



Overview

Patient Reported Outcomes (PROs) Add Value to the Evaluation of New Treatments

Asha Hareendran, MA, PhD
Director, Outcomes Research, Pfizer Pharmaceuticals Group
Sandwich, UK



Outline

Patient Reported Outcomes

- ◆ Are Key measures of treatment outcome in some disease areas
- ◆ Complement traditional endpoints to evaluate significance of treatment effect from the patient's perspective
- ◆ Facilitate Patient Involvement in treatment decision making
- ◆ Facilitate decision making on value of a new treatment

.....Add Value to the Evaluation of New Treatments



Patient Outcomes Assessment Sources and Examples

Clinician - Reported

For example,
Global impressions
Observation & tests
of function

Physiological

For example,
FEV₁
HbA1c
Tumor size

Caregiver - Reported

For example,
Dependency
Functional status

Patient - Reported

For example,
Symptom severity
Symptom bother
Functional status
Symptoms
HRQoL
(Health Related
Quality of Life)



PROs are key measures of treatment outcome in some diseases

- ◆ When there are no objective marker of Symptoms

- Rhinitis, Functional GI disorders

- ◆ When there are no objective markers of the Impact of Symptoms

- Sexual Dysfunction, Insomnia



PROs complement traditional clinical endpoints - 1/3

PROs are Key Secondary endpoints for efficacy when:

- ◆ Disease is characterised by several possible measures
 - Symptoms: Asthma, COPD, Psoriasis, BPH
 - Functioning: Parkinson's Disease, MS, Arthritis, Stroke, TBI
- Aim of treatment is to improve/maintain function
 - Parkinsons Disease, Stroke , Arthritis
 - Treatment has a small impact on survival, as in Oncology



Comments?



PROs Complement Clinical endpoints- 2/3

◆ Help to characterise the treatment effect

- ◆ **Hypertension** - Captopril vs. methyldopa: Similar BP control; higher general well-being, life satisfaction, (Less AEs). (*Croog et al 1986*)
- ◆ **GERD** - Ranitidine vs. omeprazole (10 and 20mg): Similar symptom relief. PGWB scores higher for omeprazole. (*Wiklund et al, 1998*)
- ◆ **Migraine** - Rizatriptan: Used for dose selection. 5 and 10 mg significantly more efficacious than placebo, however patients on 10 mg had better scores on HRQoL domains (*Santanello et al, 1997*)
- ◆ Higher doses may have higher efficacy but more side-effects and be reflected in HRQoL or Treatment Satisfaction measures



PROs Complement clinical endpoints-^{3/3}

Correlation between patient and clinician perceptions ?

❖ **Asthma**

Variability in exercise capacity contributed to only 3% of the variability on a patient self-report questionnaire (the BPQ) (*Yohannes AM et al 1998*)

❖ **Pain**

Physicians seem to underestimate pain when compared to patient ratings (*Surez-Almzor, 2001*)

❖ **HIV**

Patient self report of symptom bother and frequency were greater than clinician assessments. (*Justice et al 1999 and 2001*)

❖ **PAOD**

Correlation between hemodynamic parameters and HRQoL are low (*Muller-Buhl et al, 1999 and 2003*)

❖ **Osteoarthritis**

Discordance between radiographic arthritis, physician based diagnosis and patient reported pain (*Hannan et al 2000*)



*Do they Add Value
When they are Highly correlated?*



PROs facilitate patient involvement in treatment decision making ^{-1/2}

Enable health care providers explain the effects of a treatment from a patients' perspective

◆ Trade-off of efficacy vs. safety

Quality of life assessments provide an overall evaluation of the patient's experience of the disease and treatment

Examples as mentioned in the characterisation of treatment



PROs facilitates patient involvement in treatment decision making –2/2

- ◆ The patient can use the PRO instrument to recall and summarise health related aspects
 - ◆ Symptoms, Impact on Daily Activities, Quality of life
- ◆ Facilitates doctor-patient communication, improving service delivery
 - ◆ Helps identify physical or psychosocial problems that may have been missed
 - ◆ Helps monitor the course of the disease-improvement and deteriorations, to enable review of therapeutic plans



PROs provide guidance to make health care decisions ^{1/2}

Predict response to treatment

◆ COPD

- In addition to FEV, health status (SGRQ) scores were independent predictors of mortality in a cohort of male COPD patients (*Domingo-Salvany, et al. 2002; Almagro et al, 2002*)
- Low health status scores (SOLQ, SF-36) predicted resource use/hospitalisation in COPD patients. (*Desikan et al 2002; Fan et al , 2002*)

◆ Dyspepsia

- Number of days with epigastric pain....low impairment of vitality domain (PGWBI) were positive predictors of outcome of treatment with a proton pump inhibitor in functional dyspepsia (*E-Bolling-Sternevald e al, 2003*)

◆ Oncology

- Changes over time in self-report endpoints forecasts outcomes in advanced lung cancer (*Eton et al, 2003*)



Provide guidance to make health care allocation decisions ^{2/2}

Help to understand the burden of illness

❖ GERD

Scores on most domains of the SF-36 were lower than that of the US population norm and patients with Diabetes. (*Wiklund, et al; 2003*)

❖ Atopic Dermatitis

Psychological problems due to stigma, aggravation of the itch-scratch-cycle during flare-ups, sleeplessness, lack of concentration in school/work (*Finlay, 2001*)

❖ Nocturia

Incremental increases in the number of nocturnal voids have negative effects on sleep and HRQoL (*Coyne, 2003*)



Professional organisations recognise the role of PROs^{- 1/2}

- ◆ WHO consensus, 1999, EAU Guidelines- BPH
Treatment choice based on level of bother. Aim of treatment is to improve HRQoL
- ◆ GOLD guidelines. BTS, ATS guidelines COPD
Treatment objective: improve health status/function
- ◆ OMERACT 2000- Rheumatology
Recommends measure of disability by patient
- ◆ Health care Allocation authorities
PRO outcomes considered (using utility values) in the evaluation of new medicines for reimbursement and formulary listing
UK, Finland, Sweden, Portugal, Norway, Netherlands



Professional organisations recognise the role of PROs^{- 2/2}

CPMP guidelines

❖ Cardiac failure

Broad based assessment of QoL is recommended because all components of life quality may be influenced by an intervention for heart failure
CPMP/EWP235/95,Rev. 1

❖ Irritable Bowel Syndrome

Psychosocial status and health related QoL must be..considered as important secondary endpoints...CPMP/EWP/785/97

❖ HRQoL is also mentioned as secondary endpoint in Notes for Guidance:

ALS, Asthma, Cancer, CHF, COPD, Crohns, IBS, Osteoarthritis, PAOD, RA, Stable Angina, Urinary Incontinence, Weight Control



Summary

Patient Reported Outcomes Add Value to the Evaluation of Treatments because they -

- ◆ Are key measures of treatment outcome in some disease areas
- ◆ Complement traditional endpoints to evaluate significance of treatment effect from the patient's perspective
- ◆ Facilitate Patient Involvement in treatment decision making
- ◆ Facilitate clinical and healthcare allocation 'decision making' on the value of a new treatment

They are also recognised as valuable endpoints

by Professional Organisations