EMA-HTA Workshop
Parallel Advice in Scientific Drug Development

The HTA View
Professor David Barnett
The HTA/Regulatory divide?

**Regulatory perspective**
- Efficacy
- Safety

**HTA perspective**
- Clinical effectiveness
- Cost effectiveness

The same evidence can lead to different decisions
HTA
Core Principles

Obtaining value for money in the delivery of healthcare

Working within a defined budget
*Central Government or Private Payer*

Taking into account opportunity costs
*What will be displaced*
Patient & clinical experts, consultation comments
The Evidence for HTA

• Clinical effectiveness
  – Comparators
    • Placebo
    • Standard of Care (SOC)
    • Licensing status

• Outcomes
  – Survival
  – Quality of Life (patients & carers?)
  – Relevance to patients
  – Surrogates
  – Long term (lifetime benefits)

• Cost effectiveness
  – Full pathway of care for drug use
  – Patient access schemes/discounts
  – Relevance to ‘jurisdiction’

All evidence is important:
• RCTs
• Observational studies
• Registries
• Case series
• Clinical opinion
• Real life experience
• Patient reported outcomes
Psoriasis – Anti-TNFs

Impact of Psoriasis on QoL

Clinical trials use **extent** of psoriasis measured by PASI score (psoriasis area and severity index) as a proxy for effects on quality of life.

Patients identified that the **location** (e.g. face, palms, perineum) was most significant on QoL irrespective of total area covered.

“Appraisal Committee understood that the effect of psoriasis on patients’ quality of life is related both to the degree of skin involvement and to the body sites affected” (PASI & DLQI)
Beta-interferon for multiple sclerosis

• The appraisal
  – 2 years
  – 2 appeals

• Patient reported outcomes
  • Flares & remissions
  • Disability long term
  • Cognition

• Cost effectiveness modeling
  – extrapolation of trial data to long term effects on disability
Beta-interferon for multiple sclerosis

What Happens in the Model - Extrapolation

Treated rate of progression ('estimated')

Nat. history rate of progression (observational to 25 years)

Modeled rate of progression following cessation of treatment

Treated rate of progression ('estimated')

Disability (as EDSS)

Time (to 100 years minus age at MS onset)

Treatment stops on average at 9.9 years

End of analysis at 20 years
Lucentis - ranibizumab (VEGF inhibitor)
Age-related macular degeneration

- Quality of life
  - Monocular versus binocular vision
- Cost effectiveness
  - One eye versus two eyes
  - Costs of blindness
  - Societal benefits
- Patient access scheme

Monocular versus binocular vision
Evidence suggested that loss of sight in one eye impacts little on quality of life.

Patient organisation, patients and carers clearly indicated that there were significant negative effects of loss of binocular vision on daily activities and quality of life.
Inhaled Insulin
‘Innovation’ for Diabetes?

- Innovation
- Dosing variation
- Costs and benefits
- Needle phobia
- Patient choice

Convenience/portability?
NICE Technology Appraisal Recommendations

291 appraisals published to June 2013

The HTA that likes to say ‘yes’!
The HTA/Regulatory divide?

Regulatory perspective

HTA perspective

Not a divide but a continuum of evidence development

Parallel advice on evidence development at an early stage should reduce the likelihood of different decisions and provide a better pathway from laboratory to market for new medicines as well as the provision of ‘value for money’ in healthcare delivery.