Signia Expert Series:

**Competing in Today's Disruptive Audiological Environment**

*Presented by Amyn Amlani, PhD*

- This course is offered for Continuing Education Units (CEU)s for Total Access Online members.
  - Stay logged in for the duration of the course to be eligible to earn CEU credit.
  - Take the exam following course completion to earn credit.
  - For questions or assistance, contact 800-753-2160.

- Please visit the AudiologyOnline website for other live and recorded events from Signia.
  
Learning Outcomes

Upon completing this course learners will be able to…..

• Describe how economic and marketing principles support growth opportunities in the hearing aid market

• Describe how professional services rendered, and not price, is the primary factor in the procurement of audiology services and technology.

• Discuss strategies that increase audiology awareness, service and technology adoption rates, and, ultimately, total revenue.

Introducing….

Amyn Amlani, PhD
Disclosures

• Financial
  • Employee at Audigy
  • Former Employee at:
    • University of Arkansas for Medical Sciences
    • University of North Texas
  • Sponsored funding from Audioscan, Signia, Unitron

• Non-Financial
  • Editor – Economics Section, HHTM
Projected number of people with hearing loss in different world regions until 2050

The map shows the current and projected number of people with hearing loss in different regions. Projections show that the number of people with disabling hearing loss will increase in all regions.

Patient Flow and Conversion – Global

Untreated Hearing Impaired = Flow

Amlani (in review)
PATIENT UPTAKE - GLOBAL

<table>
<thead>
<tr>
<th>Country</th>
<th>Hearing loss prevalence (% of HI in population)</th>
<th>Adoption rate (% of HI with HAs)</th>
<th>Bilateral rate (% of HA owners w/ 2 HAs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>12.1%</td>
<td>34.9%</td>
<td>75%</td>
</tr>
<tr>
<td>France</td>
<td>9.3%</td>
<td>34.1%</td>
<td>70%</td>
</tr>
<tr>
<td>UK</td>
<td>9.7%</td>
<td>42.4%</td>
<td>61%</td>
</tr>
<tr>
<td>Italy</td>
<td>11.7%</td>
<td>25.2%</td>
<td>57%</td>
</tr>
<tr>
<td>Switzerland</td>
<td>8.0%</td>
<td>41.4%</td>
<td>72%</td>
</tr>
<tr>
<td>USA</td>
<td>10.6%</td>
<td>30.2%</td>
<td>72%</td>
</tr>
</tbody>
</table>

Hougaard et al (2016) - EuroTrak
NEW AGE IN HEALTH CARE

Retail clinic use is steadily growing

<table>
<thead>
<tr>
<th>Consumers who report using retail clinics</th>
<th>Consumers willing to seek various types of care at a retail clinic</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>28 p.a.</td>
<td>Immunizations/vaccinations</td>
</tr>
<tr>
<td>9</td>
<td>Care for minor illnesses</td>
</tr>
<tr>
<td>24</td>
<td>Lab tests</td>
</tr>
<tr>
<td>2013</td>
<td>Preventive health screenings</td>
</tr>
<tr>
<td>2017</td>
<td>Health risk assessments</td>
</tr>
</tbody>
</table>

p.a., per annum.
Category 1: Preset Interface
(No audiogram; preset settings; no/limited specialist support)

Category 2: Customizable Interface
(audiogram online/app; profile-based settings/adjustments; specialist support available)
Category 3: Expert Interface

(audiogram online/app; expert-like interface; optional specialist support)
DISRUPTION DEFINED
Consumer Demand for High-End (i.e., Greatest Profit)

Consumer Demand for Mid-End

Consumer Demand for Low-End (i.e., Least Profit)

Incumbent's Sustaining Trajectory

Entrant's Disruptive Trajectory

Associated New Market

Time

Product Performance
HOW DOES MARKET DISRUPTION AFFECT THE PROFESSION...?

- The contemporary role of the hearing healthcare provider is deeply tied to technology (hearing aid devices and diagnostic equipment)
  - The cost of the disruptive technology will approach \textit{zero} – this is an unsustainable business model given “\textit{traditional}” business practices

- Creation of \textit{new} market segments, several of which will require “\textit{traditional}” business practices to re-think their:
  - Content and messaging
  - Create a new business case (i.e., service-based)
  - Value proposition (“hearing aids” vs. “improved QOL”)
  - Pricing
DEMAND AND HEARING AID MARKET

- Demand function ($\varepsilon$), overall, within the hearing aid market is inelastic (Aaron, 1987; Lee & Lotz, 1998; Amlani & De Silva, 2005; Amlani, 2010)

- Elastic demand means that consumers are price sensitive (i.e., $\varepsilon > |1|$)
  - Appreciable decline in quantity sold when price is increased
  - Appreciable increase in quantity sold when price is decreased

- Inelastic market means that consumers are not price sensitive (i.e., $\varepsilon < |1|$)
  - No appreciable decline in quantity sold when price is increased
  - No appreciable increase in quantity sold when price is decreased

\[ \text{Total Revenue} = \sum (\text{Price}_i \times \text{Quantity}_i) \]

<table>
<thead>
<tr>
<th>Demand</th>
<th>Raise Prices</th>
<th>Reduce Prices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elastic</td>
<td>Total Revenue Decreases</td>
<td>Total Revenue Increases</td>
</tr>
<tr>
<td>Inelastic</td>
<td>Total Revenue Increases</td>
<td>Total Revenue Decreases</td>
</tr>
</tbody>
</table>

Amlani (2008)

Caveat: Over-charging is not being advocated. Over-charging for a product or service can result in no gain or a loss in revenue and in perceived value of the provider and practitioner.
CANNIBALIZATION

Amlani (2014)

Hosford-Dunn & Antos (2015)

D2C Space
< $800
The Need for Standards in Audiology

Published on February 18, 2019

Opinion | March 2019 Hearing Review

Why up-to-date practice standards for the profession of audiology are necessary

By John A. Coverstone
Cost-Plus Pricing
The selling price is determined by adding a specified markup to a product's unit cost.

Value-Based Pricing
The selling price is based on the service and product benefits perceived.

Amlani (2019)
Conversion = Revenue

Reduce COGs = Revenue

Profit Contribution

Marginal Cost (MC)

QUANTITY

PRICE
The contemporary role of the hearing healthcare provider is deeply tied to technology (hearing aid devices and diagnostic equipment)
- The cost of the disruptive technology will approach zero – this is an unsustainable business model given “traditional” business practices

- Creation of new market segments, several of which will require “traditional” business practices to re-think their:
  - Content and messaging
  - Create a new business case (i.e., service-based)
  - Value proposition (“hearing aids” vs. “improved QOL”)
  - Pricing
Adding value to the patient experience

Amlani et al (2016)
Systematic Reviews

Models of behaviour – psychological determinants of change at the level of the individual

Theories of change – how behaviour can change over time

Frameworks for behavioural change – how to influence behaviour change in a target group or population

Course presented in partnership with
Today’s impaired listeners do not view decreased hearing sensitivity as a medical condition, but as a consumer decision (that is, not a change in behavior, but the need for a strategy to overcome a state).
Retail clinic use is steadily growing

Consumers who report using retail clinics %

<table>
<thead>
<tr>
<th>Year</th>
<th>Immunizations/vaccinations</th>
<th>Care for minor illnesses</th>
<th>Lab tests</th>
<th>Preventive health screenings</th>
<th>Health risk assessments</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>19</td>
<td>76</td>
<td>76</td>
<td>74</td>
<td>70</td>
</tr>
<tr>
<td>2017</td>
<td>24</td>
<td>80</td>
<td>76</td>
<td>74</td>
<td>70</td>
</tr>
</tbody>
</table>

+28 p.a., per annum.
Sources: McKinsey 2013 and 2017 Consumer Health Insight Surveys

LIFESTYLES AND LIFE STAGES ON THE PATH TO PURCHASE.

A GENERATIONAL PERSPECTIVE

Matthew Millennial
- Born: 1981-2000
- Population: 83.1M
- Disposable income: $406B
- Always on: 58%
- Time-starved: 56%
- Low-tech, high touch

Ginny Gen Xer
- Born: 1966-1980
- Population: 65.7M
- Disposable income: $285B
- Always on: 53%
- Time-starved: 54%
- Medium-tech, medium touch

Bobby Boomer
- Born: 1946-1964
- Population: 75.4M
- Disposable income: $181B
- Always on: 53%
- Time-starved: 54%
- High-tech, high touch

Sally Silent
- Born: 1920-1945
- Population: 28.3M
- Disposable income: $114B
- Always on: 48%
- Time-starved: 56%
- Low-tech, high touch

4 GENERATIONS, 4 PATHS TO PURCHASE

- Relies on technology for entertainment: 71%
- Needs to feel emotionally connected to a brand: 71%
- Values performance: 50%
- Relies on retails to follow up: 63%
- Desires more: 76%

Course presented in partnership with
Course presented in partnership with

Consumer Decision Model (Blackwell et al, 2001)…Consumer Behavior (Book)
Amlani (2015)…Seminars in Hearing
CONSUMER DECISION MODEL - METHODOLOGY

- 618 adult listeners completed online questioning
  - Females = 426 (Mean = 58.4 years; SD = 6.2)
  - Males = 186 (Mean = 63. years; SD = 5.3)
- Survey open from October 2015 – December 2016
- Participants completed the survey twice:
  - Pre-appointment = desired (i.e., what was expected)
    - Survey requested to be taken within 14 days of appointment (Mean = 7.6, SD = 3.8)
  - Post-appointment = actual (i.e., what was received)
    - Survey requested to be taken within 14 days of appointment (Mean = 3.3, SD = 2.1)
Q1. In your opinion, a hearing healthcare provider is best classified under the heading of (a) medical, (b) rehabilitation, or (c) consumer electronics?

<table>
<thead>
<tr>
<th>“Perceived” Provider Seen</th>
<th>Sample Size (n)</th>
<th>Interest in Amplification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical</td>
<td>142</td>
<td>95</td>
</tr>
<tr>
<td>Rehabilitation</td>
<td>389</td>
<td>187</td>
</tr>
<tr>
<td>Consumer Electronics</td>
<td>87</td>
<td>72</td>
</tr>
</tbody>
</table>

Amlani (in review)
<table>
<thead>
<tr>
<th>Respondent Perception</th>
<th>Medical (n = 142)</th>
<th>Rehabilitation (n = 389)</th>
<th>Consumer Electronics (n = 87)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre</td>
<td>Post</td>
<td>Pre</td>
</tr>
<tr>
<td>Receptive towards Treatment</td>
<td>142</td>
<td>50</td>
<td>389</td>
</tr>
<tr>
<td>Apathy towards Treatment</td>
<td>0</td>
<td>92</td>
<td>0</td>
</tr>
<tr>
<td>Receptive towards Amplification</td>
<td>95</td>
<td>36</td>
<td>187</td>
</tr>
<tr>
<td>Apathy towards Amplification</td>
<td>47</td>
<td>40 (7 changed minds)</td>
<td>202</td>
</tr>
</tbody>
</table>

Amlani (in review)
Social Sense

- Change in Terminology
  - Hearing Difficulties vs “Hearing Loss”

- Hearing Evaluation Perceived as “Pass” or “Fail”
  - Acknowledge difficulties, provide solution

- Being Empathetic
  - Patients demonstrate high levels of anxiety

[Images of hearing levels and speech-in-noise chart]

https://www.nationalhearingtest.org/wordpress/?p=786
https://www.verywellhealth.com/what-is-the-speech-banana-on-a-hearing-test-1048455
Includes:
- 100% Digital Signal Processing
- 3 Environmental Listening Programs
- Automatically Increases Soft Sounds and Reduces Loud Sounds
- Reduces Background Noise
- Reduces Listenning Effort
- Reduces Whistling
- One-Year of Fitting Adjustments
- Two-Year Repair and Lost Warranty

Includes:
- 100% Digital Signal Processing
- 3 Memories
- 12 Channels, 3 Bands
- Independent Wide Dynamic Range Compression
- Adaptive Directionality
- Adaptive Noise Reduction
- Adaptive Feedback Control
- Professional Fee
- Two-Year Manufacturer’s Warranty
• Dominating speaking time
• Interrupting the patient
• Non-active listening
• Overemphasizing technical aspects of device care
• Inability to deal with emotion-alden aspects related to rehabilitation

“I’ve learned that people will never forget what you said, people will forget what you did, but people will never forget how you made them feel.” – Maya Angelou
SUMMARY

- Service provision is the key to success in the “new” hearing healthcare arena
  - Provide services that meet the needs of your patient’s journey while maintaining a professional standard of care
  - Avoid cannibalizing your efforts, including free hearing tests

- Strengthen your brand and market position based on the values of your patient’s needs

- **YOU** control your own fate

THANK YOU

aamlaniam@audigy.com
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*Presented by Amyn Amlani, PhD*

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Thank you!!!