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Alternative Futures

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Institute for Alternative Futures

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Upcoming Events:

Future Search. IAF Founder Clem Bezold, keynote speaker. Society for Social Work Leadership in Health Care. April 27, San Diego.

Shaping Pharma's Future: Influencing the New Business Models, IAF President Jonathan Peck, PBIRG 2006 Annual General Meeting. May 22, Aventura, Fla.

Wiser Futures: Using Futures Tools to Understand

Emerging Issues

Avian Flu Threat Requires Advance Planning for Business Disruption

If pandemic flu occurs, the potential disruption is likely to be swift and significant. IAF recommends organizations think through how they will protect their people and manage several weeks of business interruption as soon as possible.

Dr. Bill Rowley, IAF senior futurist, compiled the best current thinking about how events might unfold if the avian flu virus mutates to pass easily from human to human. He put these assessments into a wargaming exercise for a global firm with employees in many of the potential hot spots.

"It is essential that you proactively clarify company values, communications plans, and contingencies for a situation when events are happening too fast for rational answers to be developed for a multitude of issues," Rowley said. "You have to be prepared to empower people to make the right decisions for the situation they find themselves in. The threat could be very different in different parts of your world."

In the scenario, Rowley outlined the services likely to be disrupted by quarantine and general public panic. In a large scale epidemic, even the U.S. healthcare and emergency response facilities would be hard-pressed to meet the needs. Hospitals would not have sufficient respirators to treat pneumonia. As key personnel became sick or stayed home to care for family members, essential services like electricity could be compromised. In the most likely case, schools, government, and stores are likely to suspend operations to control the exposure to the virus. People should prepare to be isolated or limit their public exposure for two to six weeks while the virus runs its course.

IAF used the scenario to discuss how it will protect staff and maintain any essential work during an epidemic. IAF has good communications capacity for remote work; however, the business disruptions others experience would likely delay existing projects and affect cash flow.

IAF is lending its expertise to an avian flu simulation in the UK. Ben Sheppard of King's College London is leading this pandemic flu simulation with the Bioscience Futures Forum to test the bio-pharmaceutical industry's preparedness plans to manufacture and develop anti-virals and a vaccine for influenza. "Based on the methodology of wargaming in the political and defense sectors, the simulation will pull together key players in the bio-pharma industry and the UK's critical health assets to assess how the nation could respond to pandemic flu, and explore new partnerships and solutions."

and Create the Future. IAF futurists reprise this popular preconference workshop. World Futures Society Annual Conference, July 28, Toronto.

Anticipatory Learning Strategies for Schools. Marsha Rhea speaker and moderator, World Future Society, July 29, Toronto.

Certainly no one can say whether avian flu will amount to no more than swine flu or Y2K, or turn into a crisis that dwarfs the number of lives impacted by such disasters as 9-11, Katrina or the South Asian tsunami. Crisis planning is simply an essential management function in the face of uncertainties at the scale and speed found in a potential pandemic.

Shared Learning

Orthodontists Set Future Direction for a Changing Specialty

In a year-long futures project for orthodontists, IAF explored major forces of change likely to end treasured traditions and beliefs, and opened them up to emerging priorities for the specialty.

Working with the leaders of the Southern Association of Orthodontists, IAF forecast major changes in orthodontic education, treatment practices, patient markets, and the business environment. IAF created four scenarios that imagined exactly how different the practice of orthodontics could be in 2016. In March IAF facilitated the SAO Board and invited national leaders in creating a vision and strategic framework for orthodontics.

After wrestling with some provocative alternatives in the scenarios, these leaders were thinking in new ways about current faculty shortages in orthodontic education. They could try new models that include using Internet2 and different configurations of staff and curriculum. Realizing their practices are not truly insulated from globalization, they made educating their members about global changes, participating in international organizations, and welcoming international members one of four audacious goals for the specialty. They got very excited about scaling up a new foundation to provide access to care for the poor and underserved. They gained so much insight into how patients and the public are changing that they made rallying behind a proposed national public awareness campaign an imperative for the specialty.

SAO commissioned this research on the future of orthodontics and then worked to engage national leaders in the project. Now key leaders have drafted a resolution to be introduced in the upcoming meeting of the American Association of Orthodontists House of Delegates that would create a future directions task force to carry this work forward and monitor future trends and issues affecting the specialty.

“Every time we thought we had pushed the limits as futurists on how much change could happen, one or more orthodontists would quickly grab our lead and run with the idea,” said IAF Futurist Marsha Rhea. “SAO has really opened up a national strategic conversation that now has orthodontists asking the ‘what if’ and ‘why not’ questions that lead to a preferred future.”

Rhea and SAO Executive Director Sharon Hunt will share their lessons learned from this project in a session at the American Society of Association Executives annual conference in August.

U.S. Science and Engineering Ceding its Innovation Leadership

For most of the 20th century, America was at the forefront of innovation. U.S. scientists and engineers consistently led their fields and lifted the fortunes of American companies.

Now U.S. high school students consistently rank at the bottom of developed countries in math and science test scores. The U.S. share of four-year college graduates with science and engineering degrees has dropped considerably since 2000. Even in graduate degrees, North America has dropped behind both Europe and Asia in the number of degrees granted.

The U.S. attracted large number of immigrants from Europe and Asia to compensate for this shortage. Now many of these science and engineering graduate students and workers from abroad are staying home. Higher education institutions are improving in developing countries, especially China and South Korea. These emerging market economies are focusing on innovation to reverse their brain drain. And tougher U.S. visa requirements invoked to

address terrorism hamper admissions for foreign students.

Signs of weakness in America's preeminence in science and engineering are notable. The U.S. share of science and engineering papers has declined as the share of European and Asian papers has grown. Western Europe passed the U.S. in the number of papers published in the 1990s, and now Asian scientists and engineers are proving quite prolific. The number of patents filed by Asian companies and the money these companies devote to research and development are increasing rapidly. Collectively, Asian countries are on pace to outstrip the U.S. in both patents filed and resources spent on research and development by the end of the next decade.

This has a direct and measurable impact on America's economy. America's share of worldwide high tech exports has dropped from 31% to 18% from 1980 to 2001. Western Europe, South Korea, China and Japan are dramatically increasing federal spending in key areas such as nanotechnology, information technology, energy and biotechnology. They are doing this despite the fact that Japan and a number of Western Europe countries are only recently emerging from prolonged recessions, and China is still in the early stages of its development.

"If you extrapolate from current trends, U.S. prominence in innovation seems to be ending," said IAF Futurist Craig Bettles. "But this forecast is not inevitable. The U.S. has the resources to make science and engineering attractive to students and research and development available to spur innovation."

Intriguing Ideas

FDA Head Forecasts Circular Model for Clinical Research

Today's clinical trial regimens are expensive, too lengthy and do not deliver all the answers that patients and physicians need, according to Acting FDA Commissioner Andrew von Eschenbach, describing the agency's efforts to accelerate the drug approval process.

Speaking March 7 to the Personalized Medicine Coalition in a speech co-sponsored by IAF, Dr. von Eschenbach told people that a "radically different future is coming faster than expected." He argues that an integrating force will bring government, academia and industry into a new, non-linear, circular model for research that has real-time learning from patients informing discovery.

His vision for clinical research aligns with forecasts IAF has been making for a decade. Dr. von Eschenbach said new methods for assessing safety, efficacy and value will take us beyond today's clinical trial methods. In 1997, IAF first forecast significant acceleration of clinical research in Clinical Development 2005. Last year IAF updated this forecast with its "N of 1" clinical trials forecast in the 2029 Project.

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