

Device considerations in osteoporosis and women's health: an industry perspective

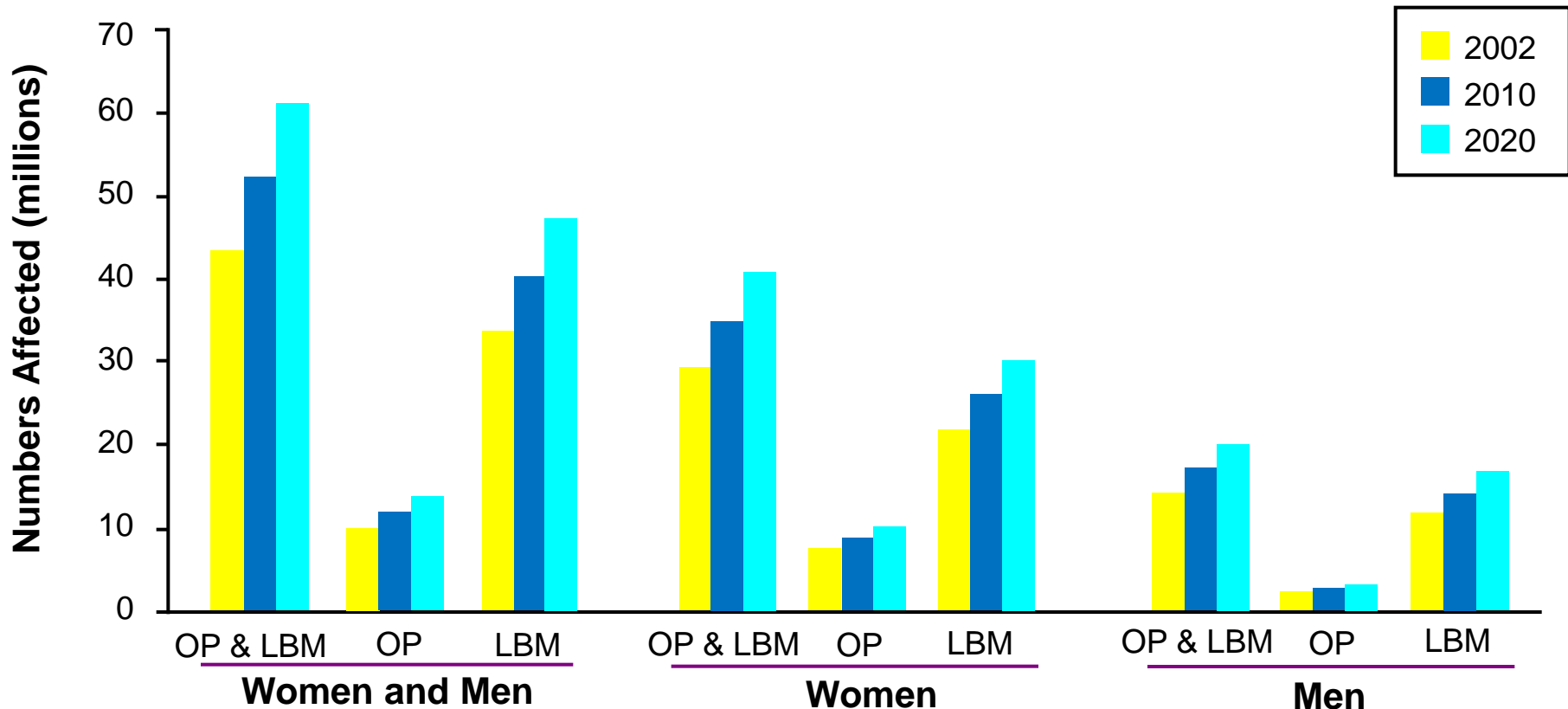
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Disclosure

- **RB Wagman** is an employee of Amgen Inc. and may own stock or stock options in Amgen Inc.
- The views expressed in this presentation represent those of the presenter and do not necessarily represent the views or practices of the presenter's employer or any other party.

Prevalence and Estimates of Osteoporosis and Low Bone Mass in the US Population Aged ≥ 50 Years



OP and LBM defined according to DXA. Prevalence estimates based on 2000 Census data; figures have been rounded.

OP = Osteoporosis; LBM = Low bone mass

National Osteoporosis Foundation. At: <http://www.nof.org/advocacy/prevalence>. Accessed November 2006.

Indications and Fracture Relative Risk Reductions From Product Prescribing Information for Selected Osteoporosis Therapies in Postmenopausal Women

Description	Product	Indication in Postmenopausal Women	3-Year Fracture Relative Risk Reductions ^{1-9*}			
			Vertebral	Non-vertebral	Hip	
Bisphosphonate	Alendronate²	Treatment and prevention of osteoporosis	47%		51%	
	Risedronate	Actonel³	Treatment and prevention of osteoporosis	41% [†]	39% [†]	
		Atelvia⁴	Treatment of osteoporosis			
	Ibandronate	Tablets⁵	Treatment and prevention of osteoporosis	52%		
		Injection⁶	Treatment of osteoporosis			
	Zoledronic Acid⁷	Treatment and prevention of osteoporosis	70%	25%	41%	
Estrogen agonist/antagonist	Raloxifene⁸	Treatment and prevention of osteoporosis	55%			
Parathyroid hormone/anabolic	Teriparatide⁹	Treatment of postmenopausal women with osteoporosis at high risk for fracture	65%	53%		
RANK Ligand Inhibitor	Denosumab¹	Treatment of postmenopausal women with osteoporosis at high risk for fracture	68%	20%	40%	

*Based on postmenopausal women with prior osteoporotic fracture and/or Bone Mineral Density indicative of osteoporosis. [†]North American study
 These data are not meant to imply comparative fracture efficacy and should not be extrapolated to predict differences in fracture efficacy. Head-to-head fracture studies have not been conducted. Populations in clinical studies may vary.

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Blue text denotes therapies delivered parenterally

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Device attributes

- Convenient
- Well-tolerated
- Offer flexibility in who administers, either by
 - a healthcare professional
 - an individual trained in injection technique
 - patient self-administration

Why are these considerations important?

Device attributes are important to patients



Delivery assured



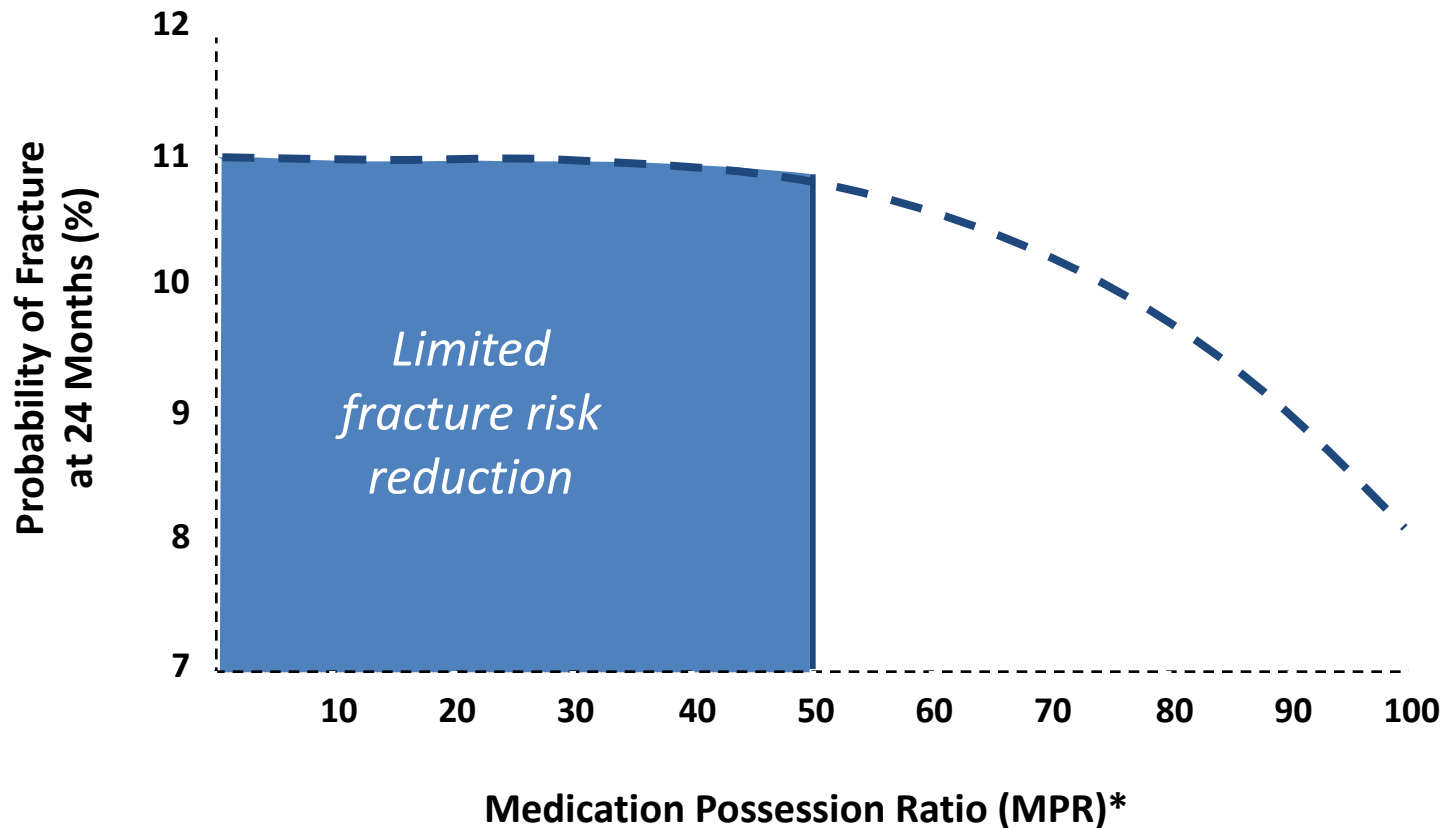
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Not interfere with activities of daily living



Maintain lifestyle

In a claims-based analysis, improved compliance was associated with lower fracture risk



Refill compliance was measured by medication possession ratio (MPR), ie, the percentage of time a medication was available

[†]Based on a study of 35,537 patients from 2 claims databases

Adapted from: Siris ES, et al. *Mayo Clin Proc.* 2006;81:1013-1022.

Future directions in device

- Expected that benefit/risk profile is favorable
- Potential derailers for therapy persistence may include
 - adverse events associated with delivery
 - frequency of administration
 - volume of treatment delivered
 - ease of use in an older population
- Device attributes should be thoroughly evaluated to ensure that patients will persist with therapy so that they may benefit from prescribed treatment