Planning, Learning and Rehearsing the Future for Academic Health Centers: Success in the Face of...

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"Scenarios are not about predicting the future, but about perceiving and reperceiving possible alternative futures." Georgantzas & Acar

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INTRODUCTION

Although the Hedwig van Ameringen Executive Leadership in Academic Medicine (ELAM) Program for Women is still young, its roots can be traced back to 1850, when the Female Medical College of Pennsylvania was founded in Philadelphia as the country's first medical school for women. ELAM's goal is to increase the number of women chairs, deans and other senior academic administrators in medical and dental schools.

For the 1997-1998 class, 32 women were selected from medical and dental schools. Most were associate or full professors who held administrative positions, such as assistant or associate dean, department chair or division chief. ELAM fellows participated in two 9-day sessions, intersession assignments, and the annual meeting of the Association of American Medical Colleges. Curriculum components included "mini-MBA" sessions, emerging issues discussions, personal professional development and network building.

ELAM concluded with the Forum on Emerging Issues, for which the fellows were joined by senior delegates, most often the deans, from their home institutions and invited guests (see Appendix A for list of participants). The Forum is designed to involve the fellows and their deans in collaborative learning through an innovative large-group organizational planning tool. This year, the group engaged in a method called *scenario planning* and was led by Dr. Paul Batalden, M.D., Director of Health Care Improvement Leadership Development in the Center for Evaluative Clinical Sciences of Dartmouth Medical School. The 1998 Forum was supported by a staff grant from the Josiah Macy, Jr. Foundation.

WHY BOTHER TO PLAN?

Change is coming fast and hard to academic health centers (AHCs). ❑ Biotech researchers continue to unravel the human genome and create sophisticated tools for diagnosis and treatment. ❑ Information technology is changing in fundamental ways the teaching paradigm as well as patient care. ❑ Managed care is replacing traditional fee-for-service insurance plans, driving down the benefit to specialized practice and taking decision-making power out of the health practitioner's hands. ❑ The hospital is losing its position as the primary locus of care as a wider number of services are provided in the health practitioner's office or patient's home. ❑ At the same time, for-profit giants are using their financial clout and business expertise to buy up not-for-profit hospitals and clinics. ❑ And there is still the nagging fact that 40 million Americans have little or no access to health care.

All of these forces pose dramatic threats to AHCs, the most pressing of which may be funding. Who is going to pay for research, teaching and service innovation in an increasingly for-profit world made up of demanding, powerful purchasers?

There is no doubt that AHCs will have to transform themselves, and the conventional thinking says they will have to produce fewer physicians, focus on creating cost-reducing rather than cost-increasing technologies, and become more responsive to community needs.

But, given the pace and size of the change, there is a real chance that today's concerns may be passing trends. A new set of threats and opportunities could present themselves next week, next month or next decade. In this climate, setting a long-term agenda might seem like a waste of time, since prediction is all but impossible. But uncertain times are *precisely* when leaders should rededicate themselves to thinking about the future. Done right, long-range planning prepares leaders for the harsh environmental changes that are on or just over the horizon. And, at ELAM's third Forum on Emerging Issues, one method for doing it right – *scenario planning* – was presented.

WHAT IS SCENARIO PLANNING?

Scenario planning was first used in the 1950s to train military leaders for Cold War contingencies. Twenty years later, certain industry leaders began to employ its methods, and it has since become a favorite research topic among management experts such as Peter Schwartz and Kees Van Der Heijden.

A scenario is a tightly woven story based on the interaction of a few critical, uncertain forces. It is meant to provide a realistic picture of how an industry might be reshaped and have the effect of transporting readers into a possible future. A scenario is an invitation to a group of people to *rehearse* what they might do and consider how well they might fare in a different reality.

With the foresight he or she gains, a manager can begin to think through strategic strategies and tactics and set in motion the ideas that will create success under – and this is the important part – a number of potential conditions. The Forum's participants were encouraged to consider various actions they should take *today* if the scenario were in fact a glimpse of the future.

But the true purpose of scenario planning is not prediction. Instead, it is closer to what Schwartz states. "The point of scenario planning is to help us suspend our disbelief in all the futures: to allow us to think that any one of them might take place. Then we can prepare for what we don't think is going to happen."[1]

Thus, scenario planning is a method for *learning*. It helps to shatter the conventional wisdom over what the future will look like, and to prepare a course of action for a completely

[1] Schwartz, P. The Art of the Long View, New York: Doubleday, 1991.

different set of conditions. Arie De Geus[2] of Royal Dutch Shell sees the challenge in management as the ability to "recognize and react to environmental change *before* the pain of a crisis." De Gues says pain management or crisis management is, by necessity, autocratic. Under these circumstances, decisions are quick and implementation is rarely good. Therefore, by opening up people's minds to *potential* crises, they can mentally prepare themselves for when a problem comes and prevent a full-blown crisis. For example, using future scenarios, it's possible that AHCs could have done a better job in preparing for the unanticipated consequences of the Balanced Budget Act of 1997 on Medicare reimbursements.

Scenario planning served Shell well in the 1980s when oil prices dropped to $16 a barrel. Two years earlier, when things were rosy and prices stood at $28, they had developed a scenario for managing a significant price shock. By setting the learning process in motion *before* the shock, they were able to stem some of the panic. Again, the purpose of scenario planning is not just to create a specific strategy but to expand a leader's repertoire of options, so that when change does come, he or she can be more agile and adapt more quickly to it.

ACADEMIC HEALTH CENTER SCENARIOS

Forum participants considered, through a mixture of learning and doing, four scenarios prepared for the Forum, which were described by one ELAM fellow as "apocalyptic." The complete scenarios, which were revised from scenarios prepared for the Association of Academic Health Centers,[3] can be found in Appendix B. Forum participants were invited to suspend their current views and the need to defend history, to allow themselves to play and share outrageous thoughts, and to be like the blind Sufi examining the elephant – to explore the future with humility.

Assumptions Guiding the AHC Scenarios

- Financial resources and time will be increasingly constrained and pressures to remove poor quality and waste will grow.
- Accountability pressures for outcomes will increase.
- Educational and service delivery capacity will be dynamically reallocated.
- Patients and families will decide more in health care.
- New health care service realities and changes in learning methods and technologies will challenge faculty to move beyond denial and anger at the loss of a cherished past.
- The cognitive dissonance between the organization's need for improved value and its requirements for academic promotion will be slow to disappear.
- Spelling and naming the names of new ways (superficial knowledge) won't be enough. Implementation will be what matters.

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[2] De Geus, A. Planning as learning. Harvard Business Review. March/April 1988.

[3] Batalden, PB, Evans, JP, Ryer, JC. "Weaving a Tapestry of Change: Quality and Values in Education," in Mission Management: A New Synthesis, vol. 2, Rubin, ER, ed. Washington DC: Association of Academic Health Centers, 1998, pp. 129-50.

These assumptions led to identification of two critical uncertain forces or variables facing health professions education – whether education will continue to:

- take place within the AHC or in the community, and
- be conducted within disciplines (e.g. medicine, dentistry, nursing) or be interdisciplinary.

Placing these variables on two axes led to four scenarios to answer the question, "How should we educate health professionals in and for the future?"

Health Professions Education

	In the AHC	In the community
In the discipline	Reshuffling the Deck	In the Niche of Time
Across disciplines	Bridge Over Troubled Waters	Tear Down the Walls

In the Niche of Time Scenario

The realities of the targeted niche market have moved, finally and inexorably, into health care. After a few big players realized there was money to be made, the stampede to niche marketing of every health care service – at least every kind with profit – began.

Among the niche players is MotherCenter, a chain of outpatient maternity clinics recently opened in 50 major cities and another 50 prosperous suburbs by KinderCare Company, a darling of Wall Street. The clinics offer one-stop care from pregnancy test through the post-partum visit. The clinics are fully equipped for normal vaginal deliveries and routine and emergency c-sections. They even have mini-NICUs to stabilize newborns in trouble. Throughout her stay, the mother enjoys gourmet fare and a private room decorated like an upscale bed-and-breakfast.

Given this option, pregnant women were only too happy to leave the increasingly crowded, understaffed and unpleasant conditions of hospitals. They had been looking for an alternative since the mid-1990s when they began to see insurer and hospital complicity pushing "drive-by" deliveries and grew annoyed by the hospitals' overtly capturing every possible charge from rent-a-doulas to metered labor-and-delivery nurses.

The impact on hospitals, especially teaching hospitals, was immediate, dramatic and negative. The centers immediately drew off the middle- and upper-class patients, "the paying clientele," and left the hospitals to care for the growing number of indigent on what little reimbursement they could get from Medishare, the last vestige of the old Medicaid program.

Re-Shuffling the Deck Scenario

With patients in revolt, budgets shrinking, enrollments dropping and graduates and employers clamoring about the relevancy of medical education, six medical schools joined together to take a long, hard look at reorganizing care. The resulting reinvention of care organizations and graduate medical education sent a seismic wave throughout the health care world.

The new system has "first contact" health workers – many not physicians or even physician extenders – to conduct initial assessments, diagnose and treat a core group of common conditions, often working in patients' homes, in schools and child care centers and work places. Their efficacy is bolstered by the increasing use of Web-based health resources.

The second level of training focuses on an intersection of health concerns and demographics, much as pediatrics and obstetrics had always done, but redefined to manage all care for a given demographic group. The meta-discipline for mid-life women, for example, includes the traditional disciplines of gynecology, internal medicine, cardiology, orthopedics and ophthalmology to cover all health needs for women in that age group and present a one-stop shopping solution.

The top level of training is focused on the cell and organ system level and trains specialists in very small numbers. The top-level trainees receive advanced learning in global communications to help them use the most specialized information. And telemedicine brings the third-level specialists wherever they are needed, so their small numbers create high-level expertise and volume of practice.

Tear Down the Walls Scenario

The Dean of the Medical School surveyed the group gathered at the convocation ceremony and noticed their nervous anticipation. She was about to present a new and terrifying departure from the traditional method for medical education. "Our health care institutions have failed," she began. "It is if we have built a beautiful city, and then built a wall around it so that no one can enter. We expect those outside the walls to pay us exorbitant rates but let them come to us only grudgingly."

Step by step, the Dean outlined the new structures, curricula and organization of the medical school and center. No longer just a medical school, it now will be a community health sciences university. The school will abandon its old structure for a new training pyramid that builds on the greater numbers at the bottom in the courses for community health workers, EMTs and home care workers, with nurses and technicians at the next level, mid-level practitioners and on to physicians.

Echoing back to a concept long thought dead, she described educational programs designed so that people who are successful, both as students and in their professional role in the community, can enter education and work their way up. EMTs can train on as nurses, then as mid-level practitioners, then as physicians. And no one – not nurses, physicians or pharmacists – will graduate without completing a six-month rotation as a full-time community health worker.

A Bridge Over Troubled Waters Scenario

By 2006, some of the promises of the 90s had come to pass. The seniors lobby had forestalled any meaningful reform of Medicare or Social Security. Aging Baby Boomers, who started turning 50 at the rate of 10,000 a day in the late 90s, were suffering heart disease, new lung cancers, skin cancer and knee-replacements and a host of other mid-life problems. And whatever social and family problems that had led to violence and teen pregnancy had not been resolved by the time the next baby boomlet members reached their teen years.

The social safety net was frayed to the breaking point by Draconian budget cuts, which unleashed a wave of riots not seen since 1968. AHCs moved from a figurative state of siege to a literal one. After multiple acts of hospital violence, security was tighter than at international airports.

Many hospitals had not been good neighbors to their community; and after years of health care systems dumping problems back on the communities the tables have turned. Police, social service agencies, schools and families demand that health providers treat and understand social ills as well as physical ills. Communities want action and answers; some innovative solutions have begun to bubble up.

In Duluth, Minnesota, trained nurse-mediators ride with the police on domestic violence and assault calls. In Harlem, psychiatrists doing follow-up care on patients living in abandoned junk cars were joined by vocational rehab specialists. In partnership with Los Angeles schools, Habitat for Humanity and the AFL-CIO Building Trades Council, pediatric community nurse practitioners set up asthma surveillance systems. And, in Detroit, the Wayne County Vocational Technical School in partnership with a consortium of health care payers and General Motors were using telemedicine units to monitor medications, offer meals and telephonic check-in services for seniors.

WRITING SCENARIOS

"Scenarios invite us to think beyond an assumed 'Official Future,' Schwartz[1] says. "The point of scenario planning is to help us suspend our disbelief in all the futures: to allow us to think that any one of them might take place. Then we can prepare for what we *don't* think is going to happen."[1]

To push beyond the familiar mental models, it is helpful to select two critical uncertain forces or variables you wish to address, as was done in the AHC scenarios. In those scenarios, the two critical variables are: (1) the location where education would take place, and (2) the groups (disciplines or interdisciplines) who would organize the education. Scenarios then can be written to describe the interactions among these.

As a second example, the two uncertain forces for the future of clinical services might be how the services will be operated:

1. by *delivery of care*, organized by
– disciplines (e.g. cardiothoracic surgery, cardiology, nutrition, rehabilitation medicine), or
– disease orientation (e.g. heart disease)
2. by *institutions*, organized by
– single AHC, or
– alliance/partnership (e.g. two AHCs partnering, AHC-insurance company partnering).

In a third example, one might consider the increasing partnership of health care organizations, and select two critical uncertain forces such as:

1. *nimbleness of change* within the resulting organization, whether:
– agile, with quick cycle change, or
– cumbersome, with slow cycle change
2. *degree of fit* of the post-merger siblings, whether:
– competitive, in which parts don't fit well, or
– interdependent, in which parts fit well.

Scenarios can always be more inviting. Therefore, in constructing a scenario, it is important to remember that it will never be *done*, just *due*. A scenario writing group needs to recognize that no one has ever written a perfect story.

The aim is to create a good scenario story that walks a tightrope between the future and present, neither *floating* in a future where it makes readers too nervous, nor *embedded* in the current reality. If the story is too outlandish, it won't be sufficiently plausible to engage its readers. If it is too current, the readers won't confront the mental models they are using.

Letting go of the present is variably difficult for people. If people find themselves repeatedly rehearsing the current frustrations, it may signal a greater need to "formulate the current mess," as Russell Ackoff says, before problem solving.

Moreover, while scenarios are intended to shake people up by challenging the mental models in use, the person orchestrating the planning effort needs to recognize some need for comfort among the group. Earth-shattering events will make people question their importance in the proposed order. The intention is to *invite* people to suspend their mental models, to *engage* people and not to frighten them off.

In sum, scenarios can help people process inputs that are now customarily mentally filed in less accessible ways or as frustrations. Scenarios can increase our receptivity to new ideas, to making sense in different ways as we rehearse the future. Scenarios are useful if they help make sense of a new or emerging pattern.

WORKING WITH THE AHC SCENARIOS

What might life be like within the scenario?

Working in small groups of no more than 10 people, the Forum's participants started off by *"living"* in each AHC scenario and interpreting how the conditions might feel, through answering a series of prompting questions:

- What are the *salient features* of the scenario for health professional education?
- What might be *attractive* – personally and professionally – about life in that scenario? (And what might be assumed and underneath the attractions?)
- What might be *frustrating*? (And what might be assumed and underneath the frustrations?)
- What might be a *"warning signal"* that something like this future is at work?
- What *should have been done* back in 1998?

As the participants volleyed answers back and forth and challenged one another, a designated scribe recorded the conclusions, and each break-out group reported its findings to the entire group after 20-30 minutes of discussion. Attention then returned to the last question on the list – action items. The break-out groups narrowed their actions lists to 5-10 *robust options worth trying.* These robust action ideas seemed to have utility *across* several

scenarios. Themes of important action ideas emerged as to what might make sense for AHCs to begin to do.

Action Ideas from Analysis of Scenarios for Health Professions Education

Integrate with the Community

- Align the AHC's mission with the community's needs.
- Identify the community's change agents and begin to team with them.
- Create proactive interactions among patients, students, doctors and educators.
- Enmesh the AHC in the community early on through community health centers, support programs; churches and innovative interventions.
- Redefine the AHC's mission, setting its limits and developing new delivery models.
- Create a community-based education system, which trains and employs community health lay workers.
- Create area health education centers.
- Increase the collaboration among AHCs.
- Educate the community and government regarding health care problems and future increasing social concerns.
- Use technology to connect stakeholders to academic systems.
- Rely on community stakeholders in solving health care social problems.

Change the Educational Process

- Link education more closely to the physician's eventual practice.
- Begin to teach public health and complementary medicine.
- Create a flexible curriculum that reflects the community needs.
- Focus the curriculum on outcomes.
- Begin to develop methods for distance learning.
- Build new off-site strategies for general medical education.
- Hire community physicians to teach classes.
- Develop an interdisciplinary approach; break down department silos.
- Emphasize community medicine, geriatrics and epidemiology.
- Continue the focus on high-tech, basic science research (molecular biology, genetics) but clearly focus the effort on therapies and cures.
- Maintain a separate track for medical students but incorporate specific training regarding working in cross-professional teams.
- Create a public-service requirement for residents.
- Begin collaboration between AHCs and other educational institutions on skill-based learning.
- Emphasize sub-acute care.
- Seek a diverse student body.
- Develop cross-training programs to break down the hierarchical structure between professionals and paraprofessionals.
- Put in place incentives to encourage the faculty to work across disciplines.
- Develop separate tenure tracks for educators, basic science and clinical practitioners.

Become Better Business People

- Encourage joint venture partnerships.
- Go public to find financial resources.
- Establish outcomes to stimulate financial investment.
- Develop niche markets and use them in medical education programs.
- Develop product line management.
- Focus on a smaller number of centers of excellence and consciously choose not to be "all things to all people."
- Develop niche programs in close proximity to AHCs but operate them as separate business entities to contain costs.
- Establish primary care structures to support the tertiary/quaternary care system.
- Develop transportation systems to make care more accessible.
- Develop business expertise in running much larger corporate structures formed by consolidations and mergers.
- Decrease reliance of AHCs on medical resident labor.
- Reduce medical school class sizes.
- Downsize medical schools.
- Use strategic planning for focused, rather than across-the-board, budget cuts.
- Synchronize training of workforce with community demand.

Advance Information Technology

- Look for opportunities to create Web-based educational programs.
- Begin to use 'neural networks' for decision support.
- Create a medical information department with resources for various tracks.
- Train students and faculty in use of new technologies.
- Protect the integrity of our information by building strong fire walls within the system.

Using the AHC Scenarios in Tactical Implementation

Each group selected one or two action plans, with specific steps that could be begun in the *next week*. The groups then began thinking about the *disruptive* events that would get in the way and work against the intended results. Interference can come from anywhere, but Schwartz[1] identifies a few *"inexorables:"*

- Social, population, demography
- Technology
- Economic forces
- Politics, laws, regulations
- Environment

Planning for Disruptive Events in Implementation

Using these inexorables as thought triggers, the groups began to brainstorm possible disruptive events that might complicate taking action in the way the groups envisioned. They selected one potential disruption and developed some countermeasures to stem its impact.

- Disruptive event in one of the "inexorables" or other category
- Impact on the planned actions
- Countermeasures that could be designed for the disruptive event

After a brief discussion, the groups reconvened to share their thinking. One example of a disruptive event came from discussion of an action plan of consolidating basic science departments to facilitate interdisciplinary research and educational initiatives and to reduce costs. Several deans noted the difficulty in this action, and that this effort might be a 'career-ending' move on the part of the dean! The general consensus was that structural changes in the current hierarchical patterns would certainly be a disruptive event. Countermeasures considered included bringing the affected departments into the planning from the beginning, and developing clear incentives for the change (e.g. showing how reduction in some administrative costs could produce additional resources for interdisciplinary biomedical graduate education and pilot grant support for interdisciplinary research).

Identifying Critical Moments and Critical Incident Paths

The groups then considered a related approach to the identification of disruptive events and countermeasures – *"critical moments"* and *"critical incident paths"* in change efforts at their AHCs. Batalden defines a critical moment as a "step in the process when an 'action idea worth trying' is being acted on and being incorporated into the 'usual' professional education, processes, and systems...depending, in part, on the role of the academic health professional education leader."

ELAM fellows and deans worked in pairs and tried to draw some of the critical moments from an *"idea worth trying"* to being *"in place and working"* from their own experiences. Tips for identifying critical moments include:

- Start with a specific example of something new and in place and working
- Identify some critical moments in that example and add from your other experiences
- Place them in a time sequence
- Be as concrete as you can be

Several interesting examples were described and are outlined on the following page. The participants also went on to select a specific idea worth trying when they got home and connected the idea with the map of critical moments. In piecing them together, they uncovered a number of strategies for forcing their actions ahead.

USING THE AHC SCENARIOS BACK HOME

Writing detailed scenarios takes time. Therefore, it is best for them to be used on large issues that really matter. However, shortened scenarios can be useful in assisting in strategic conversation.

The shortened approach was used by one ELAM fellow, Dr. Karen Wendelberger, Associate Dean for Curriculum at the Medical College of Wisconsin. She put scenario planning to work almost as soon as she returned home.

> "We used this tool at a retreat to determine the purpose of the M4 year of medical school. After [the Forum on Emerging Issues], we refined some of the objectives...It worked very well, with 4 of 5 groups able to think of some possible futuristic methods (virtual patients, etc.) to train medical students. The participants had fun and I appreciated Dr Batalden's recommendation not to push them too far or try to accomplish too much in the first session. The exercise was a good way to develop some group identity. It made the participants identify issues that they will likely be struggling with and prepare some possible actions that would prevent the scenario's not-so-nice outcomes."

The session of trying scenarios at her AHC also made Wendelberger recognize some of her own limits.

> "The session made me aware of how difficult it is to 'think outside the box.' We all talk about it, but when actually asked to come up with innovative ideas, it is very difficult not to think in the manner you have become accustomed to. In particular, I struggled with the territoriality physicians continue to exhibit – thinking that M.D.s are the ultimate in health care, regardless of the health issue."

Critical Moments and Incident Paths for Change Efforts at Academic Health Centers

Idea worth trying				Plan in place and working	
Increase structure of 4th year + required ambulatory care rotation	Appoint faculty study group, endorsed publicly by dean	Student opposition to decreased flexibility	Student Affairs Dean and SOM Dean intervene to gain support	Committee approves plan (original plan sustained)	Plan implemented and endorsed by SOM dean - 4th year more structured with required ambulatory rotation

Idea worth trying					Plan in place and working		
Short initiative impacting high prevalence of Diabetes (DM) in African Americans	Dean: coalescing of ideas	Univ. Pres.: critical timing of presentation ➔ buy-in ➔ start-up $	Legislature: fundraising	Senior Mgmt: packaging of idea	AMC leaders' buy-in	Univ.: create academic unit	AMC leaders recruit + develop academic plan	Comprehensive DM program - clinical + research

WRAPPING UP

ELAM Forum participants had a number of comments about future scenario building and the process of learning during the Forum.

> It might be useful to role-play pessimistic and optimistic scenarios about the clinical service mergers taking place among AHCs. This could broaden the conversation about strategic options.

> I really enjoyed thinking about possible uses of technology in the future and how to break down the walls that health disciplines have constructed.

> Useful process....Would like to try this at my home institution. Our new president wants us to develop the new paradigms for AHCs of the future. This would be a great way to do this.

> Scenario-based planning can be used as we look at curriculum renewal; approach a possible hospital merger; address cross-discipline education and health care delivery; enhance our own health care delivery system.

> [I] see use in plotting strategy for reconceptualization and alignment of the components of the clinical enterprise; evaluation of clinical partners; strategic planning – to break out of the box.

The Forum facilitator also was pleased with how things turned out.

> "People got into it, stayed the course and were good sports. Thinking outside usual frames is tiring. The groups did well. In a short session like the one we did, you can hope for awareness, some insight but not too much analysis...Still, the ELAM Forum participants were able to help facilitate the process and were not intimidated by the "*differentness*" of it all. [On the whole,] they were quite imaginative and receptive – not threatened by vastly different futures for health professional education...I was pleased they engaged as well as they did. They seemed to have fun, and gave me hope for the future."
>
> *Paul Batalden*

Appendices

Appendix A:
List of Forum Participants

Appendix B:
Academic Health Centers Future Scenarios

Appendix C:
Additional Resources for Scenario Building

Appendix D:
Forum Facilitation

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APPENDIX B – ACADEMIC HEALTH CENTERS FUTURE SCENARIOS
The Scenarios: *Tales from Possible Futures*

Scenario A: In the Niche of Time

The realities of the targeted niche market have moved, finally and inexorably, into the world of health care. After a few big players realized there was money to be made, the stampede to the niche marketing of every kind of health care service – or at least every kind with profit potential – began. The bureaucratic and slow-moving institutions of not-for-profit hospitals and academic medical institutions have come face-to-face with well-capitalized ventures that are quick on their feet and seem to have an uncanny knack for understanding what patients really want.

Angela Quinn is euphoric, but still she has some big decisions to make. Though the pregnancy she's contemplating is only a few days old, Angela needs to make decisions about where and how to get her maternity care. Times have changed a lot. Her grandmother might have knitted booties as she waited for the rabbit to die, and she would surely have had her baby at the "best" hospital and with the "best" and most grandfatherly obstetrician she could find. Angela's mother would have had a home birth if she dared but settled instead for a midwife-attended birth at a so-called "alternative" family birth center.

Angela herself is leaning toward using the new MotherCenter chain of outpatient maternity centers recently opened by the KinderCare company; they offer one-stop care from pregnancy test through the post-partum visit. Whatever she needs, from regular prenatal visits to ultrasounds, from non-stress tests all the way to labor and delivery will be done at the MotherCenter location by their own staff obstetricians and midwives.

On a roll after its acquisition of the MotherCare line of maternity boutiques and its capture of the Huggies diaper line from the break-up of Kimberly-Clark, KinderCare opened MotherCenter clinics in 50 major cities and another 50 of the prosperous suburbs. The MotherCenter rollout was heavily capitalized by the Wall Street investment firm of KKR; even Syntex quickly bought up a minority position.

Combining the concept of day surgery center with the birthing centers of the 70s, the concept gained instant acceptance among pregnant women anxious to get out of the hospital setting. The centers are fully equipped for normal vaginal deliveries and routine and emergency c-sections, even to the extent of having mini-NICUs to stabilize newborns in trouble.

The public felt stung by what they saw as insurer and hospital complicity in pushing drive-by deliveries in the mid-90s and annoyed by the hospitals' overtly capturing every possible charge, from rent-a-doulas to metered labor-and-delivery nurses. Pregnant women were only too happy to leave the increasingly crowded, dangerous, understaffed and unpleasant conditions of the hospitals for the relaxed and airy environs and gourmet fare of the MotherCenter birth centers. Each MotherCenter has beds for one- to seven-day stays; the residential units are designed and decorated like an upscale bed-and-breakfast inn with comfortable accommodations for mothers, fathers and babies. Their midwives have equity positions in their "own" franchised unit. Unobtrusive nursing services are available around the clock. Some centers even have adjacent KinderCare children's centers with 24-hour child care and activities available to older children.

The impact on hospitals, especially teaching hospitals, was immediate, dramatic, and negative. Already dealing with shrinking pools of newly unionized residents, increasing levels of in-hospital violence, and a growing problem with cyber-sabotage of their information systems, hospital administrators have had their coping skills stretched to the limit. Now, maternity care, the one part of their work that had been a guaranteed "up" and great PR fodder, was being siphoned off. The family maternity centers immediately drew off the middle- and upper-class patients, the "paying clientele," and left the hospitals to care for the indigent on what little reimbursement could be gotten from MediShare, the last vestige of the old Medicaid program after it was cut and block-granted to the individual states.

And the numbers of indigent pregnant women were swollen once again by a boom in births to teenagers, themselves the product of the last baby boomlet.

To add insult to injury, the maternity centers also siphoned off many of the best OB/GYNs and midwives from the hospitals' own staffs. The OB/GYNs and midwives were only too happy to have job offers with equity positions, less productivity monitoring infinitely more pleasant working conditions, and the cream of the crop of patients. Congressional budget-cutting fervor had cut the reimbursement for graduate medical education almost to nothing, spurred on by some reimbursement scandals that looked remarkably like double-dipping to the Congress and the public. The academic medical centers found it hard enough to figure out how to care for the wave of teen births on minimal reimbursement, but the departure of paying patients and the best senior staff was almost more than they could handle. Only of slight consolation was an offer from KinderCare to pay a modest amount to the medical schools and residency programs to place residents in their facilities for training.

Angela didn't know it, but KinderCare was planning to meet the next stage of her needs as well. Just six months before, Disney had opened five of its new Minnie-Care for Kids (TM) Child Health Centers, and KinderCare was readying its response with its own pediatric extension of the MotherCenter line. The Disney Minnie-Care clinics specialize in one-stop pediatric care with extended hours and a kid-friendly atmosphere. Each exam room has a Disney theme (the Jungle Book room, Ali Baba's Cave), and Disney characters entertain the children while they wait for appointments. Waiting rooms feature food service and entertainment options for kids and parents. Disney brings its expertise in providing entertainment, training staff to provide consistent, smiling service, and managing waiting times and antsy children to this new field.

Disney recruiters have already had a few unhappy encounters with placement directors from the pediatric residency programs over just the kind of pediatrician they're looking for. The Disney folks quickly backed away from their "no-eyeglasses" rule for employees, but their demand for what they euphemistically call a "positive affect" isn't setting too well with residents who've been sleep-deprived for the last three years of their lives. More than one pediatric resident has been heard grumbling about "not going to wear those bleep-bleep ears to work," but then, the money is good, so Disney is getting the best of the clean-cut crop of this year's residents. The Disney salaries were especially good for pediatrics, and it seems like a safe haven from some of the pressures their older colleagues are reporting now that they're out in the trenches. On the agenda for the Disney Board in the near future is a joint venture with one of the California medical schools to assure a continuing supply of pediatricians, and control over the "product" of the school as well.

These two businesses have entered health care the old-fashioned way by today's standards. Starting in the late 90s, "virtual health care providers" began to make the scene. Overnight, companies with the ability to put together contracts and supply patients became the new providers, bypassing the traditional professional affiliations and business relationships of health care. Even upstart companies could and did grab market share from big players in the market by contracting for patients, then contracting for the docs to care for them and the beds to put them in. The idea of health care being affiliated with a particular institution was forever shattered. All those marketing efforts to create warm and fuzzy feelings about Community General Hospital went down the tubes overnight as patients developed about as much loyalty to their health care organization as they had to their long-distance phone company.

Just as Federal Express swept through the package delivery business with a bold idea in the 80s, companies like MedExpress were a fact of life by the end of the 90s. MedExpress did its ambulatory care in comfortable clinics in convenient locations. The difference was that MedExpress physicians didn't work directly for the company but came on a contract, and MedExpress used whatever hospital or outpatient surgery center gave the company the best deal. MedExpress regularly bought some services on the "spot" market. If the MRIs were cheaper this morning at St. Joseph's, the van that picked up the patients was dispatched to St. Joseph's. If the price changed mid-morning, MedExpress dispatchers re-routed the patient deliveries. Though it got some of its patients by contracting with HMOs for covered services, MedExpress's patients didn't "belong" to the company in any capitated sense. Many of MedExpress's patients came to the company directly for their services and were only too happy to go where the service was great and prices were tolerable. The decline of employment-tied health insurance, which had its roots in the mega-layoffs of the mid-90s, let many patients vote with their feet. And those feet were not willing to plod along

the blue and yellow lines (and jump through the attendant hoops) of the traditional hospital and clinic-based systems. MedExpress had taken a few lessons from the package delivery companies. Using bar codes, GPS satellite systems, and cellular phones and modems allowed MedExpress to know where its vans, the patients and the requisite information were at any moment in time. Its use of technology made guarantees possible that weren't even dreamed of before.

In a backwards way, one of the fore-runners of the MedExpress concept was the failed acquisition of the University of Michigan Hospital and Medical School by the former Columbia just before it, too, failed. By scooping up one of the mid-west's premier academic medical centers, Columbia would have quickly acquired a huge pool of desirable patients and got control of the supply pipeline for its physicians. Even more radical was the attempted takeover of a small HMO/hospital chain by one of the private medical schools. That venture didn't fare as well, doomed, some said, by the arrogance of the dean of the medical school. The failure of the takeover, and the resulting public auction of the medical school to the highest bidder, cast a pall over similar ventures for a while, but not for long. The medical school itself was bought at a bargain price by the US Army, which was tired of competing for the overly-specialized graduates of other schools after Congress eliminated the Uniformed Services University of the Health Sciences.

Another more successful venture took the diabetes community by surprise, when a Texas medical school scooped the Joslin Clinic and signed an agreement with Lilly-Value to create a series of Diabetes Connection Clinics throughout the Sun Belt. The clinics, with oversight staff of leading endocrinologists from the medical school, set up regional clinics for management of diabetes and its complications. The Diabetes Connection clinics stepped on everyone's toes, from the other regional medical centers to the community hospitals to the big guns of endocrinology that were left out. They were also incredibly successful financially, and Lilly's stock took a big jump as its market share in a demographic gold mine was assured.

The young woman behind the Lilly deal became the CEO of MedExpress and took the new company public. Though she didn't advertise the fact, she had cut her management teeth at the Columbia system in the years before its death spiral. She grasped quickly that in the health care business you could own everything and control everything or own nothing and still control everything. In an interview with *Investor's Business Daily*, she coolly explained that the "future in health care belongs to whoever sets the agenda." Was she concerned that she didn't have her own hospital or even hire her own physicians? "Not a bit," she said, "Health care is just like any other business. You get the customers, give them what they want, and the rest is easy. Our success hinges on that – that and the fact that our back-room operations for contracting and billing are ruthlessly efficient. Nobody from the traditional health care mind-set can beat us. I know to the penny the cost of every component of every service *and* the value that patients put on it."

Of course, Congress and state and federal regulators could not look at all of the money being made in the niche marketplace, without their traditional conditioned response. Not only did they want to get some of the profits directed to the public coffers, but they saw an opportunity – and to be honest a real need – to regulate the new scions of the industry. Possibilities for fraud, for self-referral, for over-service and for consumer rip-offs were clearly there; and the Kennedy-Kassebaum insurance legislation of the late 90s had given them plenty of room to maneuver with broad new regulatory powers. Congress climbed into micro-regulating out-patient oncology and diabetes centers to the point that patient focus groups likened reading patient brochures to comparing the nutrition labels on bottled water: lots of information about not very much. Even that did not chill the new trend, though the bean counting and regulation dodging ate into the not-insubstantial profits.

Angela Quinn isn't too worried about any of this. The drive-by delivery revolt of the late 90s spawned legislation that pays enough for maternity care so that she can exercise her choices. After all, once a public cost-accounting showed that maternity care dollars were carrying the rest of the hospital, insurers couldn't justify their bare-bones coverage any longer. That public airing of the financial volume of the maternity care business is also what got the attention of KinderCare and the investment bankers. They quickly saw that if you could tap that revenue stream – and not be saddled with the rest of the hospital overhead – you would end up with some real money. Limited tort reform for birth-related malpractice claims that was passed by the 107th Congress helped sweeten the pot, but wasn't an essential part of their calculations.

Once Angela finds out about KinderCare's new PediCare Centers, she'll probably choose KinderCare – and stay with them – until the kids are grown. And who knows, maybe by then it will have moved into general adult medicine, too, and then maybe geriatrics....

Scenario B: Re-Shuffling the Deck

With patients in revolt, budgets shrinking, enrollments dropping, and graduates and employers clamoring about the relevancy of medical education, six medical schools joined together to take a long hard look at the way care is organized. The resulting re-invention of care organizations and graduate medical education sent a seismic wave throughout the health care world.

In late 2001, a group of six major medical schools and academic health centers developed a curriculum initiative that dramatically changed the organization of training for the specialties. The new "meta-disciplines" cut across conventional disciplines and organized professional knowledge by the way patients, families, and other users most often sought care: by level of contact, by population group, and by cell type/organ system.

The new system would have "first contact" health workers – not all of whom would be physicians or even physician extenders – to conduct initial assessments, diagnose, and treat a core group of common conditions, often working in patients' homes, in schools and child care centers, and in work places. These new health care delivery graduates were prepared to help people manage the second level of need – the first being the level of health care they were comfortable in delivering as self-care or care to their family members.

The efficacy of that first line of health care was being been bolstered by waves of increasing use of Web-based health resources that led the health establishment to both decry the risks and role of the Web and rush to keep its own Web presence ahead of the curve. Growing from roots in the earlier self-care and self-help movements, the Web resources were drawing more people into broadly geographically dispersed conversations about health, about illness, and about wellness. Disease-specific discussions began to chip away at geographic variations in care, as people from across regions – and even countries – compared notes about their treatments and questioned their doctors. Early studies showed people able to avoid unnecessary visits because of information they'd found online. Some providers were able to adapt to the partnerships with their now-better-informed patients; but others railed at the resource, assailed the quality of the information, and seized on any example of harm caused by either bad advice or online charlatans. All the while the insurers were trying to figure out how to harness the movement to reduce costs.

The "first contact" health professionals were trained in the newly developing knowledge about the methods for the small population epidemiology useful in the care of panels of patients, study of the ways patients' values are expressed in their choices and preferences for care, and learning about the design and re-design of care systems and processes. Students also were trained to work with patients on an advanced level of self-care, use statistical process control charts to detail their daily weights for congestive heart failure patients, expiratory peak flows for asthmatics, glucose for diabetics. Technology made recording and charting daily values easy and patients now had better and more immediate information on their status than their caregivers did.

Technology also made it possible for groups of students in different – and sometimes very distant – locations to learn together. Many of the basic science courses would be conducted in tele-lectures with interactive, multimedia demonstrations and live, online discussion sessions. More advanced courses would use electronic discussion formats and teleconferencing for student mentoring. Both basic and advanced course would use pooled faculty resources drawn from other campuses and presenting their sessions electronically.

The next, second level of training in the new professional education scheme would be focused on an intersection of health concerns and demographics, much as pediatrics and obstetrics always have done, but redefined to manage all care for a given demographic group. The new subject areas of epidemiology, shared decision-making and ongoing improvement were now more sharply focused on the strata that made sense to those seeking care. The meta-discipline for mid-life women, for example, would include but not be limited to the traditional disciplines of

gynecology, internal medicine, cardiology, orthopedics, and ophthalmology to cover all health needs for women in that age group and present a one-stop health shopping solution. The meta-disciplines would act essentially as umbrella disciplines and provide age-, gender-, and even socio-economically focused care, in much the same way that NICUs or VA medical centers traditionally operated.

The top level of training would be focused on the cell and organ system level and would train third-level specialists in very small numbers. Under the new system, the whole of the United States would need only 12 T-Cell specialists and five who did biliary duct neoplasia. Although all the levels would be trained to use and welcome all of the new information and communications technologies, the top level trainees would receive advanced learning in global communications to help them use the most specialized information. Telemedicine brings the third-level specialists wherever they're needed – even globally – so their small numbers create high-level expertise and volume of practice.

The motivations that led to such a radical shift were mixed. Patients were increasingly frustrated with being treated as "presenting problems" and not as whole individuals, shuffling from one specialist to the next for common constellations of problems. And the Boomers, now reaching the age when their bodies were starting to let them down, were using the health care system more often and for specific sets of complaints that mirrored their age and accumulated physical "experience." They wanted health professional knowledge organized to better meet their needs.

Patients as a collective group – and a vocal political force – also were annoyed at having always to go through their primary care provider, a step that added time, delay and, it turned out, cost. Patients, having to pick up ever larger portions of provider visit costs, were livid when it took three visits – two to a generalist and one to the much-protected specialist – to get resolution for a relatively simple concern, but one that crossed organ systems.

Results from studies started to show that the gatekeeper concept wasn't panning out as a cost-saver. Physicians didn't really change their practice patterns, and analysis of pre- and post-gatekeeper era care-seeking behavior showed that most patients and most physicians had actually accessed care at reasonable levels, once care patterns were adjusted for certain groups of high utilizers and high-use conditions. Once the insurers had freed up access to specialty care, they, too, began to realize that the lines were drawn too finely to serve either the consumers' needs or the purchasers'. High-end insurance plans had good specialty access, but most of the low-end and public managed care plans were as stringent as ever.

As more and more physicians moved into completely capitated generalist practices, they, too, became overwhelmed with the complex and inter-related set of problems common to specific life cycle periods. Trained as they had been to master patterns of signs, symptoms and disease, they were overloaded in having to master detailed patterns for wide ranges of patients – and the fallback of referring for a consult was dramatically curtailed by economic reality and physician profiling systems.

Other concerns also created some impetus for change. Specialty physician unemployment reached 7.5% in the year 2000. Applications to medical schools dropped like a rock in response, and hospitals with residency programs began to wonder how they would cover staff needs. A few were demanding even more hours from senior staff – and pushing the talk of physician unionization to the top of discussions at water coolers, cafeteria tables, and coffee breaks. Public money – for graduate medical education, for medical student loans and loan repayment, for patient care – was tight and all but gone.

Medicaid was gone – the brief block-granting of funds to the states had, in retrospect, been only the beginning of its disassembly. Medicare was managed care only, and the only reason the 107th Congress got that through was because the Baby Boomers convinced their parents that managed care was actually better than fee-for-service, really, Mom, and a lot better than no Medicare at all. The Boomers knew, too, that without mandated managed Medicare, there wouldn't be any Medicare left for them in a few years. Since the Boomers outweighed and outvoted their parents at the polls, finally, it wasn't as hard a political battle as some had predicted.

Boomers and elders weren't the only ones choking the now slimmed-to-starvation health system. After a brief hiatus, the teenagers of the baby boomlet were getting pregnant and shooting each other at unprecedented rates. Childhood asthma had continued to skyrocket, in part because of increased air pollution after the repeal of the Clean Air Act. The health consequences of long-term drug use had not been mitigated by the legalization of most drugs in 1999.

Limits to care, the growing realization in the public that more medical care did not mean better medical care and did not include acceptance of the perceived value of alternative and complementary therapies, added to the energy for the new curriculum, as did the widespread respect for the hospice movement and the spiritual dimensions of healing. Of interest were the ways that these new disciplines had incorporated alternative and complementary medicine, as well as ways of delivering health care and disease prevention services, into more conventional streams of professional knowledge. It was after all, a required part of the meta-discipline curriculum for first and second levels of training.

Alternative health practices had reached a high level of acceptance with the public, and the health professions had gone along, some less grudgingly than others. Some of the alternative therapies had even proved to be quite effective. Many of the third-level specialists weren't too keen on things like crystal therapy, but they didn't have to deal with alternative therapies too often. The first and second levels of caregivers seemed comfortable incorporating homeopathy, mind/body therapy, and acupuncture into their practices when it seemed like they might be helpful. And decision-makers realized that complementary medicine was – for the most part – a comparatively inexpensive treatment. Of course, studies showing the volume of out-of-pocket money being spent on alternative health care didn't hurt either. Legislatures in seven states – beginning on the West Coast – voted to require insurance coverage for alternative medicine, so managed care providers had to scramble to find suitable – and suitably inexpensive – resources for treatment. The issues of credentialing and quality control sent chills down the backs of accreditors and HMO risk managers. Once they saw that the alternative-care-users were a pretty healthy group, though, they began to relax.

The six medical centers had shifted their care patterns, and early data on patient outcomes and patient satisfaction was quite positive. The adolescent who wanted to see a dermatologist wasn't any more – or less – miffed than he had been under the old gatekeeper system; and the older patients were quite grateful not to be shuffled around – at least as long as their providers appeared to know what they were doing. The disruption in existing staff was considerable, and one wag writing for *The Economist* suggested that it would have been better to wait until a Mad Cow-like disease had killed off the senior staff one by one than to try to get them to change. The new possibilities for the delivery of care, however, had been picked up by new model care systems; and every graduating resident from the consortium had three real job offers – all at a time when just 80% of the conventionally trained professionals were able to find work that matched their chosen field of preparatory studies.

Around the country, the other academic medical centers and policy makers watched and waited. Some were holding their breath, others were hoping for a fatal flaw to appear. But they all knew the gauntlet had been thrown down and they would have to respond.

Scenario C: Tear Down the Walls

Rows of assembled faculty, restless ranks of students and residents, assorted staff from the medical center – the Dean of the Medical School surveyed the group gathered for the Convocation ceremony. It looked just like every crowd she had addressed for the past 15 years but the number of staff from the medical center, some people who looked like they were there for the first time and the reporters and cameras at the back of the room reminded her – as if she needed a reminder – that this day would begin a new and terrifying departure. And the sense of nervous anticipation in the auditorium was palpable.

After the briefest of greetings, she launched into her speech. "We are beginning today on a bold path that will change medical education here, and everywhere, possibly irrevocably. We hope that it is the right path. Colleagues and students, the institutions of medical education as we have known them have failed. Our health care institutions

have failed. It is as if we have built a beautiful city, and then built a wall around it so that no one can enter. We expect those outside the walls to pay us exorbitant rates, but let them come to us only grudgingly. Neither the circumstances nor the people will allow this to continue any longer."

Step by step, the Dean outlined the new structures and curricula and organization of the medical school and the medical center. No longer just a medical school, it now will be a community health sciences university – with a twist. The school will abandon its old structure for a new training pyramid that builds on the greater numbers at the bottom in the courses for community health workers, EMTs and home care workers, with nurses and technicians at the next level, mid-level practitioners and on to the physicians. "We can no longer afford to isolate the people with the most training from the people with the least. If you don't train together as a team, you won't work together as a team." "Further," she said, "we intend to do this in partnership with this particular geographic place – its people and their needs. We intend to give priority to the people who live here as we seek to make ourselves locally the "right-sized" setting for the growth and development of the health professional workforce this place needs – now and in the future."

Echoing back to a concept long thought dead, she described educational programs designed so that people who are successful, both as students and in their professional role in the community, can enter local education and work their way up. EMTs can train on as nurses, then as mid-level practitioners, then as physicians. And no one – not nurses, physicians, or pharmacists – will graduate without completing a six-month rotation as an on-the-ground full-time community health worker.

She announced a new training level – a cross-disciplinary program at the master's level for clinical managers – requiring a degree in either nursing or social work to enter. Graduates would be prepared for a new field in clinical and social case management. In those roles, they will monitor and guide patients through the health care and human services system.

Set in a context of local lifelong learning, all of the training levels will share some classroom time and some clinical rotations, i.e., some courses will include both physician candidates and home health aides. Various parts of the room stir in approbation or agitation, as the Dean elaborated other new requirements in the curriculum: community-level epidemiology, discerning and using patient preferences, ongoing system and process redesign and improvement are among the new requirements at all levels. (Some had always thought her odd – now they were certain!) Nurses, mid-level practitioners and physicians must qualify in a course in outcomes analysis that helps them actually quantify the illness burden they are trying to address in their own work. Competency in advanced levels of information technology will be required for graduation. A listening skills series will require six weeks *each year,* just prior to the clinical rotations. A new course in the cultural anthropology of health will be a full-year requirement, and will foster cross-cultural understanding of birth, death, illness, aging and child-rearing practices in a culturally diverse society. "We are not and will not abandon basic science and clinical studies," says the Dean, "But we are remiss if we do not equip our students with the skills that they will need to use – for their entire professional lives – in order to put their clinical abilities to good effect." "We have partnered," she continued, "with AT&T to develop interactive online formats for delivering basic science and clinical science instruction. The new formats will highlight the interactive nature of learning and allow our curriculum to focus on interpersonal skills and team development."

Some of these were a hard sell with the faculty – and it wasn't over yet. What she knew, and the faculty didn't as yet, was that the State was ready to mandate most of these changes – and a few more less palatable ones – if they didn't move on their own. The President of the State Senate was on the warpath against what he considered to be an isolated, inefficient, and arrogant medical establishment. Her medical school, with the biggest state subsidy, was right in the line of fire.

The old-guard faculty shuddered in unison when the Dean announced that complementary therapies will be a required part of curriculum. "You will practice in the real world, and in the real world people use alternative therapies and expect you to be able, not only to advise them on what works, but offer insights into the wise use of these approaches as well. Seven states, including this one, now mandate health insurance coverage for alternative therapies." (The Dean took grim pleasure in her next pronouncement – might as well move a few of the old fellows a

little closer to apoplexy.) "We also will introduce a special certificate program in spiritual healing available to any professional level. "

Item by item, the Dean read out a litany of change. Faces relaxed into smiles or fell in dismay, as the organizational changes behind such a massive institutional change became clear. Slowly she headed to the crescendo – though by now her audience was too numb (some were laughing quietly) even to sense what was coming, and the security for this part of her speech had been tight.

"My final announcement today is an exciting one. We have a new partner in our efforts to bring about this dramatic change. The FHC health plan, headquartered in nearby Melrose Point, has acquired a significant, but still minority position, in the parent organization that oversees this institution." The Dean paused momentarily as she waited for the audience to settle down. This part of the announcement was obviously a surprise to everyone, a good thing, since FHC's CEO was a stickler for operational security.

"FHC, as many of you know, covers more than a million individuals in its health maintenance organization and managed care plans. FHC is eager to work with us to find ways to serve its members." (Nice paint job on the truth, she thought. FHC was in a tight squeeze with an aging and un-dumpable population and a shrinking cap rate from the Feds. The old crocodile was thrashing around for an answer, and we were the first bite-size solution in its path.) "Our institution will help FHC assure that its health care providers are the best and the best-trained in the world and can help meet the challenges of providing care in today's environment." (More euphemism, and this time she knew she wasn't fooling anybody in his audience. FHC wanted a hand in the training so it could get providers who could function in its increasingly cut-throat environment. If FHC couldn't assure a stream of the right kinds of providers – trained its way – FHC wouldn't survive. It was an unholy – and uneasy – alliance. Without FHC's money, the medical school, no matter how it was reconstituted, wouldn't survive either.)

She wound down her speech; she'd lost the audience – they were all twittering in speculation and astonishment and I-told-you-so's. Suddenly, she felt very weary. The path to this moment had been tough, and the trail ahead looked even rougher....

Scenario D: Community Professional Bridges: A Bridge Over Troubled Waters

By 2006, some of the promises of the 90s had come to pass. The "half-empties" were pitted against the "half-fullers" again. For those who seemed to see the darker side, it seemed that three age cohorts were driving the American Dream into the dust:

The seniors lobby had forestalled any meaningful reform of Medicare or Social Security long past the point where it would do much good; and beginning in 2000, rapid and draconian cuts in coverage, services and SSI were hitting the poorest elderly with a vengeance. Promised budget surpluses had been frittered away with bi-partisan abandon putting even more pressure on the entitlement side of the budget.

Aging Baby Boomers, who started turning 50 at the rate of 10,000 a day in the late 90s, were moving into the years when their vices and virtues were starting to catch up with them, each year seeing more heart disease, new lung cancers, skin cancer, knee replacements, and a host of other mid-life problems.

And the teenagers....Social scientists had predicted that teen violence and social disruption in the mid-90s would end with the aging of that cohort. They forgot to count backward, with the next baby boomlet reaching teenagehood at the turn of the century. Whatever social and family problems led to violence and teen pregnancy had not resolved themselves, and the rates of both were exceeding all records.

The social safety net was frayed to the breaking point by draconian budget cuts, and unleashed waves of riots not seen since 1968. Academic health centers moved from a figurative state of siege to a literal one. After multiple acts of hospital violence, security was tighter than at international airports. Cyber-terrorism had taken out more than one

hospital's major information system, bringing chaos to treatment. It had been one thing to distrust the electronic patient record or question the computerized pharmacy system's orders. But the real vulnerabilities of the information systems were something else again. One cyber-terrorist group had stolen some interesting medical records of prominent figures and then hacked the hospital's own Web site to post them there. Another planted a cyber-bomb that took out a hospital's whole system for 24 hours – effectively bringing all surgery and all but the most acute treatment to a halt. The nursing, medical, and pharmacy staff turned out every scrap of paper in the hospital to communicate the basic orders and prayed none would get lost.

Many hospitals had not been good neighbors to their community and, after years of health care systems dumping problems back on the communities, the tables have turned. Police, social service agencies, schools, and families demand that health providers treat and understand social ills as well as physical ills. No more sending frail elderly – and there are more of them every day – home to recuperate, only to have them call the police, 911, and the building super for help. Wishful-thinking nutrition lectures to teen mothers hadn't worked, and platitudes about gun violence as a public health problem hadn't helped. Cash-strapped social service agencies are fed up with seeing the health care systems collect capitation payments on the poor and the elderly and dump them on the agencies for care after their "appropriate utilization" meter has run out.

The community wants some action and some answers. Health care institutions have to respond or lose their relevance once and for all. Innovative solutions have begun to bubble up from within the community. Their presence buoyed those who always seemed to see the other, positive side.

For them, the hypocrisy of simple governmental solutions: "one need, one program" finally seemed to have been dealt a telling blow. Further, the lifelong bureaucrat image of public service had given way to a new breed of "community professional" and they seemed to be engaged in the most unorthodox set of undertakings!

In Duluth, Minnesota, trained nurse-mediators ride with the police on domestic violence and assault calls. Appropriate case management was started, a routine visit schedule begun, and a system for ongoing contact with the victims several times to monitor their injuries and assist with the emotional trauma was established. Repeat domestic violence calls were down, as were domestic murders. Joint criminology and nursing seminars had been set up by the University of Minnesota-Duluth and the police department.

In Harlem, the physiatrists who had been doing follow-up care on their patients living in the abandoned junk cars (parked forever in the same places) had been joined by vocational rehab and the mayor's new business development task force. They actually were starting cottage industries in junk cars! The Chamber of Commerce initially had taken on the capital development for the project as something of a wager...now they faced the issues of operations. The physiatrists noted real gains in what they had previously considered static levels of physical and mental functioning, but they were unsure where to categorize this kind of experience for their residents as they were preparing for the Residency Review Committee visit next week.

In partnership with the Los Angeles schools, Habitat for Humanity and the AFL-CIO Building Trades Council, pediatric community nurse practitioners had set up asthma surveillance systems, care monitoring plans for individual children at risk; and with their home visit program, they monitored the indoor air quality at home and at school. This had led to some renovations at home and school with fewer missed school days. The cross-professional learning and skill development was sponsored by the Greater Los Angeles Council of Labor.

In Detroit, the Wayne County Vocational Technical School in partnership with a consortium of health care payers; and Community Senior Centers were using telemedicine units donated by General Motors to monitor medications, offer meals and telephonic check-in services for seniors who were living in downtown senior apartments. Referrals to further care were being managed by the downtown church-sponsored community health workers, an affiliate of the Department of Medicine at Wayne State. The Medicine Department decided that this approach had been the most effective approach yet in its management of the frail, but still at home, elderly.

These four examples were only four of the hundreds on file in the Community Foundations Center. Just a short time ago – or so it seemed – the community had begun (with the help of the Federal Accounting Standards Board) to

address seriously the issues of cross-organizational accounting and (with the help of the Council of the Health Professions) beneficiary-focused cross- professional resource development. It had learned so many things it hadn't expected. For example, the professional training programs had been able to use some of the insights from the cross-organizational accounting methods to classify learning experiences. The Web sites had moved the lessons about the governance of cross-organizational efforts much faster than anyone had believed possible.

That term – cross-professional – had had more currency than meaning, but it began to take on some real meaning as physicians, nurses, and other health professionals began to shed their professional turtle shells and actually talk with, and work with, and appreciate each other as they cared for patients and figured out how to meet the real needs of the community. Some of the more seasoned, but not yet entrenched, professionals could be heard counseling their younger colleagues to abandon their jingoistic responses and categorical dismissals of colleagues from other professions. It began, at least in some circles, to be politically incorrect to call the docs arrogant, the nurses controlling, the administration to be clinically unconnected. Perhaps it was too much to expect that patients would get a little more respect, but who knows, that too might come in time.

Perhaps the most hopeful indicator of all was the quiet talk about the new meanings of altruism and service – topics and conversation that the "management mania" of the closing days of the twentieth century had all but silenced.

APPENDIX C – ADDITIONAL RESOURCES FOR SCENARIO BUILDING

1. Ackoff, R. Creating the Corporate Future. New York: John Wiley & Sons, 1981.

2. Anthony, WP, Maddox, EN, Wheatley, W. "Managing by your Mind's Eye." Management World. April/May 1987.

3. Batalden, PB, Mohr, J, Strosberg, M, Baker, GR. "A Conceptual Framework for Learning Continual Improvement in Health Administration Education Programs." The Journal of Health Administrative Education. Vol. 13, No. 1, Winter 1995.

4. Bezold, C. "Five Futures." Healthcare Forum Journal. 29, May/June 1992.

5. DeBono, E. Serious Creativity. New York: HarperCollins, 1992.

6. DeGeus, A. "Planning as Learning." Harvard Business Review. March/April 1988.

7. Eisenhardt, K. "Speed and Strategic Choice: How Managers Accelerate Decision Making." California Management Review. 1990.

8. James, J. Thinking in the Future Tense: Leadership Skills for a New Age. New York: Simon & Schuster, 1996.

9. Kao, J. Jamming: The Art and Discipline of Business Creativity. New York: HarperCollins, 1996.

10. Kuhn, TS. The Structure of Scientific Revolutions. 2nd ed. Chicago: University of Chicago Press, 1970.

11. Lorange, P and Nelson, R. "How to Recognize and Avoid Organizational Decline." Sloan Management Review. Spring 1987.

12. Michalko, M. Thinkertoys. Berkeley: Ten Speed Press, 1991.

13. Palmer, P. The Courage to Teach. San Francisco: Jossey-Bass Publishers, 1998.

14. Pearson, GJ. The Strategic Discount. New York: John Wiley & Sons, 1985.

15. Rappaport, Ralph. "Linking Competitive Strategy and Shareholder Value Analysis." Journal of Business Strategy. Spring 1987.

16. Schoemaker, PJH and van der Heijden, CAJM. "Integrating Scenarios into Strategic Planning at Royal Dutch/Shell." Planning Review. May/June 1992.

17. Schriefer, A. "Getting the Most Out of Scenarios: Advice from the Experts." Planning Review. September/October 1995.

18. Schwartz, P. "Composing a Plot for Your Scenario." Planning Review. May/June 1992.

19. Schwartz, P. The Art of the Long View. New York: Doubleday, 1991.

20. Senge, P. "The Leader's New Work: Building Learning Organizations." Sloan Management Review. Spring 1989.

21. Senge, P, Roberts, C, Ross, RB, Smith, BJ and Kleiner, A. The Fifth Discipline Fieldbook. New York: Doubleday, 1994.

22. Simpson, DG. "Key Lessons for Adopting Scenario Planning in Diversified Companies." Planning Review. May/June 1992.

23. Stata, R. "Organizational Learning–The Key to Management Innovation." Sloan Management Review. Spring 1989.

24. Tenaglia, M, and Noonan, P. "Scenario-based Strategic Planning: A Process for Building Top Management Consensus." Planning Review. March/April 1992.

25. Thagard, P. Conceptual Revolutions. Princeton: Princeton University Press, 1992.

26. Wack, P. "Scenarios: Uncharted Waters Ahead." Harvard Business Review. November/December 1985.

27. Wack. P. "Scenarios: Shooting the Rapids." Harvard Business Review. November/December 1985.

28. Wack, P. Scenarios: The Gentle Art of Reperceiving. Cambridge, MA: Harvard College, 1984.

29. Whipple III, W. "Evaluating Alternative Strategies Using Scenarios," Long Range Planning, Vol. 22, No. 3: 82-86. 1989.

30. Wilkinson, L. "How to Build Scenarios." Wired. 1996–Special Edition.

31. Zentner, RD. "Scenario Approach to Future Planning." Chemical Engineering Progress 82. (June 1986): 25-29.

32. Zentner, RD and Gelb, BD. "Scenarios: A Planning Tool for Health Care Organizations." Hospital and Health Services Administration. 36:2. Summer 1991.

APPENDIX D: FORUM FACILITATION

Paul B. Batalden, M.D., the 1998 ELAM Forum facilitator, is the Director of Health Care Improvement Leadership Development in the Center for Evaluative Clinical Sciences at Dartmouth Medical School. In this capacity, he leads the creation and delivery of educational opportunities for physicians and other health professionals from professional school through mid-career. Dr. Batalden is a leader of the effort to accelerate the improvement of care for patients at Dartmouth Hitchcock Medical Center. He is also a consultant for international health care improvement organizations. Dr. Batalden serves as Chair of the Board of the Institute for Healthcare Improvement, and is a member of many professional associations including the Institute of Medicine of the National Academy of Sciences. In addition, he serves as the Ernest Breech Chair of the Department of Health Care Quality Improvement Education and Research at the Henry Ford Health Sciences Center. Prior to his current position at Dartmouth, Dr. Batalden was the Vice President for Medical Care and Head of the Quality Resource Group for the Hospital Corporation of America (HCA) in Nashville, TN. He also served as a member and past Chair of the United States Quality Council of the U. S. Conference Board, as one of the initial examiners for the U.S. Malcolm Baldrige National Quality Awards, as well as a member on several other Boards.

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Jeanne C. Ryer, author of the 1998 ELAM Forum's *The Scenarios: Tales from Possible Futures*, is a health care consultant specializing in issues of community health planning and primary care access, particularly in under-served and rural areas. She provides services in community health needs assessment and planning, grant and proposal development, and identification of potential funding sources. In addition, her current interests include clinical improvement in ambulatory care, uses of scenario planning in health care strategic planning, and exploration of potential applications for community health network development, telecommunications, and telemedicine in rural health. Ms. Ryer is a member of the New Hampshire Primary Care Steering Committee. She is a graduate of the University of New Hampshire and has a Master of Science in Evaluative Clinical Sciences from the Dartmouth Medical School. Ms. Ryer also is a writer and is the author of HealthNet: An Essential Guide for Up-to-Date Medical Information Online (Wiley, 1997), A Pocket Tour of Health and Fitness on the Internet (Sybex, 1995), and the co-author of The Internet Companion, a best-selling introduction to the global super-network (Addison-Wesley, 1992). Ms. Ryer has presented seminars and speeches on the Internet, online access to health information, and grant writing and has a bi-weekly commentary on health issues and the online world on Vermont Public Radio.

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