

# Ophthalmology Experience

*More than 15 staff with experience in ophthalmology projects, including*

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## A Wealth of Experience

At RTI Health Solutions, we have collaborated with our clients on more than 70 projects researching ocular diseases, ocular treatment studies, and complications of ocular diseases. Our experience includes:

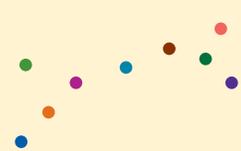
- Benign essential blepharospasm (BEB)
- Cataract surgery
- Conjunctivitis
- Diabetic macular edema
- Diabetic retinopathy
- Dry eye
- Glaucoma
- Macular degeneration
- Nonarteritic anterior ischemic optic neuropathy (NAION)
- Ocular hypertension
- Ocular complications of graft-versus-host disease (GVHD)
- Posterior blepharitis

## Types of Projects

We have implemented studies to help our clients develop strategies in the ophthalmology market and to develop and gain market access for products to treat ocular diseases and complications arising from treatment of ocular diseases. Recent projects have included:

- Epidemiology of disease
- Decision-analytic modeling to examine
  - Cost-effectiveness
  - Budget impact
- Database analyses, using cross-sectional and longitudinal databases
- Economic burden of illness studies
- PRO instrument development, evaluation, and validation
- Psychometric evaluations of PRO instruments
- PRO consulting to support label claims, publication, and regulatory strategies
- Survey research
- Systematic literature reviews
- Preparation of Health Technology Assessment (HTA) submissions
- Global value dossiers
- Value communication strategies
- Pricing and reimbursement strategic assessments
- Pharmacovigilance, including
  - Literature searches
  - Medical review and coding of reported cases
  - Annual Safety Reports (ASRs)
  - Periodic Adverse Drug Experience Reports (PADERs)
  - Periodic Update Safety Reports (PSURs)
- Abstract and manuscript development

*(continued)*



## See How We've Helped Others

### Burden of Illness in the Management of Age-Related Macular Degeneration

We conducted a time-and-motion study to investigate the physician, patient, and caregiver time burden associated with the management of patients with neovascular age-related macular degeneration (NVAMD) in the US. A total of 56 retina specialists provided data on upcoming visits for 221 patients that showed that, on average, 23 staff members were involved in the management of patients with NVAMD. The study demonstrated that there may be a need for additional support for services required by patients and caregivers, as well as those provided by physicians. Study results were presented on a poster at the ISPOR 19th Annual International Meeting in June 2014.

### UK Database Study Evaluates Glaucoma Therapies

Using data from the Glasgow Glaucoma database, we implemented a retrospective cohort study to identify initial treatment choices of glaucoma drugs and determine if differences existed with respect to treatment adherence. We analyzed data from 1006 patients with ocular hypertension and glaucoma attending the Glaucoma Clinic in Glasgow, UK. The study showed that there are no significant differences in adherence for current prostaglandin therapies. Study results were published in *British Journal of Ophthalmology*, 2011; 95(7):966-70.

### Cost-Effectiveness of a Treatment

We developed a health economic Markov model to evaluate the cost-effectiveness of pegaptanib in patients suffering from neovascular age-related macular (NV-AMD) degeneration. The study showed that treatment with pegaptanib should be started as early as possible to maximize the clinical and economic benefits in patients with early, moderate, or late stage disease over the age of 65 years. Study results were published in *Value in Health*, 2008;11(4):563-74.

### Estimating the Health Benefits and Costs of Diabetic Retinopathy Screening Programs

We developed a discrete-time Markov model to estimate the health benefits and costs of hypothetical new diabetic retinopathy screening programs. The model tracks the underlying epidemiology of diabetic retinopathy and accounts for the influence of screening and subsequent treatment on progression and vision loss. Data to parameterize the model were obtained from publicly available sources, and the model was validated with a clinician and against published clinical and economic studies.

## Selected Publications and Presentations By Our Staff

**Pearson I**, Rycroft C, Irving A, **Ainsworth C**, Wittrup-Jensen K. A systematic literature review of utility weights in wet age-related macular degeneration. *J Med Econ*. 2013 Nov;16(11):1307-16.

**Holdsworth EM**, Liao C. A cost-utility analysis of two treatment options for age-related macular degeneration to prevent blindness. Poster presented at Annual Spotlight on Student Research Poster Presentation Event; 2010 Mar.

**Arana A**, Arellano FM, Rivero E. Incidence of endophthalmitis after intravitreal injection procedures in the general population of the United States of America. Presented at 25th International Conference on Pharmacoepidemiology; 2009 Jan.

**Candrilli SD**, **Davis KL**, Kan HJ, Lucero MA, Rousculp MD. Prevalence and the associated burden of illness of symptoms of diabetic peripheral neuropathy and diabetic retinopathy. *J Diabetes Complicat*. 2007;21(5):306-14.

**Earnshaw SR**, Moride Y, Rochon S. Cost-effectiveness of pegaptanib compared to photodynamic therapy with verteporfin and to standard care in the treatment of subfoveal wet age-related macular degeneration in Canada. *Clin Ther*. 2007;29(9):2096-106.

Javitt JC, Zlateva GP, **Earnshaw SR**, Pleil AM, **Graham CN**, **Brogan AJ**, Shah SN, Adamis AR. Cost-effectiveness model for neovascular age-related macular degeneration: comparing early and late treatment with pegaptanib sodium based on visual acuity. *Value in Health*. 2008;11(4):563-74.

Rahman MQ, **Abeyasinghe SS**, Kelly S, Roskell NS, **Shannon PR**, Abdlseaed AA, Montgomery DMI. Persistence of glaucoma medical therapy in the Glasgow Glaucoma Database. *Brit J Ophthalmol*. 2011;95(7):966-70.