

## Reducing errors of omission in chronic disease management

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**Abstract** ???

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### Cracks in then system

The inability to successfully transition patients from one level of care into another is a persistent flaw of most chronic disease management systems (Gandhi, 2005; Laurence et al. 2004). A central component of chronic disease management is to move patients along the continuum of care so the disease can be managed over time, particularly following an acute episode. When patients become disengaged in the continuum of care, they often become disengaged in chronic disease management, leading to unnecessary acute episodes (George, 1996). This health care phenomenon originates from isolated health delivery system components that are organized by traditional treatment functions and rarely co-ordinated. This discontinuous flow of services often forces patients to build their own bridges within the continuum of care. All too often patients fail to successfully bridge these cracks, and errors of omission occur.

Errors of commission occur when individuals or organizations ‘do the wrong thing’. This is characterized in medication errors or conducting surgery on the wrong leg. Not as well publicized, but equally harmful, are errors of omission. Omission errors are ‘not doing the right thing’, for example, clinical staff not ensuring that an addiction treatment patient discharged from inpatient care moves directly to an outpatient program to receive adequate care in order to prevent relapse. These errors of omission place the patient at risk. Morbidity, mortality, health care and other societal costs can be reduced by ‘doing the right thing’—designing chronic disease management systems to facilitate successful patient transitions between levels of care.

### Using ‘Plan-Do-Study-Act’ cycles

In addiction treatment, the primary predictor of successful disease outcomes is the length of stay in treatment (NIDA, 1999). However, as with other chronic disease programs, there is a

high incidence of patient dropout during the transition between levels of care. Members of the Network for the Improvement of Addiction Treatment (NIATx), a joint initiative of The Robert Wood Johnson Foundation's *Paths to Recovery* program and The Center for Substance Abuse Treatment's *Strengthening Access and Retention* program, have been applying principles of process improvement in order to quickly engage patients and retain them throughout the continuum of care.

Prairie Ridge Counseling Services, a rural provider in Mason City, Iowa, USA, and a member of NIATx, found that 82% of patients did not make the transition from residential care to an outpatient program. Patients who fail to make this transition are at high risk for relapse. At best they are more likely to be re-admitted to residential care, which is costly. Worse, relapse may result in death or disability, homelessness, school and/or work failure and incarceration. In an effort to reduce the percentage of patients who fail to make the transition, Prairie Ridge staff used a series of Shewhart's (1939) Plan-Do-Study-Act (PDSA) cycles. The agency's first series of PDSA cycles focused on organizing a joint meeting with the patient, the residential counselor and the outpatient counselor to prepare the patient for the transition into the new level of care. This cross-professional co-ordination reduced the dropout rates between residential and outpatient care from 82% to 66%, a modest improvement.

In order to further build rapport and co-ordination between residential and outpatient programs, which had until this point had little formal interaction and no 'shared' services, Prairie Ridge began a second series of PDSA cycles. This series focused on introducing residential patients to outpatient groups and facilitating their participation in these groups prior to their discharge from residential services. By allowing patients to become familiar with the outpatient groups and making the transition between the two levels of care appear seamless, Prairie Ridge's dropout rates fell from 82% to 34%.

The fundamental principle in Prairie Ridge's improvement cycles was facilitating patients' transition into the next level of care *prior* to their completion of their current level of care. In application, this principle made patients' transitions less abrupt and provided additional means for preparing patients for the next stage, clarifying their expectations, answering their questions, and ensuring fewer opportunities for errors of omission. Other members of the NIATx network have applied this same principle to achieve improvements in transition rates between residential and outpatient levels of care (e.g. Palladia Inc., Bronx, NY, USA and Jackie Nitschke Center, Green Bay, WI, USA).

Another system design feature that has aided transitions between levels of care is the use of 'pull strategies' in which the receiving level of care makes efforts to pull in incoming patients. For instance, Acadia Hospital in Bangor, Maine, USA instituted a process in which all patients transitioning into outpatient care are called before their arrival and welcomed to this new level of care. By implementing this change, the agency has reduced its transitional dropout rate from 48% to 22%.

### **Concluding comments**

Further consideration needs to be given to the question of how these system concepts, such as facilitating integration into the next level of care before completion of the current level of care or the use of 'pull strategies', can be used in other chronic disease management contexts. For instance, an appointment with an allergist could be made for an individual who has suffered a severe asthmatic episode, before the patient leaves the emergency ward. A diabetic case manager could call a recently diagnosed diabetic to welcome her and schedule an appointment, rather than waiting for the patient to make the first contact. These are but a few examples of how using system design features and implementing them using

PDSA cycles can bridge professional and service divides that are often barriers to effective chronic disease management over a continuum of care. These design features need to be further examined so that errors of omission can be reduced and patient safety enhanced.

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