

## Continuous Self-Improvement and Enhancing Medication Adherence

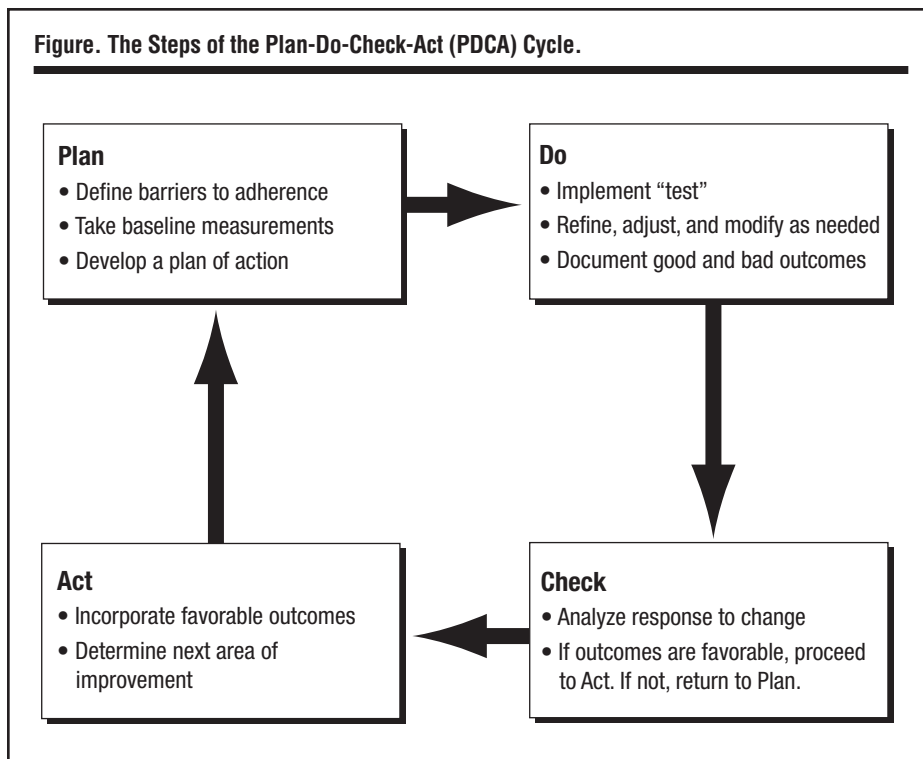
Russell CL. A clinical nurse specialist-led intervention to enhance medication adherence using the plan-do-check-act cycle for continuous self-improvement. *Clin Nurs Spec*. 2010;24:69-75.

“Continuous improvement” is a concept typically bandied about by Fortune 500 CEOs or Six Sigma gurus to enhance their bottom lines. The Plan-Do-Check-Act (PDCA) cycle (Figure 1) is a tool businesses use to analyze process areas that can cause deviations in products and customer complaints. It is performed repeatedly by businesses in an effort to achieve continuous improvement. Conveniently, the PDCA cycle is based on the scientific method (hypothesize, experiment, evaluate) and can also be applied to processes that need improvement in the medical community—such as patient adherence to medication.

Nonadherence to medication is defined as the “extent to which the patient’s medication-taking behavior deviates from the healthcare provider’s recommendations.”<sup>1</sup> A patient can be nonadherent if he or she does not take the prescribed number of doses, does not administer the medication at the right time(s), does not remain on treatment for the prescribed length of time, or does not begin treatment at all. Maintaining adherence to medications to treat chronic, life-long diseases and conditions such as MS can be extremely difficult for patients. According to Costello et al,<sup>2</sup> 60%–76% of MS patients are adherent to disease-modifying therapy for 2 to 5 years, and the majority of patients who discontinue therapy do so within the first 2 years of treatment. These patients become vulnerable to an increased risk of relapse and a reduction in cognitive faculties, functional abilities, and quality of life.

While previous studies have concentrated on interventions designed to enhance personal intention by increasing

**Figure. The Steps of the Plan-Do-Check-Act (PDCA) Cycle.**



knowledge or changing attitudes and beliefs, Russell contends that the missing piece of information, in literature concerned with nonadherence, is a method to address environmental factors that affect medication-taking behavior. Rather than changing behavior by targeting psychological approaches, which can lead to a culture of blaming the individual patient, continuous self-improvement is systems based, targeting barriers within a patient’s environment that may impede adherence: “Continuous self-improvement works to change patients’ daily habits and processes to influence how they initiate and maintain the desired behavior.” Continuous self-improvement steps that follow the PDCA model have been shown to be effective in changing behaviors, including behaviors associated with health and weight loss,<sup>3-5</sup> and should be translatable to chronically ill patients such as those with MS. **Editor’s Note:** *Russell focused on renal transplant patients as an exemplary group in the study; however, because this intervention is not specific*

*to a particular disease, it may be applicable in other disease settings that involve extensive self-management.*

A clinical nurse specialist (CNS) is the ideal professional to promote a continuous self-improvement intervention that has been integrated into the PDCA cycle to improve adherence, because improving the system of care is integral to the CNS’s core competency. The intervention focuses on guiding patients to tweak their daily habits and processes by building medication-taking into their existing routines. The *plan* step involves identifying the “life routines” that may affect a patient’s ability to adhere to therapy and developing solutions that can alter these routines so they promote adherence. These solutions are implemented in the *do* step to test their effectiveness. Tracking adherence data comprises the *check* step of the PDCA cycle; during the *act* step, the data is analyzed to determine whether or not the changes were effective. If the changes were not effective,

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### Disclosures

The editors of *MS Scan* have the following relationships to disclose.

Cira Fraser, PhD, RN, ACNS-BC: receives grant or research support from Teva Neuroscience.

Martha C. Lightfoot, MSN, RNP, MSCN: receives grant or research support from Teva Neuroscience.

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the cycle is repeated with other solutions. By coaching patients to develop and maintain adherence-promoting behaviors using the PDCA cycle, CNSs can provide patients with a continuous self-improvement approach. ■

### **References**

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***This summary was reviewed by  
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