

## MOC Part IV Project Approval Criteria

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**Project Number** 2019131

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### Project Demographics

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**Project Review Status** CREDIT REVIEW

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**Project Title** IMPROVING PATIENT COMPLIANCE IN PARKINSON'S DISEASE

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**Project Start Date** Jan 2018

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**Project End Date (If ongoing, include anticipated end date)** Sep 2018

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**Please list the specific sites where this project was conducted.** University of Colorado Movement Disorders Clinic

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**How many providers are involved in this project?** 1-10

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**Please select all sources of funding for this project** External funding (e.g., industry support, federal grant, etc.)

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## Project Background

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**What is the identified problem(s) or gap in quality for which this project was developed? Please include any relevant research in this topic area; references are not required.**

Patients with Parkinson's disease have complicated medication regimens often taking pills multiple times per day. Medication compliance is difficult in this population due to the complicated regimens as well as the cognitive impairment that often accompanies Parkinson's disease. Noncompliance is associated with poor symptom control and poor perceived response to therapy. Electronic pillboxes and smart phone applications may help increase compliance and thereby improve symptom control.

Problem statement: Medication noncompliance and Parkinson's disease results in poor symptom control and reduced quality of life.

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**What is the overall performance level(s) at baseline?**

Average patient reported compliance = 57.3%  
Average PDQ8 score = 25.4%

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**What is the primary underlying cause(s) for the problem(s) that the project addresses (e.g., communications or behaviors of people, processes, information infrastructure, equipment, environment, etc.)?**

This project helps adjust the home environment and patient behavior that leads to noncompliance.

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**What is the project aim(s) regarding the problem in quality? An aim should address HOW MUCH improvement will occur and by WHEN.**

Improve patient compliance and therefore symptom control and quality of life by using electronic pillboxes and smart phone applications over a period of 6 months. Compliance will be increased by 20% and symptoms will be reduced by 15%.

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**What patient population does this project address? What is the approximate sample size?**

This project address patients with Parkinson's disease. The sample size was 15 patients.

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## Performance Measurement

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**Metric Name/Description**

Improving symptom control and QOL

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**Metric Type**

Outcome

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**Metric Numerator/Denominator**

percentage on PDQ8

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**Metric Baseline & Target**

25% on PDQ8 to 15% on PDQ8

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**Metric Name/Description**

Increasing patient compliance

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**Metric Type**

Process

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**Metric Numerator/Denominator**

patient reported compliance

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**Metric Baseline & Target**

57% compliance to 77% compliance

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## Data Collection & Analysis

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**What is the source of data for the measure(s) (e.g., medical records, billings, patient surveys)?**

Data will be collected from patient surveys.

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**How frequently are data collected and analyzed (e.g., weekly, monthly, quarterly)?**

Data was collected every ~3 months/routine follow-ups.

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## Project Improvements

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**Select the methodology that most closely represents the methodology being used in this quality improvement effort:**

Continuous Quality Improvement

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**Please provide a detailed description of the change(s) implemented to address the project aim(s). If provider education is given, who is the educator, how many sessions are offered, how are trainees assessed? Interventions of EDUCATION ALONE will NOT meet approval criteria. There MUST be evidence of a PROCESS CHANGE in order to earn MOC Part IV credit for this project.**

Intervention 1: distribution of electronic pill boxes. These boxes have an alarm within the pill box that alerts the patient when to take medication, thus increasing compliance.  
Intervention 2: implementation of smart phone applications. These applications have reminders to take medications along with symptom descriptions at that time.

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**Please describe how each intervention is expected to impact patient care AND physician practice?**

The interventions independently or in combination should increase patient compliance. This should improve patient quality of life. If patients are taking medications regularly, it should make the physician's ability to adjust medications more accurate and effective.

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**Which of the Institute of Medicine (IOM) Quality Dimensions of Patient Care is addressed by the intervention(s) in this project? (Check all that apply, must check at least one)**

Effectiveness  
Patient-centeredness

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**Which of the ACGME/ABMS competencies is addressed by the intervention(s) in this project? (Check all that apply, must check at least one)**

Patient Care  
Communication/Interpersonal Skills

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**Select up to 5 additional relevant topics for this project:** Access to Care  
Patient Safety  
Satisfaction  
Teamwork

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**Please describe the improvement cycles (e.g., Plan-Do-Study-Act) in the project including the DATES for each cycle. There must be evidence of AT LEAST TWO improvement cycles to meet criteria for MOC Part IV credit. You may include a project timeline as an additional attachment.**

Cycle/Intervention 1:  
Surveys + distribution of electronic pill boxes  
Begin/end dates:  
January 2018-May 2018

Cycle/Intervention 2:  
Surveys + implementation of smart phone apps  
Begin/end dates:  
May 2018-September 2018

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## Project Outcomes

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**Please describe the overall outcome of the quality improvement project. There must be evidence of AT LEAST THREE data points (e.g., Baseline, Post-Intervention 1, Post-Intervention 2) to meet criteria for MOC Part IV credit. You MUST include a run chart or some other visual representation of DATA OVER TIME to receive credit.**

This quality improvement project did not meet its outcome goals. The chart demonstrates increasing compliance (by about 20%), though many patients did not complete the three cycles and of the ones that did they commented that they did not use the tools for compliance regularly. Therefore, the increase in compliance is not significant. PDQ8 outcomes were unchanged, which is as expected considering the limited use of the tools provided.

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**Upload data run chart or alternative visual representation of data over time**

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**What barriers were observed in this project and how were they resolved? What lessons were learned as a result?**

Barrier 1: Patient follow-up. Many patients did not follow-up with in their scheduled time frame. A longer project would have helped catch these patients through three data points.

Barrier 2: Patient compliance. Patients did not comply with using the tools provide to help increase medication adherence. I believe this reflects human nature that a person does not want to be "tied" down to a pill, an alarm clock or a smart phone.

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**What plans have been developed for future improvement cycles?**

No current plans

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