EXPERIENCE EXCHANGE

The importance of fundamental economic concepts for nurse leaders: No margin, no mission

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Abstract

Rising health care costs are currently a problem in virtually every industrialized country, and policy makers around the globe are trying to figure out ways to continue to maintain economically viable health care systems. A primary focus on quality and access in prior years has proven to be incomplete in terms of the long-term sustainability. The focus of interest has now turned to the concept of value which unavoidably brings the essential element of cost squarely into the forefront. In order to deal more effectively with inevitable cost constraints, nurse leaders will need a basic understanding of some of the fundamental economic concepts that will be driving many of the initiative for more financially sustainable health care systems.

Key words

Economics, Scarcity, Value, Marginal utility, Opportunity cost

Economic imperatives: Reversing the tipping point

Several years ago, the American Organization of Nurse Executives (AONE) published a list of nurse executive competencies, partially in response to many of the challenges now being imposed by the dramatic changes taking place in the health care environment. Since that time, those challenges, along with the pace of change, have been accelerating. As one of the five major competency categories listed in the AONE publication, the Business Skills section lists as its first recommendation that nurse executives will need to enhance their abilities to: "Articulate business models for health care organizations and fundamental concepts of economics."[1].

Rising health care costs are currently a problem in virtually every industrialized country, and policy makers around the globe are trying to figure out ways to maintain more economically viable health care systems [2]. The primary focus on quality and access in prior years has proven to be incomplete. The major focus has now turned to the more viable economic concept of value which unavoidably brings the element of cost squarely to the forefront. The new metric for health care systems has now become V = Q/C, where value is seen as depending not only on the quality of services, but also on their associated costs [3-5].

At the heart of any health care delivery system are its doctors and nurses. They are the ones most directly involved with patient care, and as such, are also the ones who have the greatest influence on the consumption of medical resources.

Somewhat ironically, they are often the ones who are noticeably absent from key leadership decisions when it comes to the formulation of major health care policies [6]. Part of the reason for this is that most of their education, training, and experience has focused almost exclusively on the quality side of care that is given to individual patients, with little if any exposure to non-clinical economic considerations, as well as to the much broader social responsibilities that go along with them.

As the demands for improved efficiencies and cost containment mount, it has become increasingly important that nurse leaders have a workable understanding of some of the key economic concepts that are driving current health care reform. More sophisticated economic modeling than has been used in the past is now fast becoming an essential prerequisite for organizational success, and because of their central role in the delivery of health care services, nurse leaders are sure to be called upon to actively participate in both their development and implementation.

The mounting pressures posed by the need for more value-driven health care will necessitate the much wider adoption and use of such economic concepts in order to improve organizational efficiencies. Irrespective of even the best of service intentions, a more competitive health care marketplace will require the more strategic use of increasingly scarce resources in order for health care organizations (HCOs) to maintain financial viability. As the pragmatic health industry saying has so often pointed out: “no margin, no mission”.

The more that nurse leaders are familiar with the practical use of these basic economic concepts, the better prepared they will be to make wise resource allocation decisions, to enlist the informed support of their clinical colleagues, and to provide leadership direction in helping to bringing about the many difficult but necessary changes that will need to take place [7].

Bumblebee aerodynamics: Too heavy to fly

The current U.S. health care system has often been compared to the aerodynamics of the bumblebee; its body mass in relation to its wing span is theoretically too heavy to fly, yet surprisingly enough, it does. With annual health care expenditures now topping $2.7 trillion, some 45 million Americans still uninsured, and an ever-increasing number of underinsured, the potential relevance of this analogy begins to ring unsettlingly true.

Cost increases continue to outpace the consumer price index (CPI), expenditures continue to consume more and more of the gross domestic product (GDP), and health insurance premiums are fast becoming unaffordable for the average American family. A growing number of health care experts are now cautioning that the system as it has functioned in the past has become unsustainable. “Reform” is the ubiquitous new buzz-word, and efforts to simultaneously reduce the system’s body mass (costs) while simultaneously increasing its wing span (access) are now well under way. Nurse leaders are in a unique position to play a leading role in the efforts to bringing health care costs back into a more economically sustainable balance. There are few other professions have benefit of the practical experience that will be needed in creating new ways to create a more viable relationship between legitimate clinical needs and basic economic realities [8].

Some useful economic concepts: Back to the basics

Unlike most other industries, our health care system has not been particularly aggressive in trying to find ways to simultaneously improve quality and reduce costs. In fact, there has been, more or less, an implicit assumption that reducing costs will have a negative effect on quality. With only limited research attention being directed at disproving such assumptions, the system continued to evolve almost as though quality and efficiency were mutually exclusive, with most of the attention being focused on the former and comparatively little on the latter. “Conspicuous consumption” (promoting specialty services, physical surroundings, and clinical technologies rather than lower prices) has essentially been the prevailing means of competition. The basic principle of production efficiencies determining price, and price, in turn, being

a key determinant of demand, has been rendered all but unrelated by ineffective and uncompetitive health care markets where "first-dollar insurance coverage" (minimal or no out-of-pocket payment required) has, for all practical purposes, separated price from product. Morale hazard (the propensity for insured individuals to use more health resources than actually needed) has become commonplace….all of which is now rapidly changing as a result of markedly higher deductible and co-pay insurance plans.

Scarcity: When demand exceeds supply

Scarcity is an inescapable fact of life. It's the underlying reason for economic decisions. There never was, nor ever will be, sufficient resources to satisfy all of society's needs and demands. Factors of production are simply not without limit. This is the reason why prices are attached to goods and services, and why some prices are higher or lower than others. If demand exceeds supply, prices will go up and if the reverse is true, prices will decline. Aside from major "shifts" in either demand or supply, or monopolistic market conditions, this is essentially how prices are determined. Presently there is a widespread consensus that health care prices are too high, and with an ageing population, a growing number of underinsured, and a continuing demand for expensive treatment technologies, it is likely that health care demand if left unchecked will continue to increase at a rate disproportionate to the rest of the economy. What health economists have termed the "paradox of medical progress" (medical progress which enables more people to extend their lives into additional years when they will require more extensive medical care and social assistance) will no doubt tax the system even further. Available resources will likely become more limited, rather than less. Labor costs still comprise the largest portion of HCO resources, and nursing costs remain the largest component [9]. How efficiently nurse leaders are able to allocate declining resources will prove to be an even more important price control factor than it has been in the past.

Value: The new black

Health care value is now being expressed as an equation representing a more realistic balance of quality and cost. The equation has several non-value permutations, one of which is high quality at a high cost. This is about where our current U.S. health care system now stands; very high quality with very high associated costs. Virtually everyone has been in favor of higher health care quality which has resulted in an easily ascended and all-too-crowded quality pedestal. What health care provider wouldn't be in favor of better quality?

Most would agree there are still some important quality issues, but they are more frequently problems of failed processes than ones of insufficient resources. On the other hand, there have rarely been similar cost-saving pedestals and thus not too surprisingly, far too little attention has been given to dealing with this half of the value equation. High levels of quality, at unjustifiably high levels of cost, are not indications of true value. Policy makers have become increasingly aware of this and have been calling for a virtual paradigm shift in the way services will be paid for. "A high-value provider of services recognizes that quality, while important, is not sufficient to create a sustainable healthcare organization. Value is the key. And purchasers (government, employers, payers, and consumers) will insist on it" [10]. Nurse leaders will need to have a more thorough understanding of the economic metrics that will be used in assessing health care value in order to enlist the support and effectively engage what have traditionally been quality-focused clinical staffs.

Waste: A truth inconvenient

Eliminating the problem of waste is not an easy task, particularly when it has to be done in conjunction with increasing service demands. There is no longer an issue when it comes to the existence of waste. It has now become more a matter of how much. Experts have estimate that some 30% of the $2.7 trillion now spent on health care is wasteful, meaning that it could be essentially eliminated without compromising the quality of patient care. On a more granular level, there are few reasons to believe that individual HCOs fare much better. Research has shown that providing more health care does not

necessarily improve health status, and in some cases may even make it worse. Despite such findings, health expenditures continue to vary by as much as threefold across many sections of the country, with few if any differences in either quality or outcomes [11].

Nurse leaders can and should play a more proactive role in identifying and driving out waste. They, along with practicing physicians, are in the best positions to determine what adds true service value to patient care, and what does not. The time-tested business adage that you need to go as close to the problem as possible to find the right solutions, readily applies. None are closer to the every-day consumption decisions being made than are the doctors and nurses [12].

Value-based purchasing: caveat emptor to caveat venditor

The term, "caveat emptor" is Latin for "let the buyer beware." In the past, major purchasers of health care such as Medicare, Medicaid, and insurance companies routinely paid for covered services as the bills came in from the health care providers. There were few ways of knowing whether, in fact, the services being provided were actually worth the payments being made. There was little transparency with regard to both price and quality.

All of that is now rapidly changing as more "caveat venditor" or "let the seller beware" reimbursement systems are being developed. If providers fail to meet established cost and quality metrics, payments for services will be reduced accordingly, or not made at all. Here again, nurse leaders will be called upon to help formulate a more equitable balance in the cost-quality equation. Only this time the financial stakes will be a lot higher.

Labor substitution: the right person for the right job

"Labor substitution" occurs when institutions substitute high-wage staff with workers who are less costly. Wage scales usually center around some combination of knowledge, skills, and responsibility. The more of these elements that are involved in a job function, the higher is the compensation. When staff members routinely devote a significant portion of their time to functions which can be performed by individuals with lesser qualifications, and thus require lower payroll expenditures, there is a missed opportunity for more appropriate labor substitution. The immediate economic consequence is that labor costs are higher than they need to be. A less obvious consequence is a constriction in the labor market for those in the higher job categories. It has short-term consequences such as excessive overtime, as well as longer-term pressures for higher than necessary wages in order to compete in a more constricted labor market. Yet it is still very common to have highly qualified staff spending substantial amounts of time on work which could just as easily have been done by lesser qualified staff.

There are qualitative risks associated with labor substitution, however, which is part of the reason why progress in this area has been so limited. It is considered a much "safer" option to have overqualified staff available, despite the associated costs. Nurse anesthetists as substitutes for physician anesthesiologists, surgical techs as substitutes for OR nurses, nurse practitioners for primary care physicians; LPNs for RNs, EMTs for ER nurses; all have taken prolonged periods of time to become acceptable alternatives. An important consideration in making successful labor substitutions is the involvement of higher job category staff in the decision making process, along with other major stakeholders who will be affected by the change. Where direct patient care is involved, hard data along with a thorough review of best practices should always be included in the deliberations.

Parkinson's law: Work abhors a vacuum

Parkinson's Law has its roots in C. Northcote Parkinson's empirical observations that "work expands so as to fill the time available for its completion." Though initially posed as a somewhat satirical comment on the British social service system,

the dictum rings true in many of today's HCOs, particularly in those areas where required tasks are not clearly defined, measured, or systematically evaluated. This can often occur on busy nursing units where administrative tasks have a tendency to consume more and more of available time. What initially should take only a few hours of meetings and paperwork gradually turns into the better part of an entire shift. It doesn't happen all at once, but tends to be a much more subtle process where non-essentials gradually find their way into, and eventually become embedded as a part of daily routines. The result is that additional clinical time and associated expense has to be added to nursing budgets in order to compensate for the additional time spent on superfluous administrative tasks.

In order to avoid this form of "administrative creep" all non-clinical work which is done on a regular basis needs to be identified and documented. Systems should be redesigned where appropriate and unnecessary tasks eliminated. Schedules can then be structured with applicable timelines. Tasks that can be performed by non-clinical personnel should be assigned accordingly. Attendance at meetings by clinical staff should be periodically reviewed in terms of importance, frequency, and duration in order to evaluate their cost effectiveness and subsequent overall value.

Allocation of resources: Dividing the economic pie

Scarcity, in and of itself, necessitates one form or another of determining zero sum resource allocations. Occasionally such allocations are made according to rational economic principles; sometimes they are made along the lines of more subtle intra-organizational politics. More often than not, they end up as a negotiated combination of both. Ideally, resource needs should be prioritized objectively according to their measurable potential benefits. There are a number of quantitative techniques available which can help to avoid internal power struggles when making allocation decisions. They include cost-benefit analysis, cost-effectiveness analysis, and contribution-to-margin studies. The more familiar nurse leaders are with these kinds of data-driven allocation techniques, the greater the weight objective evidence can have in helping to make informed decisions. The essential prerequisite, however, is the compilation of relevant quantitative data which clearly supports all resource requests.

Prioritization: All needs are not equal

Although a seemingly basic concept, weighted prioritizations are one of the most commonly neglected practices when it comes to the difficult task of allocating scarce resources. Resource requests typically take the form of a long list of pressing patient care essentials, supported by emotional statements about the urgent need for improvements in quality, either in the form of improvements to existing services, or as some form of additional clinical capability. Rarely are they submitted with carefully prepared, data-driven justifications. Such practices are fast becoming a thing of the past. Clearly documented prioritizations, along with some form of solid, evidence-based justification, has now emerged as a best-practice standard.

Arriving at a consensus around a final priority list requires a considerable amount of skill and cooperation. The pressures of interdepartmental interests are seldom easy to avoid and if not handled carefully, valued collegial relationships can quickly become compromised. Nurse leaders should include interdisciplinary teams in the process, and establish decision-making protocols at the outset of the prioritization process.

Cost effectiveness: Determining investment worth

"Cost effectiveness" compares the relative costs and outcomes of two or more courses of action. It is different from "cost benefit" in that it does not assign a monetary value to the outcomes. A ratio is devised which includes the cost of the intended expenditure in the numerator, and the expected outcome benefit, expressed in practical units, in the denominator. This method of evaluating potential expenditures can be very persuasive in that it helps to quantify various possible

alternatives [13]. The required calculations are straight forward and easy to comprehend, however general acceptance of the methodology is not always without its critics. It's understandable that stakeholders would much prefer not to have their proposals subject to competitive alternatives, and cost effectiveness analysis does just that; it forces a more rigorous evaluation of expenditure alternatives along with the expectations for a higher level of post-appropriations accountability.

"Return on investment" (ROI) is a similar evaluation ratio used mainly for financial purposes. Its formula is revenue minus expense, divided by expense, and indicates the degree of profit (or loss) in monetary terms, which can be expected to result from various alternative investment decisions.

Fixed costs: Fixed is the new red

Fixed Costs are just that: fixed. They are incurred regardless of variations in the volume of output. Common examples include physical surroundings, minimum staffing levels, and major pieces of capital equipment. Variable costs, in contrast, will vary more in proportion to output. Once they have been incurred, relatively little can be done to reduce the amount of fixed coasts, whereas variable costs are incurred only when necessitated by accompanying changes in volume. In a typical HCO, fixed costs tend to be much higher than they are in other service industries. Part of the reason is attributed to the high costs of medical technology, as well as to marked fluctuations in demand which are very often difficult to predict [14]. Part of it, however, is also due to an industry-wide tendency to favor more sophisticated architecture and technology over more basic structural and operational necessities. In fact, many who are concerned with the affordability of health care disparagingly refer to the extent of HCO fixed asset investments as an "edifice complex".

Nurse leaders need to carefully weigh their support for fixed cost expenditures when variable cost alternatives would suffice. By doing so, flexibility adjustments can be maintained which in turn can generate ongoing opportunities for improvements in operational efficiencies.

Marginal utility: More is not always better

How does one know when a particular level of service is adequate and or when the likely benefits of additional service increments become outweighed by their incremental costs? The average length of hospital stay, for example, has fallen dramatically over the past few decades. How was it eventually determined that the clinical benefits of additional inpatient days could not be cost-justified, and how much in the way or resources, which could have been used for other deserving purposes, were expended unnecessarily. In today's HCOs, how many nursing hours on a particular patient unit are enough? At what point does it make more sense to divert labor resources into lesser skilled positions. How often should lab tests for a particular diagnosis be repeated, medical images taken, or additional medications be provided? In actual practice, research has shown strikingly wide variations, particularly in instances where no best-practice standards have been adopted. Nurse leaders need to be aware of the availability of such standards and work towards incorporating them into standardized institutional protocols where appropriate.

Opportunity cost: No free lunches

This economic principle, although intuitively simple, often gets unintentionally overlooked: if you expend a resource for one purpose, it will no longer be available to use for another purpose. The implication here is that an actual expenditure will, in fact, be the one that is the most beneficial, when compared with other possible expenditure alternatives. It has not been an uncommon practice, however, for health care expenditures to be made in relative isolation, the focus being more on satisfying an immediate need, with little attention given to other possible needs which could likewise have been addressed. A frequent cause for this kind of economic myopia is the lack of a broader organizational perspective, and hence an inability to fully appreciate other potential benefits. The undue influence of institutional politics is unfortunately

also a common factor in determining who finally gets what in the resource allocation process. With a wider appreciation of the potential values associated with "opportunity cost," tradeoffs, nurse leaders will be in a stronger position to bring more objective, value-based choices to the decision-making table.

Efficiency and effectiveness: Doing the right things right

The terms "efficiency" and "effectiveness" are unfortunately often used interchangeably. The wrong things can be done very efficiently, as can the right things be done inefficiently. Examples of both abound in large organizations. Part of the reason stems from a lack of clear logic trails which should normally guide resource consumption decisions toward specific goals and objectives, and part stems from the lack of a clearer understanding that effectiveness is paramount. Focus is often times placed more on process than on outcome. As long as staff have the feeling they are being efficient, less than needed efforts get paid to evaluating the actual effectiveness of the outcomes, if they are achieved at all. As long as staff feel they are busy, there can be the misleading assmption that time is not being wasted, when in actuality it's a wrong or inconsequential thing that is being done right. Valuable time ends up being wasted on activities and projects that really don't matter all that much.

A closer analysis of the functional differences between efficiency and effectiveness can help nurse leaders to educate their staff on becoming more outcomes focused, discourage the misdirection of time and materials, and promote a greater cost-benefit awareness for the more appropriate use of available resources.

Specialization: Credentials creep

In recent years, there has been a marked increase in "credentialism" (the proliferation of various formal credentials required for specific jobs). The field of health care has been no exception. More and more functions are now being performed by degreed, licensed, and/or certified staff. With higher credentials go higher labor costs but also, in most instances, improvements in quality. The question then becomes: are the incremental increases in costs associated with higher credentials justified by the resulting increases in quality. As you might expect, sometime they are, but often times they are not. In the absence of cost-benefit analysis, higher (and more expensive) credentials will usually win out, due to the natural inclination that providers have for better quality. Future economic circumstances will demand more routine and rigorous analyses of where higher credentials actually add value to patient care and where they do not. In most instances this kind of analysis will require careful initiation from internal leadership as it is unlikely to come from the credentialed staff themselves. Decisions about added value cannot be subjective and should always be evidence-based.

Need versus demand: Wants minus needs equals excess

This concept is basically the economists' version of "need versus wants." In health care settings wants usually exceed needs by a considerable amount partly due to the socialization process of health care professionals whereby the prevailing norm throughout their education has been to do as much as possible for their patients. Associated costs have been secondary considerations, if at all, and marginal utility has never been a point of emphasis. If it will benefit the patient in any way, it was wanted. The result has been that resources are being consumed beyond the point of diminishing returns (a form of waste) along with attendant opportunity costs. Future expenditure limitations will require a major shift from demands and wants to evidence-based need. Here again, physicians and nurses are in the best positions by far, to determine the essential differences.

Elasticity: Is it really irreplaceable?

"Elasticity" is essentially a measure of responsiveness. Elasticity of demand is a term used to describe the responsiveness of changes in demand for a good or service as a result of changes in its price. It is usually depicted as a negative sloping

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line (downward from left to right), on a graph with price on the vertical axis and quantity demanded of the horizontal axis. Demand for a good or service is said to be inelastic if there is little change in demand associated with changes in its price. It is said to be elastic if there is a significant change. Inelastic demand generally implies that there are little or no substitute options, and the opposite holds true for a good or service whose demand is more elastic.

What is the elasticity of demand for registered nurses, and how should nurse leaders evaluate its potential impact on cost and quality? Do surgeons insist on only RNs in the operating room, or are techs an acceptable alternative, and if so, to what extent? Are there all RNs in the emergency room, or are there EMTs as well? How much non-nursing administrative work can only be done by RNs on the patient units? These are but a few of the questions that an analysis of demand elasticity for RNs can help to answer.

Elasticity of supply relates more to how RNs will respond to changes in wage levels. If RN salaries were to be increased, would this attract more nurses (part-time nurses willing to work more hours for better pay; nurses who have left the profession because of low pay, coming back into the profession; delayed retirement; etc.), or would it result in fewer nurses (nurses reducing the hours worked for more leisure/family time enabled by the higher pay; fewer willing to work overtime; fewer willing to work off-hour shifts; etc.), or some combination of both. Will response differences be a function of age, sex, marital status, employment longevity, or specialty certification? Elasticity analysis of this sort can provide valuable insights for possible labor substitution initiatives, as well as to help avoid unintended consequences from such things as a freeze on wages or less than competitive compensation packages.

Contribution to margin: Avoiding the black hole syndrome

To the lay person, a black hole is generally perceived as a mysterious sort of place somewhere in outer space with such strong gravitational pull that it vacuums up everything around it, never to be seen or heard from again. Where the vacuumed material goes, nobody is quite sure. All that is know is that it consumes avariciously, and never seems to give anything back.

When nurses are asked to help identify areas for potential savings, few things are as frustrating as their expending serious effort, realizing operational savings, and having no idea about what finally happened with the savings that they worked so hard to realize. Needless to say, when this happens the motivational level for future efficiency initiatives becomes seriously compromised. They might go through the motions, but any genuine enthusiasm will have been long dissipated. People want to see the results of their efforts. It's a well understood basic human need, yet it's one that is often either seriously undervalued by supervisors or, even worse, overlooked entirely. There should always be clear feedback about the use of realized savings, and successful initiatives should be recognized and celebrated. Staff need to know how their work is making a difference.

Inter-professional collaboration: We is smarter than me

Organizational systems are such that if one part of the system is disturbed, other parts will eventually feel the impact as well. Smaller systems frequently exist within larger ones, sometimes easily discernable, but at other times much less so. It is difficult, if not impossible, to have an accurate assessment of the interworkings of a larger system without a considerable degree of inter-professional collaboration. Today's HCOs are far too complex for any one perspective to have full appreciation of the intricate interplay of their various parts. Cross-disciplinary collaboration is a key prerequisite for a workable understanding of these larger system complexities. Without it, a valid overall assessment will almost always be incomplete, and often times can be misleading. Clinical and non-clinical staffs will need to set aside time to collaborate more closely on a regular basis. A number of larger HCOs have gotten around this problem by conducting interdisciplinary meetings around "the business of caring" in which both clinical and non-clinical staff were able to gain a much better understanding and appreciation of each others' unique roles and contributions.

Crossing the leadership bridge: Resolve, courage, and commitment

A major challenge for the today's nurse leader is to ensure that needed health care services are provided in ways which promote optimum economic as well as clinical value. It will no doubt involve the difficult task of balancing the quality-conscious biases of physicians and nurses with the cost-conscious biases of administrators and managers, realizing full well that a more value-centric approach to how care is delivered can generate significant pressures from either or both sides. It will take resolve, courage, and commitment along with a strong sense of purpose to challenge staffing and other resource requests which have been less than fully justified.

As has been proposed in the past for their physician colleagues, the first and perhaps most difficult step nurse leaders will need to take is that of "crossing the leadership bridge:" making the courageous transition from a natural desire to be popular to the more difficult one of being respected [15]. Although they are not always mutually exclusive, the road to being respected is usually much more challenging than the one to being popular. The road to respect inevitably involves making hard decisions, which can often run counter to the interests of coworkers and professional colleagues alike. It involves demonstrating the essential leadership quality of objective integrity which unfortunately is so often hard to come by in organizations where professional silos have long been the historical norm. In the new era of value-based health care, the isolation of clinical interests from economic realities is no longer a viable option, and will no doubt demand greater cross-disciplinary cooperation as well as the application of fundamental economic concepts in order to achieve future organizational success.

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