

Compliance and Persistence With Osteoporosis Therapies

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Definitions of Compliance and Persistence

COMPLIANCE: The extent to which a patient acts in accordance with the prescribed interval and dose of and dosing regimen.

PERSISTENCE: The duration of time from initiation to discontinuation of therapy.

ADHERENCE is a synonym for **COMPLIANCE**

Bisphosphonate Compliance Poor

Multiple studies have now shown that compliance and persistence with these drugs are poor, regardless of dosing interval.

(Kamatari et al., 2007; Cramer et al., 2007; Payer et al., 2007; Cramer et al., 2006)

Although weekly dosing improves compliance over daily dosing, this does not guarantee that longer dosing intervals will continue to improve compliance. (Gold et al., 2006; Keen et al., 2006; Cramer et al., 2006; Carr et al., 2006)

More OP Medicines

In addition to the medications previously mentioned, two other medications are approved for the prevention and/or treatment of osteoporosis:

- Raloxifene (selective estrogen receptor modulator)
 - Compliance with raloxifene higher than with bisphosphonates (Turbi et al., 2004; Pasion et al., 2007)
- Teriparatide (parathyroid hormone)
 - Patients who reported concerns about injection had rates of compliance that were 91% (3 mo), 89% (1 yr), & 82% (18 mos) (Adachi et al., 2007)
 - Teriparatide persistence very high at 12-18 months and likely higher than that with oral medications. (Arden et al., 2006)

Five Dimensions Affecting OP Medication Compliance and Persistence

1. Social and economic factors

Medication cost

Low health literacy

Lack of social support network/positive reinforcement

2. Health care system factors

- Poor education about meds
- Restricted formularies
- Lack of positive reinforcement from HCP
- Patient ed materials too sophisticated

Five Dimensions Affecting OP Medication Compliance and Persistence

3. Condition-related factors

Lack of symptoms

Chronicity of condition

Depression

4. Therapy-related factors

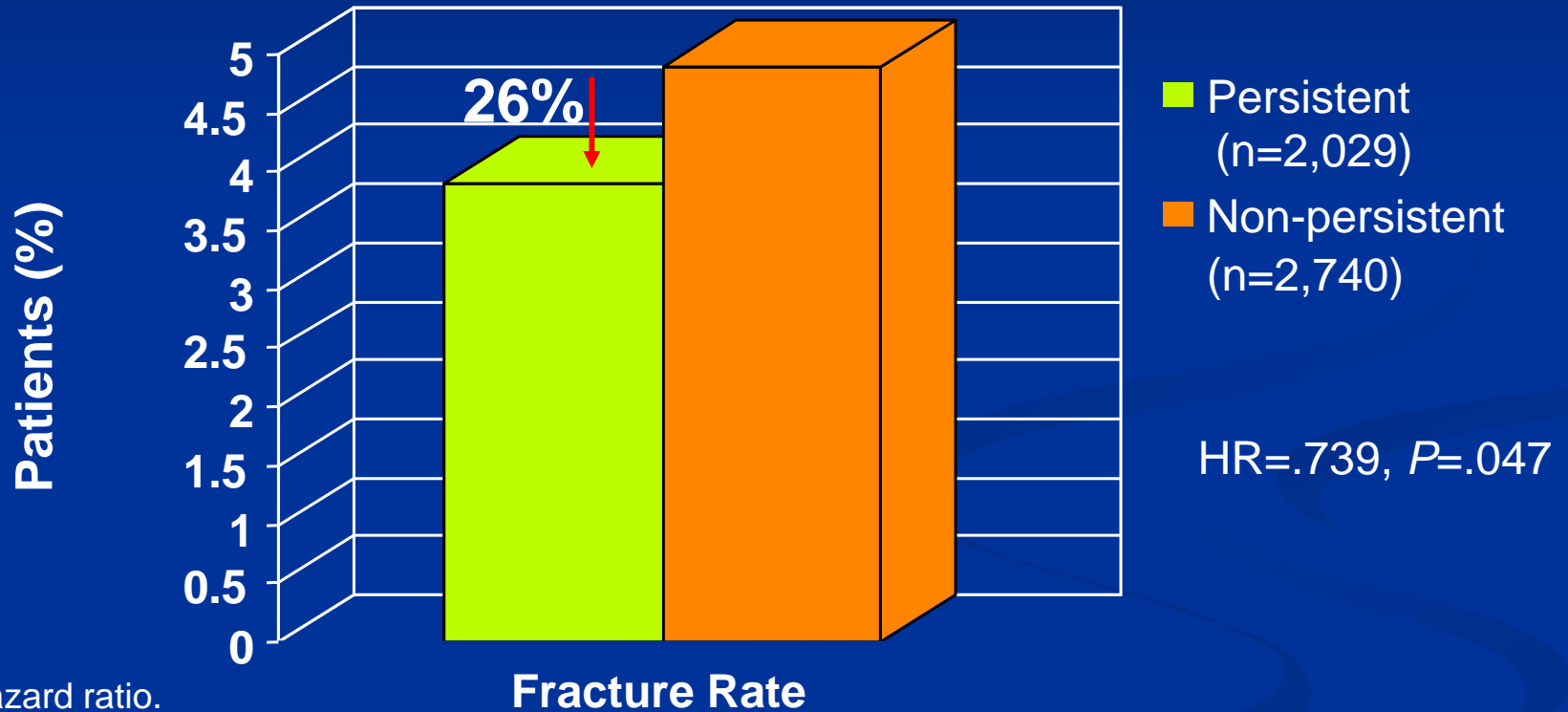
- Complexity of medication regimen
- Duration of therapy
- Lack of immediate benefit of therapy
- Actual or perceived side effects
- Treatment requires significant lifestyle changes

Five Dimensions Affecting OP Medication Compliance and Persistence

5. Patient-related factors

- Cognitive, visual, or hearing impairment
- Poor understanding of need for medication
- Perceived risk (or lack of risk) of fractures
- Perceived benefit of treatment
- Stigmatized by disease
- Poor confidence in ability to follow regimen
- Fear of dependence

Persistence With Bisphosphonate Therapy Decreases the Risk of Fracture



HR=hazard ratio.

Retrospective analysis of claims data from a large healthcare plan examining relationship between persistence with alendronate therapy and fracture risk. Patients with 24 months of follow-up were stratified into persistent (>6 months therapy) and non-persistent cohorts (<6 months therapy). Non-persistence was defined as >30-day gap in medication supply.

Improving Compliance: Overall Strategies

Emphasize the value of the treatment regimen

Provide simple, clear instructions repeatedly!

Listen to patient and respond to patient preferences; ultimately, most important factor

Positively reinforce desirable behavior

Osterberg L, Blaschke T. *N Engl J Med.* 2005;353:487-497.

Surgeon General's Report on Osteoporosis and Bone Health, 2004.

Strategies to Improve Compliance & Persistence

- Look for markers of non-persistence: missed appointments, lack of response to medication, missed refills
- Emphasize the value of the regimen and the effect of compliance and persistence
- Elicit patient's feelings about his or her ability to follow the regimen; if necessary, design supports to promote compliance
- Provide simple, clear instructions, and simplify regimen as much as possible
- Consider nurse or other staff monitoring

Conclusions

Persistence with osteoporosis therapy remains suboptimal

Non-compliance leads to poor outcomes

Key strategies for improved persistence may include the following:

- Improved patient education and participation

- Better physician-patient relationship

- Better efficacy and fewer side effects

- Periodic positive reinforcement

Conclusions

Which medication factors are most likely to positively influence compliance and persistence?

Efficacy trumps everything else most of the time

Side effect profiles and ease of medication regimen are also important

Hierarchy of factors changes with disease

- Patients may be willing to give up some efficacy to avoid side effects
- **Positive reinforcement** of compliance is essential
- Attention to patient preferences critical