SHRC

The Hearing Aid Industry

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Presented at
Medical Alley/MNBio 4th Annual Health Care & Biosciences Conference and Expo: Today's Concepts, Tomorrow's Innovations
Oct 5-6, 2005
St. Paul, MN

STARKEY

Outline

- Unique Aspects of Hearing Aid Industry
- Sales, Marketing, Education
- Innovation
- University Involvement
- Industry Trends

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The Hearing Aid Industry

- $6 billion/year in sales
- Market split among 6 companies
- Little product differentiation across flagship products of different companies

The Hearing Aid Industry

- **Venture funds reluctant to invest in HA area**
- **Investor (mis)perceptions are:**
  - ⇨ Sales channel restricts distribution
  - ⇨ Technology does not drive sales
  - ⇨ Good startups have tried and failed
  - ⇨ Exit opportunities are limited
  - ⇨ Industry is not strong, only 20% market capture

The Hearing Aid Industry: Starkey Laboratories

- **Largest market share in US (25%)**
  - ⇨ Acquired through focus on:
    - Customer care
    - Custom-fit products
    - Manufacturing expertise
  - ⇨ This strategy more successful in some regions of country than others

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Sales, Marketing, Education

- **Air-conducted aids are Class I**
  - ⇨ No 510k submissions
  - ⇨ Companies conduct extensive internal and external clinical trials prior to product launch

Sales, Marketing, Education

- **HA companies market and sell to audiologists/dispensers (Aud/Dis)**
  - ⇨ Not to hearing aid wearers
- **Companies promote benefits for patient…**
  - ⇨ Improved speech understanding
  - ⇨ Improved comfort
- **…and for Aud/Dis**
  - ⇨ Fewer return visits, aid remakes, patient complaints
  - ⇨ Shorter, easier fitting process
- **Aud/Dis typically select one or two companies and stick to selling those products**

Sales, Marketing, Education

- **Fitting software a major product and decision factor for audiologist/dispenser**
  - ⇨ Learning different software from different companies a barrier to switching brands
  - ⇨ Major software releases and new software features tied to launch of major hardware releases

Sales, Marketing, Education

- **Changing Sales channel:**
  - ⇨# well-educated audiologists *increasing*
  - ⇨# non-audiologist dispensers *decreasing*
  - ⇨# ENT offices with dispensing clinics *increasing*
- **Changing landscape requires changes to practices and to technology**
- **Most costs are paid out-of-pocket by patient**
  - ⇨Legislation being proposed to allow coverage of $500/aid
    - Hearing Industry Association has put considerable effort into promoting this initiative

Sales, Marketing, Education: Starkey Laboratories

- **Starkey flies customers, potential customers, and students to headquarters for 2-3 days of educational lectures**
  - ⇨ ~100 people/month
  - ⇨ Both product specific and general education talks
  - ⇨ Lectures by Starkey employees and invited researchers
- **Significant educational thrust at national, state and local audiology meetings**
  - ⇨ Publish in industry and scientific journals
  - ⇨ Webcast lectures

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Promoting Innovation

- **Companies in HA industry have 18-24 month horizon for R&D**
  - ⇨ Significant “me too” development
- **Often little clinical data supporting new technology**
  - ⇨ Some industry push for Evidence-Based Practice

Promoting Innovation: Starkey Laboratories

- **Starkey has created a long-term research center in Berkeley, CA to produce innovations that require 2+ years of research**
  - ⇨ Starkey Hearing Research Center (SHRC)
  - ⇨ Novel concept in Hearing Aid industry
  - ⇨ Isolate researchers from normal R&D activities
  - ⇨ Allow the time necessary to discover breakthroughs
  - ⇨ Consist of diverse expertise to promote cross-pollination
  - ⇨ Develop research relationship with UC Berkeley
  - ⇨ Focus on IP development much earlier than typically done in a product-focused company
  - ⇨ Provide peer-reviewed publications that support benefits of product being launches

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Company-University Interaction

- **The HA Industry typically funds university research in 2 areas:**
  - ⇨ DSP development
    - Often ends up ignored by sponsor
  - ⇨ Product validation & competitive testing
- **IP issues are the most significant roadblock to interaction between companies and universities**
  - ⇨ University ownership rights
  - ⇨ PI's attitude towards patenting discoveries and allowing exclusivity for the sponsoring company

Company-University Interaction

- **Key points to consider:**
  - ⇨ If a company can't receive a competitive advantage, they are reluctant to pursue commercialization of technology
    - Too many other projects in pipeline
  - ⇨ Short-term exclusives (2-years) help justify project funding and development expense. After termination of exclusivity, technology can be made available to all companies/clinics/patients

Company-University Interaction: SHRC

- **SHRC approach to funding university research:**
  - ⇨ Only fund research with universities that are collaborative with SHRC
    - Shared protocols, data collection, tools
    - Prevents the shelving of results upon completion
  - ⇨ SHRC received a grant from state of California to match funds on a sponsored project at UC Berkeley
  - ⇨ Translational Research RFPs may promote industry involvement in NIH-funded research

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Convergence

- **Hearing aid technology is converging with other technological advances**
  - ⇨ Bluetooth integration
  - ⇨ Consumer electronics
  - ⇨ Internet

Biotech Industry

PAST	PRESENT
Disease defined by *symptoms*	Disease defined by *mechanism*
Uniformity of disease	Heterogeneity of disease
Uniformity of patients	Heterogeneity of patient
Universal treatment	Individual therapy

Burrill, BayBio 2005

Hearing Aid Industry

PAST

- Loss defined by *audiogram*
- Uniformity of impairment
- Uniformity of patients
- Universal treatment

PRESENT

- Loss defined by *mechanism*
- Individuality of impairment
- Individuality of patients
- Individual therapy

- Personalization/Individualization will be major theme in patient treatment

Home-directed Healthcare

- **Internet is facilitating healthcare knowledge, access, diagnosis and treatment**
  - ⇨ Lower costs, ease of access
- **Movement by some to take many aspects of hearing loss rehabilitation directly to patient**
- **If happens, *unlikely* to affect traditional approaches negatively**
  - ⇨ Expand market size, capture those who are not going through traditional channels
    - Ultimately become consumers of traditional devices through traditional channels