What Gets Measured Gets Done: Calculating the Value of Professional Service

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ABSTRACT

In many practices, the role of professional service in the hearing aid delivery process has been obfuscated by the use of bundled pricing models. Emerging direct-to-consumer and third-party administrator hearing aid distribution channels will further challenge practitioners to examine how, and if, they choose to participate with new strategies to increase hearing aid adoption rates. This article focuses on providing a straightforward method for calculating revenue per clinical hour required to maintain quality, professionally driven, and profitable care in the hearing aid diagnostic, selection, fitting, and follow-up process. Furthermore, by *measuring* the value of clinical service, it uncouples the professional from the technology, and provides a tool for assessing how they can improve clinical efficiencies without compromising best practice or clinical outcomes.

KEYWORDS: audiology, hearing aids, revenue per hour, gross margin per hour, private practice

In his 1997 book, *The Innovator's Dilemma*,[1] Clayton Christensen defined and described disruptive innovation as a process by which a product or service initially takes root in simple applications at the bottom of a market—typically by being less expensive and more accessible—and then relentlessly moves upmarket, eventually displacing incumbent competitors. In many technology-based fields, the disruption occurs by new entrants, rather than by established companies, because the incumbents fail to recognize the need for change until it is too late. At issue, however, is whether established companies or professionals can *prevent* disruption by outside entrepreneurs. Christensen's latest book,[2] *Competing Against Luck*, introduces the Jobs to Be Done theory, a way for companies to stave off competition from disruptive products and services. As it pertains to audiology in general, and the process of hearing instrument dispensing in particular, it relates to the everyday expectations that hearing aid users have from their hearing aids: the job that they have hired the devices to do when they purchased them. Fundamentally, this likely means that they

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Tools for Success in Private Practice; Guest Editor, Gyl Kasewurm, Au.D.

Semin Hear 2019;40:214–219.
DOI: https://doi.org/10.1055/s-0039-1693444.
ISSN 0734-0451.

have been adjusted to provide optimal speech understanding in quiet and noisy listening environments. More recently, this probably also includes connectivity to smart phones and rechargeability. Increasingly, this also may include health and wellness monitoring, or other features that make patients' lives better, easier, and safer.

The emergence of personal sound amplification products (PSAPs), and eventually over-the-counter (OTC) hearing aids, will usher in new opportunities and challenges. Specifically, potentially disruptive entrepreneurial companies will try to provide technical solutions for normal-hearing and hearing-impaired consumers who do not require the role of a professional. At issue will be their ability to identify the job that these individuals will require PSAPs and OTC devices, and whether this can be accomplished with do-it-yourself (DIY) diagnosis, selection, fitting, and follow-up. In essence, disruptive innovation and jobs theory converge on the issue of whether end users can detect a difference in outcomes between OTC and professionally delivered care. Simply put, as long as audiologists *add* value, their role cannot be commoditized.

GROSS MARGIN PER HOUR

To place a value on professional service, audiologists first need to know *how much* revenue they need to generate to run their business profitably. This is often complicated by the fact that many clinical practices currently use a bundled model of product and services. The most straightforward approach for this is in terms of gross margin per hour (GMPH), especially if practices dispense hearing aids through both private pay and through third-party administrator (TPA) insurance programs, which separate the cost of the hearing aid (cost of goods) from service reimbursement. GMPH also provides a more accurate assessment than gross revenue for the impact of cost of goods (COG) differences across different product technology tiers.

Tables 1 to 3 illustrate how GMPH may be calculated for a hypothetical audiology practice with a single clinical provider who generates $600,000 annual gross revenue. In the example, Table 1 shows the practice's profit and loss statement, with the practice's gross margin ($436,200) reflecting the annual revenue ($600,000) minus the cost of goods ($163,800). Table 2 calculates the number of clinical hours available (1896) for patient appointments during the year, and Table 3 illustrates the benchmark gross margin dollars ($230) that must be generated during every

Table 1 Profit and Loss Statement from a Hypothetical Single Clinical Provider Audiology Practice

Annual revenue	$600,000	100%
Revenue from HI sales	$468,000	78%
Service revenue	$132,000	22%
Gross revenue (GR)	$600,000	100%
Cost of goods (COG)	$163,800	27%
Gross margin (GR-COG)	$436,200	73%
Personnel	$114,000	19%
Marketing	$30,000	5%
Clinical/Other	$90,000	15%
Profit	$202,200	34%

Abbreviation: HI, hearing instrument.

Table 2 Annual Available Clinical Hours Calculation

Daily work hours		8
Daily preparation hours		0
Gross daily clinical hours		8
Gross weekly clinical hours		40
Gross annual clinical hours		2,080
Deductions		
Vacation	15 d	−120
Holidays	8 d	−64
Patient no-show rate		0
Number of providers		1
Annual available clinical hours		1,896

Table 3 GMPH Computation, Reflecting Gross Margin Dollars ($436,200) Divided by Available Annual Clinical Hours (1896), Equaling a Benchmark Requirement of $230 GM Dollars Per Available Clinical Hour

Gross margin (revenue-COG)	$436,200
Annual clinical hours	1896
Gross margin/clinical hour	$230

Abbreviations: COG, cost of goods; GMPH, gross margin per hour.

Table 4 GMPH Computation for a Binaural "Standard" ($2,200/ear with 35% COG) Hearing Aid Transaction, with 12 Clinical Hours Spent with the Patient during the 5-Year Replacement Cycle of the Hearing Aid

5-y replacement—clinical hours (h) spent by year		
Gross revenue—$4,400 (ASP $2,200), COG 35%		
Gross margin—$2,860		
Y1—4.5 h	Running total 4.5 h	GMPH-$2,860/4.5 = $636
Y2—1.5 h	Running total 6.0 h	GMPH-$2,860/6.0 = $477
Y3—2.0 h	Running total 8.0 h	GMPH-$2,860/8.0 = $358
Y4—2.0 h	Running total 10.0 h	GMPH-$2,860/10.0 = $286
Y5—2.0 h	Running total 12.0 h	GMPH-$2,860/12.0 = $238

Abbreviations: ASP, average selling price; COG, cost of goods; GMPH, gross margin per hour.

available clinical hour to generate the practice's current profit and loss statement. Audiologists are encouraged to calculate their own GMPH benchmark, based on their financials and available clinical appointment hours using Tables 1 to 3 as a template. This metric will serve as the basic blocking and tackling measurement used to compete with Big Box stores, TPA insurers, OTC hearing aids, and other disruptors in their markets.

Table 4 depicts the average hours spent with hearing aid patients per year (Year 1–Year 5), and over a typical 5-year replacement cycle (running total) for the example practice depicted in Tables 1 to 3. The practice uses a fully bundled price structure, in which the patient purchased a set of standard hearing aids for $2,200 each, for a total of $4,400. Of this total, 35% represented the cost of goods, with the remainder ($2,860) comprising the service component. Consequently, in Year 1, when the patient is seen multiple times for a total of 4.5 hours, the GMPH is $636. Because of the need to subsidize care totaling 12 hours over the next 4 years, however, the terminal GMPH after 5 years drops to $238—still above the practice's benchmark of $230 GMPH. If the hearing aids were *not* replaced after 5 years, however, and the patient was seen even once for a 30-minute visit, the GMPH ($2,860/12.5) drops to $229. Therefore, the conclusion may be drawn that the pricing model, replacement cycle, and average number of hours spent with each patient is profitable—as long as all clinical hours are filled with enough new patients to generate a consistent revenue stream.

If the clinician fits more premium devices, with a higher average selling price ($3,000/ear) but a higher COG (45%) than for the standard hearing aids, a higher GMPH ($275) is preserved over the 5-year replacement cycle. As a result, one obvious way to increase profitability is to dispense more high-end devices, but this is in conflict with the perceived pressure from OTC, Big Box stores, and other price pressures (Table 5).

Table 6 reflects the impact of that downward price/technology pressure, with the model showing the reduction in GMPH for basic hearing aids that retail for $1,500 per ear (COG of 33%). In this example, GMPH drops

Table 5 GMPH for a Binaural "Premium" ($3,000/Ear with 45% COG) Transaction, with all other Assumptions the Same as in Table 4

5-y replacement—clinical hours (h) spent by year		
Gross revenue—$6,000 (ASP $3,000), COG 45%		
Gross margin—**$3,300**		
Y1—4.5 h	Running total 4.5 h	GMPH-$3,300/4.5 = $733
Y2—1.5 h	Running total 6.0 h	GMPH-$3,300/6.0 = $550
Y3—2.0 h	Running total 8.0 h	GMPH-$3,300/8.0 = $413
Y4—2.0 h	Running total 10.0 h	GMPH-$3,300/10.0 = $330
Y5—2.0 h	Running total 12.0 h	GMPH-$3,300/12.0 = $275

Abbreviations: ASP, average selling price; COG, cost of goods; GMPH, gross margin per hour.

Table 6 GMPH for a Binaural "Basic" Set of Hearing Aids, Retailing for $1,500/Ear (COG 33%), with all other Assumptions Equivalent to those for a "Standard" Device in Table 4

5-y replacement—clinical hours (h) spent by year		
Gross revenue—$3,000 (ASP $1,500), COG 33%		
Gross margin—**$2,000**		
Y1—4.5 h	Running total 4.5 h	GMPH-$2,000/4.5 = $444
Y2—1.5 h	Running total 6.0 h	GMPH-$2,000/6.0 = $333
Y3—2.0 h	Running total 8.0 h	GMPH-$2,000/8.0 = $250
Y4—2.0 h	Running total 10.0 h	GMPH-$2,000/10.0 = $200
Y5—2.0 h	Running total 12.0 h	GMPH-$2,000/12.0 = $167

Abbreviations: ASP, average selling price; COG, cost of goods; GMPH, gross margin per hour.

below the criterion amount in Year 4 of the model. Short of providing less follow-up care, which is not consistent with best practice, or a shorter replacement cycle, it challenges the profitability model from the practice's profit and loss in Table 1.

Table 7 illustrates the extreme example; if competition forces the practice into a race to the bottom on price and technology, for hearing aids that retail for $1,000/ear (COG 25%), a gross margin of only $1,500 will be distributed over the 5-year replacement cycle. Clearly, this business practice is not sustainable, using existing clinical models and GMPH benchmarks. So, what can clinicians do to reverse this trend? The simple solution for any given practice is to evaluate their *specific* GMPH requirements and raise revenue/margin dollars, find more clinical hours in the day, or lower costs, all of which will deliver more profitability.

IMPROVING GMPH THROUGH EFFICIENCY OF CARE

Use of support personnel. One way that audiologists can improve GMPH is by taking a lesson from our physician, dental, or optometry colleagues to see patients more efficiently through the use of support personnel in the face of disruptive innovation and declining reimbursement. Dentists' net production took a massive hit in 2010, declining from more than $250/hour to under $190/hour prior to recovering in 2016 to $216/hour, primarily through the use of multiple operatories and dental hygienists to enable more economical and efficient prophylaxis, allowing dentists to focus on specialty care (e.g., fillings, crowns, and extractions).[3] One cautionary tale, however, provided by dentistry is that the focus on improved efficiency may have increased hourly production at the cost of patient satisfaction, as complaints of patients feeling like they are in an assembly line have increased in recent years. The personalized care and engagement that has contributed to 81% of patient satisfaction with hearing aids[4] should not be sacrificed in the interest of improved efficiency, as it represents one of the key values differentiating professional audiology care.

Telehealth. I first used telehealth for remote programming of digitally programmable hearing aids in the early 1990s, when I was at Mayo

Table 7 GMPH for a Binaural Entry Set of Hearing Aids, Retailing for $1,000/Ear (COG 25%), with all other Assumptions Equivalent to those for a Standard Device in Table 4

5-y service plan—clinical hours (h) spent by year		
Gross revenue—$2,000 (ASP $1,000), COG 25%		
Gross margin—**$1,500**		
Y1—4.5 h	Running total 4.5 h	GMPH-$1,500/4.5 = $333
Y2—1.5 h	Running total 6.0 h	GMPH-$1,500/6.0 = $250
Y3—2.0 h	Running total 8.0 h	GMPH-$1,500/8.0 = $180
Y4—2.0 h	Running total 10.0 h	GMPH-$1,500/10.0 = $150
Y5—2.0 h	Running total 12.0 h	GMPH-$1,500/12.0 = $125

Abbreviations: ASP, average selling price; COG, cost of goods; GMPH, gross margin per hour.

Clinic in Rochester, MN. Although effective, it required a complicated setup, including expensive hardware and the use of support personnel that saved time, but not money; furthermore, it was hardly user friendly. The advent of Made for iPhone and Made for Android hearing aid technology now provides synchronous and asynchronous telehealth solutions for patients with nothing more complicated than a smartphone application in combination with their hearing aids to provide counseling, make minor hearing aid adjustments, and provide more patient convenience in the process. Although synchronous (real-time) and asynchronous (cloud-based or store-and-forward) approaches both offer advantages for the clinician and patient,[5] the use of asynchronous remote fine tuning may provide clinical efficiencies by enabling minor fine-tuning adjustments to be made outside of valuable clinical chair time (e.g., morning, lunchtime, in-between patients or when last-minute cancellations occur). In turn, this opens up appointment slots for new patients and for those patients who require more sophisticated adjustments or counseling. Furthermore, recent survey data from patients with self-described hearing loss indicated that 86% saw value in incorporating telehealth into a healthcare regimen.[6] In summary, asynchronous remote fine tuning may provide improved clinical efficiencies, preserve or enhance patient satisfaction, and improve patient engagement, compared to traditional clinical care.

For example, return to the example for the single clinician practice depicted in Table 1. On average, approximately 18 new hearing aids (nine patients) are fitted each month at an average selling price of $2,200. If each patient could substitute 1 hour of face-to-face care in year 1 with asynchronous remote fine tuning for minor adjustments, 108 appointment slots are opened annually for new appointments. Based on the average price ($2,200/ear), binaural fittings, and 60% closure rate, this translates into $285,120 additional annual gross revenue. Assuming 35% COG, this means $185,328 in gross margin annually to the clinic's bottom line.

Table 8 illustrates the impact in terms of GMPH. In comparison to the traditional clinical service model for a patient fitted with standard technology from Table 4, GMPH is increased over the entire 5-year life cycle, with a terminal value of $301 GMPH, compared with $238 for the traditional face-to-face model. The combination of increased GMPH for each patient with the opportunity for filling the created clinical chair time provides significant financial upside while potentially adding to patient engagement and satisfaction.

WHAT GETS MEASURED GETS DONE

With GMPH, clinicians now have a tool to address how, and if, they should compete with Big Box stores and price-driven competitors by placing a benchmark *value* on their services and using technologies like telehealth to improve efficiencies without compromising quality. A final example addresses a hypothetical TPA program that removes the COG by providing the hearing aid(s) separately to the patient, and contracts with participating providers for a binaural fitting fee ($850) and evaluation fee

Table 8 GMPH Computation for a Binaural Standard ($2,200/ear with 35% COG) Hearing Aid Transaction, with 9.5 Clinical Hours Spent with the Patient during the 5-Year Replacement Cycle of the Hearing Aid, Plus 2.5 Hours Telehealth in Years 1 to 3 for Minor Fine Tuning Adjustments

5-y service plan—clinical hours (h) spent by year		
Gross revenue—$4,400 (ASP $2,200), COG 35%		
Gross margin—**$2,860**		
Y1—3.5 h	Running total 3.5 h	GMPH-$2,860/3.5 = $817
Y2—1.0 h	Running total 4.5 h	GMPH-$2,860/4.5 = $635
Y3—1.0 h	Running total 5.5 h	GMPH-$2,860/5.5 = $520
Y4—2.0 h	Running total 7.5 h	GMPH-$2,860/7.5 = $381
Y5—2.0 h	Running total 9.5 h	GMPH-$2,860/9.5 = $301

Abbreviations: ASP, average selling price; COG, cost of goods; GMPH, gross margin per hour.

Table 9 GMPH Calculation for a Hypothetical TPA Program that Provides Clinicians with an Initial Evaluation Fee ($75) and Binaural Fitting Fees ($850), with Annual Maintenance Fees of $65 and Repeat Evaluation ($75) Every Second Year

5-y replacement—clinical hours (h) spent by year		
Gross margin—$925 (year 1) = $65/annually + $75/test = $1,335		
Y1—3.5 h	Running total 3.0 h	GMPH-$925/3.0 = $308.33
Y2—1.0 h	Running total 4.0 h	GMPH-$990/4.0 = $247.50
Y3—2.0 h	Running total 6.0 h	GMPH-$1130/6.0 = $188.33
Y4—1.0 h	Running total 7.0 h	GMPH-$1195/7.0 = $170.71
Y5—2.0 h	Running total 9.0 h	GMPH-$1335/9.0 = $148.33

Abbreviations: COG, cost of goods; GMPH, gross margin per hour.

Table 10 GMPH Computation for Hypothetical TPA Program, as in Table 9, but with Telehealth Used to Supplement Face-to-Face Visits each Year

5-y replacement—clinical hours (h) spent by year		
Gross margin—$925 (year 1) = $65/annually + $75/test = $1,335		
Combine face-to-face and telehealth follow-up care		
Y1—2.5 h	Running total 2.5 h	GMPH-$925/2.5 = $370
Y2—0.5 h	Running total 3.0 h	GMPH-$990/3.0 = $330
Y3—1.5 h	Running total 4.5 h	GMPH-$1130/4.5 = $251.11
Y4–0.5 h	Running total 5.0 h	GMPH-$1195/5.0 = $239.00
Y5—1.5 h	Running total 6.5 h	GMPH-$1335/6.5 = $205.38

Abbreviations: COG, cost of goods; GMPH, gross margin per hour; TPA, third-party administrator.

($75) directly to the practitioner in exchange for testing, fitting, and two follow-up visits totaling 3.0 clinical hours during year 1. Subsequently, the contract provides an annual maintenance fee of $65/year and compensates practitioners for repeat evaluations every second year. Tables 9 and 10 demonstrate how telehealth may be used to supplement face-to-face visits conducted each year to preserve higher GMPH when compared with traditional models. The author is by no means advocating whether practitioners should participate in TPA programs; the point of this example is that GMPH calculation *empowers* clinicians to know what their value is, and make informed decisions regarding whether to participate or not. In the same vein, by benchmarking the GMPH specific to *their* practice, clinicians can place a value on their hourly rates for providing care to patients who purchased their hearing aids elsewhere. In short, knowledge is power, and knowing your financials will assist practitioners with making sound business decisions that enable them to evolve—and thrive—amidst threats posed by disruptive environments.

CONFLICT OF INTEREST
None declared.

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