All the drivers, the metrics of success, the economic underpinners work against all these things we're talking about. We can't do what we need to do because the system works against it.

Managing mission tensions in academic health centers

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Unprecedented collective forces challenge the preeminence and survival of today's academic health center (AHC).[1,2]

Academic structure and culture have proven difficult to change to meet current societal needs, because they entail a deeply entrenched faculty value system,[1,3–9] and ingrained sociocultural norms that impede organizational innovations and leadership diversity.[10–13] This increased complexity of AHCs, compared with other academic settings, exponentially magnifies challenges, and makes leaders reluctant to abandon practices in which they are heavily invested.[1,9,14–18]

Dr. Steven Wartman's (AΩA, Johns Hopkins University, 1970) 2015 editorial in *The Pharos* asserted that the academic health center must adapt to a disrupted world.[1] A period of unique adjustment associated with a prolonged and permanent decrease in federal funding for research; fundamental changes in health care financing with the passage of the Affordable Care Act; the rapid emergence of major new electronic educational methods; and uneven recovery from the Great Recession. He asked how AHCs might "shake loose their insular, siloed traditions to change their culture and behavior,"[1] and proposed identifying transformational leaders who can align academics with patient care in a future orientation requiring skill in change management.

Hearing from AHC leaders

To explore institutional change management strategies by AHC leaders, a series of focus groups were conducted. Between December 2011 and September 2012, 74 leaders from the Association of American Medical Colleges' (AAMC) professional groups (Graduate Education, Research, Faculty Affairs, and Diversity and Inclusion),[19] with alumnae of the Executive Leadership in Academic Medicine (ELAM) program,[20] participated in nine focus groups. Group members included deans, associate deans, and chairs of medical schools; associate deans of research, faculty affairs, and diversity; deans and directors of graduate schools; and vice deans and provosts. Most had a strong history of federally-funded research, and careers of two decades or more in academic medicine.

The focus groups described the current state of affairs in AHCs as a polarity[21] between an emerging AHC structure and culture in response to financial and cultural forces, and the sustainability of the traditional

medical school missions.

The leaders' responses to questions about trends in collaborative and translational research, faculty trends, institutional and national influences, and the impact on institutional policies and practices echo the dilemmas identified by Wartman[1] and others. Responses included:

• Adapting promotion and tenure systems to value faculty's collaborative research, including instituting new promotion and tenure polices to foster institutional collaboration; providing additional time to tenure; and instituting new academic tracks that recognize diverse contributions. Institutional leaders play promotional roles by supporting new policies, and play inhibiting roles by maintaining traditional discipline-focused, single author publication standards of excellence.

In terms of promotion, we're struggling with how to reward multidisciplinary research... our dean has actually overridden some [negative] decisions in the basic science department on tenure.

• Managing faculty affairs and development for success of diverse faculty, often through mentoring and monitoring its influence on retention.
• Training in collaborative research, and creating a culture of collaboration in research.
• Prioritization and allocation of scarce resources to overcome the financial storm that results from trying to maintain traditional academic scholarship and productivity. This includes bridging investigators between grants, reducing tuition for medical students facing crushing debt, funding graduate schools, and tangible incentives for collaborative research.
• Generating clinical revenue within an academic system by recruiting clinical faculty, and establishing

expectations for research when they are able to fund their activities and time.

The leaders recognized the need for change that will hold AHCs more accountable to their community and society.[22,23] However, they also discussed the immediate daily problems they face, such as being overwhelmed dealing with the immediate crises, which leaves little time and energy to consider fundamental changes to the traditional academic system. One participant explained, "We pretty much don't have time to focus on those, because we're waiting for the next thing to come down the pike from D.C. and/or the state...[this has] thwarted any real interest in trying to get ahead in terms of what systems, what processes can we put into place... that can produce better outcomes and better behaviors, because we're just trying to keep up."

The leaders focused on incremental adaptations in institutional policies and practices that sustained traditional academic missions and values, rather than describing explicit "out of the box" or "over the horizon" institutional responses. They spoke of not knowing what to change or how to change the academic culture:[24,25]

You have to have people who will recognize the value of being able to think that it is important to do this type of work and put the incentives...on the table, and unless you have grown up with the idea that this is important, you are not going to...this is something that people need to get us [to] start thinking about as important to be able to implement it.
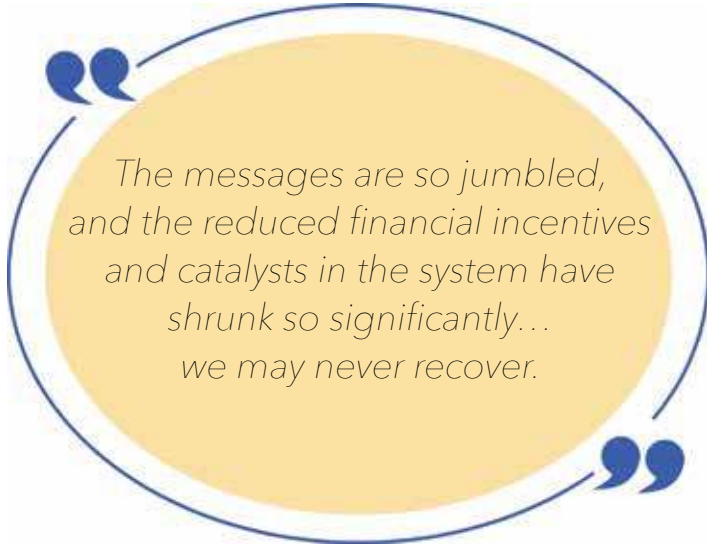
The leaders emphasized the importance of outside funding sources to enable innovations, which calls into question how many of the adaptive responses they mentioned could be sustained.

Polarity mapping as a way forward

We live in a world of extremes and polarities....We spend energy on justifying our position...on defending our ground, on protecting our position...we've lost sight of the middle...where possibilities reside....Humility and curiosity is what shifts us to center...toward the middle ground, with its fertile promise of new ideas and new relationships.

—Margaret J. Wheatlley

Addressing the complex issues facing AHCs today

> *The messages are so jumbled, and the reduced financial incentives and catalysts in the system have shrunk so significantly…*
> *we may never recover.*

- Tradition versus innovation;
- Stability versus adaptation;
- Academic ivory tower versus embracing societal needs;
- System centralization versus physician decentralization;
- Faculty autonomy versus collectivization; and
- Internal focus versus external focus.

From the focus groups, there was no indication of the institutional responses being out in front in regard to Rogers' theory[33] of responses to change—the response that determines how the world needs to change rather than coping with, reacting to, or denying, the need for change. This may be related to the negative impact of the influences—mixed messages from funders, short tenures of leaders,[34] and an academic culture that serves as an invisible backdrop of constraints.[1,8,10]

The polarity map serves as a catalyst to thinking, dialogue, and action to better manage the important, yet competing, realities in becoming vibrant leaders of innovation.

Application of polarity theory suggests several steps to answer the question, "How can we avoid the threats that inhibit our aspirations, and maintain a productive level of innovation that draws on both poles?" It can identify warning signs that an AHC is focusing too much on either pole, and conceive possible actions to bring the system back into balance.

The polarity management strategy is designed to function within dynamic systems of ongoing change, and can aid AHCs in productively moving forward. The ultimate goal is to advance academic medicine's capacity to innovate and adapt in clinical care, research, and education.

This strategy builds on the AAMC's initiative to describe five future forces, and their impact on academic medicine by 2025.[2] Organizations such as the AAMC, National Institutes of Health, and foundations could convene iterative meetings, commission groups, and/or conduct surveys to develop polarity management maps that identify the major polarities, and identify warning signs and strategic actions for rebalancing.

In addition, AHC leaders can be educated on the tools required for complex adaptive change, changing the academic value system, and obtaining a broader perspective beyond AHCs.

The recent Institute of Medicine report on Clinical and Translational Science Awards indicated the need to "create new benchmarks that place value on team-based science, leadership, community engagement, and entrepreneurship."[16]

requires moving beyond the usual change-management methodologies.[5–7,17] Several new approaches have been developed that involve actively engaging everyone—leaders, faculty, staff, students, boards, community members, patients—in developing a shared vision, implementing an action plan with iterative experiments, and monitoring for fast learning and adaptation.[6,7,14,26–28] These approaches recognize the inevitable tensions and paradoxes between independence and interdependence, consensus and conflict, and resistance and power.[28,29]

Polarity mapping[21] is a strategic organizational approach to align the values and culture of AHCs with innovations across silos. It enables a closer linkage and accountability to communities and society.

The polarity approach in change management enables dialogue to move forward in a strategic manner, beyond the current debate oscillating between the two poles—maintaining the traditional AHC with its intellectual rigor, and developing collaborative and open systems in order to be societally accountable.

An integrated polarity leveraging model[21] used in health care,[30] nursing,[31] and churches,[32] helps address the tension and conflict that arise from competing paradigms. The approach was developed to address ongoing, chronic issues that are inescapable in organizations, while also harnessing the tension to propel movement forward. Rather than seeking to identify the right paradigm, polarity management provides a process for drawing on the strengths of each. The process involves identifying competing trends (polarities); determining how each optimally supports and detracts from the larger system; and determining how to strengthen actions that contribute to optimizing benefits.

Polarities embedded within AHCs include:

Polarity mapping catalyzes dialogue to take the conversation beyond either-or polarities, and to identify and pursue opportunities for serving missions while allowing for needed organizational change.
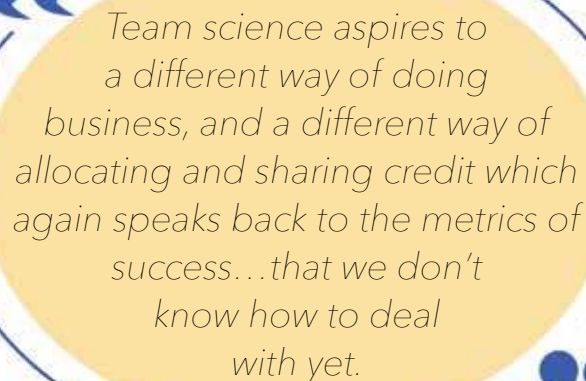
AHCs using this method of managing through organizational change will be optimally positioned for clinical, translational, collaborative, and entrepreneurial medical scientific research and application. They will have the ability to forge new academic values and culture, and be prepared to acclimate their community to the rapidly changing health care landscape.

Team science aspires to a different way of doing business, and a different way of allocating and sharing credit which again speaks back to the metrics of success…that we don't know how to deal with yet.

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POLARITY MANAGEMENT® MAP

Greater Purpose Statement (GPS*) – Why balance this polarity?
Academic Health Centers as Vibrant Leaders of Innovation

ACTION STEPS

How will we gain or maintain the positive results from focusing on this right pole? What? Who? By when? Measures?

- Include individual and group contributions in criteria and decisions for promotion, advancement, and merit.
- Set clear targets and jointly negotiated expectations for outcomes
- Provide continuous learning and skill development, especially in group inclusion of individual talents and perspectives across the organization
- Provide professional development in areas of individual expertise
- Incentivize collaborative activities aligned with institutional goals
- Foster ongoing transparency, with orientation to priorities, use of multiple communication methods, sharing information, and changing goals

EARLY WARNINGS

Measurable indicators (things you can count) that will let you know that you are getting into the downside of the right pole

- Decreased faculty/staff satisfaction (e.g., lack of feeling valued for individual contributions)
- Decreased collaborative productivity (e.g., confusion over individual responsibilities; groups assigned fall apart before work/goal is accomplished)
- Increased administrative burden in coordination and accountability monitoring
- Faculty/staff "doing their own thing" (e.g., pursuing own agendas; not being aligned with team efforts)
- Autonomous learning, independent of group goals

Innovating in Collaborative and Open Systems (upper right, positive)

- Transparency of process and information increases probability of trust-based culture
- Shared accountability and goal orientation stimulates team productivity
- Increased rates of progress from discovery to application
- Improved engagement, satisfaction, and organizational productivity
- Increased retention of diverse talent
- Social accountability encourages work for the greater good
- Public participation engages a wide circle of stakeholders

(lower right, negative)

- Disorienting and scary (e.g., leaves faculty wondering, "Where do I fit?," "Where is my professional home?")
- Collectivism compromises individual contributions and recognition
- Dialogue and consensus building with too many stakeholders requires increased communication skills and time; can slow decisions and implementation
- Weak leadership and ill-defined goals result in lack of direction and increased risk of team disruption and conflict
- Participation without expertise can drive agendas to unintended consequences

and

Sustaining Traditional Academic Missions (Education, Clinical Service, Research) (upper left, positive)

- Rules and tools for success (promotion, tenure, leadership) are established through policy and tradition
- Participants grounded in core/key goals of the missions and sense of serving society
- Systems favor autonomy, freedom of expression, and expertise, which leads to individual power and freedom
- Individual research/scholarship advances new knowledge
- Hierarchical leadership creates clear pathways for alignment and decision-making

(lower left, negative)

- Academic culture is so ingrained and invisible that systems are difficult to question or change
- Silos of specialties prevent information sharing resulting in uncoordinated approaches; reinventions with minimal variation
- Experimental scientific mental model requires evidence of high probability of generalization and effectiveness before investigation and implementation; inhibits applied action research, risk taking, and innovation even in face of external pressure for change
- High value on individual achievement inhibits relationship building and organizational learning; leads to predominance of ideas by small number of influential individuals; leads to incremental vs. coordinated research

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ACTION STEPS

How will we gain or maintain the positive results from focusing on this left pole? What? Who? By when? Measures?

- Broaden criteria for faculty reward and advancement to include collaborative scholarship, achievement of group goals
- Promote organizational learning through professional development programs and individual development
- Plan for succession and orientation to new roles
- Monitor the climate of fulfillment, morale, awareness of opportunity across the system, and establish standards of accountability for results
- Build more relational opportunities, recognitions and rewards (formal and informal)
- Educate leaders in establishing transparency, mutual strategic goal setting
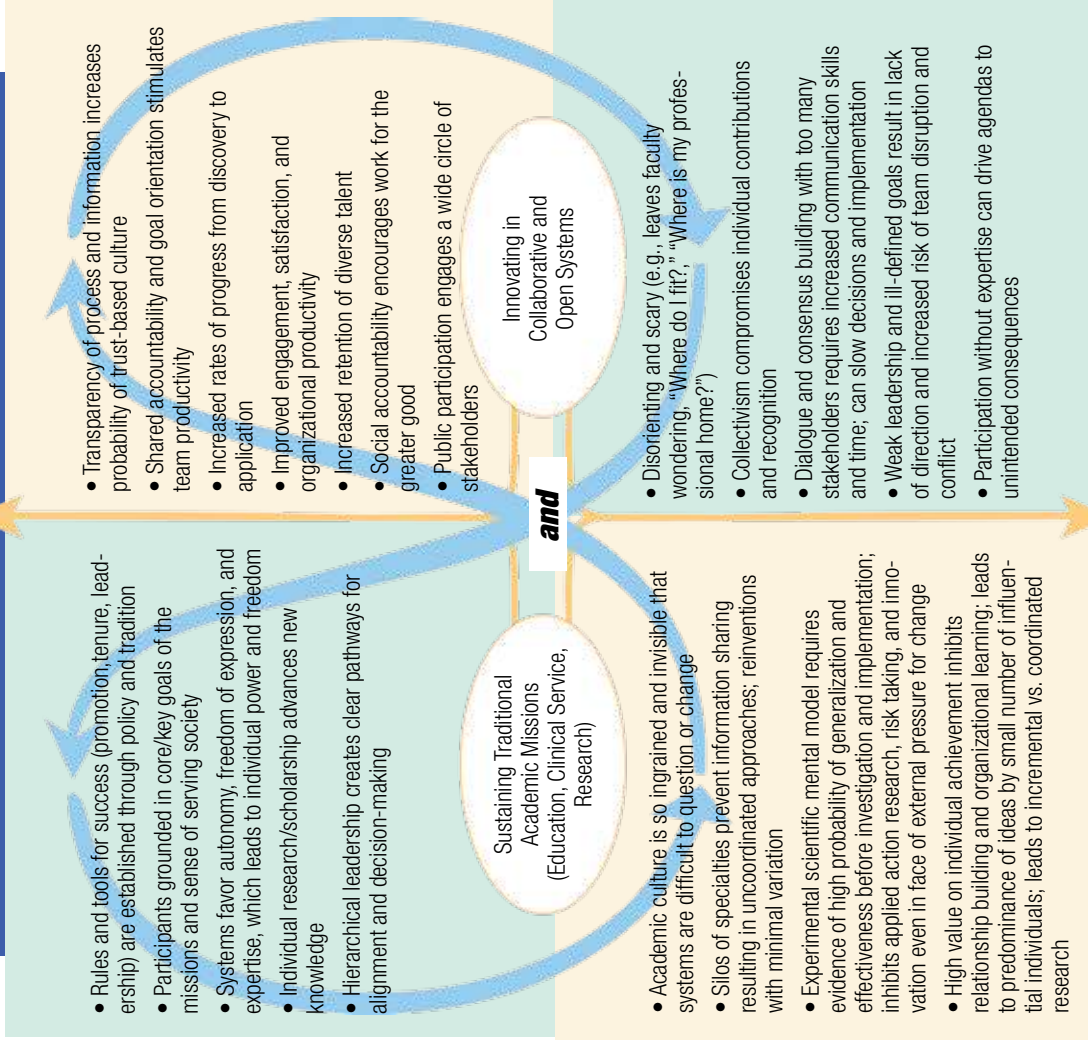- Create awareness of new technologies, systems, and public expectations throughout the system

EARLY WARNINGS

Measurable indicators (things you can count) that will let you know that you are getting into the downside of the left pole.

- Decreased reputation by external stakeholders (e.g., reduced funding, decreased student applications)
- Decreased diversity, same types of leaders (e.g., same goals, aspirations, actions, outcomes)
- Decreased recruitment and retention, especially collaborative and diverse talent; increased faculty departures
- Decreased faculty/staff satisfaction, engagement, productivity; increased depression, burnout
- Decreased excellence with faculty/staff assigned to new jobs for which they are not competent, and are not provided with training

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Dissolution of Academic Medicine
Deeper fear from lack of balance

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Representative analysis of one polarity (center quadrants) in academic health centers, using a framework of sustaining traditional academic rewards and commitment to service (left) and innovating in a collaborative, open environment (right); shown are each pole's benefit (upper center), and threats and fears about negative results of over-focus (lower center). The polarity management map (outer quadrants) shows early warning signs of over-focus on each pole (outer bottom left and right) and action steps organizations can take (outer top left and right) to rebalance for each pole's benefits (upper center quadrants). *Polarity Management Map adapted from Polarity Management Associates, LLC.*