Study Designs

*Claxton et al:* This study reviewed 76 studies of patient medication compliance using electronic monitoring devices in published literature from 1986 through 2000. Dosing behavior in patients with a variety of medical disorders (eg, hypertension, asthma, infectious diseases, etc) was described. Mean compliance rates from each study were extracted and averaged; dose-taking and dose-timing compliance rates were compared using analyses of variance. The Bonferroni adjustment was used as a conservative approach to determine significance.2

† Coleman et al:* This study was a meta-analysis that included 29 studies (published between 1987 and 2011); 41 study arms evaluated once-daily dosing, 29 arms evaluated twice-daily dosing, and 27 arms evaluated thrice-daily dosing. Only studies that included electronic monitoring (which is considered to be the most accurate method to evaluate adherence) were included in the analysis. Chronic CVD states evaluated in the studies were hypertension (46%), hyperlipidemia (10%), heart failure (10%), stable angina (10%), anticoagulation (10%), coronary artery disease (7%), and a mixed cohort of CVD conditions (4%).8

‡ Laliberté et al:* This study analyzed health insurance claims from the PharMetrics database between January 2004 and December 2009. Patients with VTE who were initiating a once-daily (n=4867) or twice-daily (n=1069) oral regimen of antidiabetic or antihypertensive medications were identified. The patient observation period was from the index date through the earliest date between a switch to an agent in another drug class, change in health plan enrollment, or end of data availability. Adherence to the dosing regimen was estimated using the medication possession ratio and the proportion of days covered.9

Adherence Rates Consistently Higher for Once-Daily Versus Twice-Daily Dosing

References


When Making Treatment Selections, Dosing Frequency Matters

For many patients, dosing complexity can affect medication adherence. In a review of multiple adherence studies using electronic monitoring devices, once-daily (QD) dosing regimens had the highest rates of patient adherence. When choosing treatment options, factors that impact medication adherence, like dosing frequency, should be considered. Due to the risk of poor outcomes, medication nonadherence is a particular concern for patients who require anticoagulation. A patient who is nonadherent to their medication regimen may be at an increased risk of an event, which could potentially result in hospital readmission and other adverse outcomes.

Areas of focus to improve medication adherence include providing patient education, improved dosing frequency, increased access to care, and better communications between healthcare providers (HCPs) and patients.

Medication Adherence Impact on Patients Who Require Anticoagulation

Medication adherence is a concern for all therapies, but particularly important for medications prescribed for chronic conditions, including thrombotic disorders. One study demonstrated that poor adherence is potentially a major source of poor anticoagulation control in patients, even those being treated at anticoagulation clinics. A study in patients with a history of cardiovascular disease (CVD) found that poor adherence was associated with worse health outcomes. The first meta-analysis to evaluate dosing frequency and CVD medication adherence showed that once-daily dosing significantly improved adherence to medications for chronic CVD conditions. Similarly, another study found that venous thromboembolism (VTE) patients were 62% more likely to adhere to once-daily dosing compared with twice-daily (BID) dosing schedules for antihypertensive and antidiabetic medications.

When choosing treatment options, factors that impact medication adherence, like dosing frequency, should be considered. Due to the risk of poor outcomes, medication nonadherence is a particular concern for patients who require anticoagulation. A patient who is nonadherent to their medication regimen may be at an increased risk of an event, which could potentially result in hospital readmission and other adverse outcomes.

Areas of focus to improve medication adherence include providing patient education, improved dosing frequency, increased access to care, and better communications between healthcare providers (HCPs) and patients.

1. Medication Adherence
2. Impact on Patients Who Require Anticoagulation
3. For many patients, dosing complexity can affect medication adherence. In a review of multiple adherence studies using electronic monitoring devices, once-daily (QD) dosing regimens had the highest rates of patient adherence. When choosing treatment options, factors that impact medication adherence, like dosing frequency, should be considered. Due to the risk of poor outcomes, medication nonadherence is a particular concern for patients who require anticoagulation. A patient who is nonadherent to their medication regimen may be at an increased risk of an event, which could potentially result in hospital readmission and other adverse outcomes.

1. Areas of focus to improve medication adherence include providing patient education, improved dosing frequency, increased access to care, and better communications between healthcare providers (HCPs) and patients.

Areas of focus to improve medication adherence include providing patient education, improved dosing frequency, increased access to care, and better communications between healthcare providers (HCPs) and patients.

Medication adherence was inversely related to the number of prescribed doses per day. In addition to better adherence rates, once-daily dosing was also associated with fewer dosing mistakes.
When Making Treatment Selections, Dosing Frequency Matters

For many patients, dosing complexity can affect medication adherence. In a review of multiple adherence studies using electronic monitoring devices, once-daily (QD) dosing regimens had the highest rates of patient adherence.

When choosing treatment options, factors that impact medication adherence, like dosing frequency, should be considered. Due to the risk of poor outcomes, medication nonadherence is a particular concern for patients who require anticoagulation. A patient who is nonadherent to their medication regimen may be at an increased risk of an event, which could potentially result in hospital readmission and other adverse outcomes.

Areas of focus to improve medication adherence include providing patient education, increased dosing frequency, increased access to care, and better communications between healthcare providers (HCPs) and patients.

Medication Adherence Impact on Patients Who Require Anticoagulation

Medication adherence is a concern for all therapies, but particularly important for medications prescribed for chronic conditions, including thrombotic disorders. One study demonstrated that poor adherence is potentially a major source of poor anticoagulation control in patients, even those being treated at anticoagulation clinics.

A study in patients with a history of cardiovascular disease (CVD) found that poor adherence was associated with worse health outcomes.

The first meta-analysis to evaluate dosing frequency and CVD medication adherence showed that once-daily dosing significantly improved adherence to medications for chronic CVD conditions. Similarly, another study found that venous thromboembolism (VTE) patients were 62% more likely to adhere to once-daily dosing compared with twice-daily (BID) dosing schedules for antihypertensive and antidiabetic medications.

Areas of focus to improve medication adherence include providing patient education, improved dosing frequency, increased access to care, and better communications between healthcare providers (HCPs) and patients.

Medication Adherence is a concern for all therapies, but particularly important for medications prescribed for chronic conditions, including thrombotic disorders. One study demonstrated that poor adherence is potentially a major source of poor anticoagulation control in patients, even those being treated at anticoagulation clinics.

A study in patients with a history of cardiovascular disease (CVD) found that poor adherence was associated with worse health outcomes.

The first meta-analysis to evaluate dosing frequency and CVD medication adherence showed that once-daily dosing significantly improved adherence to medications for chronic CVD conditions. Similarly, another study found that venous thromboembolism (VTE) patients were 62% more likely to adhere to once-daily dosing compared with twice-daily (BID) dosing schedules for antihypertensive and antidiabetic medications.

Medication adherence was inversely related to the number of prescribed doses per day. In addition to better adherence rates, once-daily dosing was also associated with fewer dosing mistakes.
Study Designs

*Claxton et al: This study reviewed 76 studies of patient medication compliance using electronic monitoring devices in published literature from 1986 through 2000. Dosing behavior in patients with a variety of medical disorders (eg, hypertension, asthma, infectious diseases, etc) was described. Mean compliance rates from each study were extracted and averaged; dose-taking and dose-timing compliance rates were compared using analysis of variance. The Bonferroni adjustment was used as a conservative approach to determine significance.2

†Coleman et al: This study was a meta-analysis that included 29 studies (published between 1987 and 2011); 41 study arms evaluated once-daily dosing, 29 arms evaluated twice-daily dosing, and 27 arms evaluated thrice-daily dosing. Only studies that included electronic monitoring (which is considered to be the most accurate method to evaluate adherence) were included in the analysis. Chronic CVD states evaluated in the studies were hypertension (44%), hyperlipidemia (10%), heart failure (10%), stable angina (10%), anticoagulation (10%), coronary artery disease (7%), and a mixed cohort of CVD conditions (4%).8

‡ Laliberté et al: This study analyzed health insurance claims from the PharMetrics database between January 2004 and December 2009. Patients with VTE who were initiating a once-daily (n=4867) or twice-daily (n=1069) oral regimen of antidiabetic or antihypertensive medications were identified. The patient observation period was from the index date through the earliest date between a switch to an agent in another drug class, change in health plan enrollment, or end of data availability. Adherence to the dosing regimen was estimated using the medication possession ratio and the proportion of days covered.9

References