

## Retinal Prostheses in the Medicare Population

Client: U.S. Department of Health and Human Services, Agency for Healthcare Research and Quality

### Overview

Insight assessed risks and outcomes associated with retinal prosthetic sight restoration technology in the Medicare population. Retinal prostheses might significantly improve the eyesight of severely visually impaired patients with retina-related vision loss, including macular degeneration. Such improvements might enhance health-related quality of life and daily living activities measures for these patients. Recent technological advances have permitted the first attempts at sight restoration by combining a patient's native intrinsic visual pathway with advanced light sensing, signal processing, and stimulation components in the form of an ocular prosthesis.

Insight collaborated with the ECRI Institute-Penn Medicine Evidence-Based Practice Center



to prepare this assessment that summarized the current state of retinal prosthesis systems, evidence addressing their clinical utility, and potential directions for further research in areas where information on this technology is limited. Working closely with federal stakeholders, academic experts, medical professionals, and patient advocacy groups, Insight collected formative research to inform research questions and sources for a technical brief and interviewed stakeholders on the following topics:

- Improved outcomes through use of retinal prostheses in the Medicare population
- Potential adverse events associated with implantation and use of these devices
- Other populations that could benefit from the further development of these devices

As part of the research, Insight also—

- Participated in the development of data collection tools
- Summarized interview findings
- Developed core sections of a technical brief

### Products

Technical brief (2016)