported in 2012 that 26.3% of physicians (150,000 actively licensed physicians) were at the age of 60 years or older. This is a significant increase from earlier data collected in 2010, in which the percentage of older physicians was 24.4%. This increase in older physicians is consistent with a reported rise in the average age of physicians with an active license from 50 years in 2010 to 51 years in 2012.1 Furthermore, physicians' increasing average age at retirement mirrors a trend observed in the general population, especially among highly educated people.<sup>2,3</sup> We are likely to see in coming years a continuing increase in the age of our physician workforce. This growing presence of older physicians will require us to appreciate and understand the potential impact of age-associated changes on professional performance and provision of competent care. Changes associated with age are complex, interacting, and multidimensional. Lifestyle changes including reprioritization of goals and values, physical changes such as altered vision and motor function, and cognitive changes can all affect aspects of physician performance. The focus here will be specifically on cognitive changes.

## NORMAL COGNITIVE AGING AND PHYSICIAN PERFORMANCE

In physicians as in all adults, cognitive decline is acknowledged to be a consequence of aging. Extensive evidence documents age-associated neuropathologic brain changes that are manifested in cognitive changes ranging from subtle alterations to neurocognitive disorders.4 The extent of cognitive aging, however, varies considerably across individuals.<sup>5</sup> Aging affects multiple domains of cognitive functioning relevant to physicians' professional performance. Memory changes, in particular, are of concern to many older adults. Episodic memory, concerned with personally experienced events, declines significantly with age.<sup>6,7</sup> Semantic memory, concerned with acquired knowledge, tends also to decline later in life.8 Age is known to diminish complex attention, which includes the ability to process two or more sources of information in the same time period,9,10 or to disregard less relevant stimuli in order to focus on a specific task.9 Working memory, which is the ability to maintain, manipulate, and reorganize information kept in short-term memory, is another potential victim of aging.<sup>7</sup> Processing speed, both cognitive and motor, is a key component of cognitive aging that is thought to contribute to changes in other cognitive functions such as memory, verbal fluency, and executive function. Language, a complex cognitive domain, remains generally intact in older adults. Although verbal fluency can decline, vocabulary remains relatively stable.<sup>4</sup> Lastly, research supports the observation that crystallized intelligence, the ability to problem-solve based on prior learning and experience, is better preserved with aging than fluid intelligence, which is problem-solving requiring novel information or approaches. 11,12

Despite the clear relationship between aging and cognitive decline, only a few studies have examined this issue specifically in physicians. Powell et al. compared the cognitive performance in multiple domains of 1,002 physicians to 581 non-physician control participants.<sup>13</sup> In brief, both groups showed a similar profile of cognitive functioning up to age 50 years and significant decline after age 60 years. The decline was slightly more rapid in controls than physicians, but this gap narrowed after the age of 75 years. Age-associated decrements in cognitive performance were clearly demonstrated in the group of late-career physicians but there was considerable variability among individuals. Expertise and cognitive reserve appeared to provide the physicians with some protection against the agerelated cognitive decline. 13,14

A physician's professional duties require constant evaluation of new data and decision-making under complex and sometimes urgent conditions. Diagnostic assessment makes use of both analytic thinking, an

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