THE FUTURE OF THE PHARMACEUTICAL INDUSTRY

YOUR CHANCE TO CONTRIBUTE

by Martin Lush

Ever participated in one of those benchmarking exercises? You know what I mean. When a (usually) fresh-faced consultant asks lots of questions and fills in a spreadsheet comparing what you do with your competitors. Well, beware.

BENCHMARKING CAN BE DANGEROUS

Trying to copy and follow others in a world of turbulence and massive uncertainty is a risky business. Assuming that what worked last year will work in the future is also very risky.

I recently presented the 30-minute webinar The Political Landscape and the Future of the Pharma Industry available in our resource library (**www.nsf.org/info/pblibrary**) under Webinars. Some of what I covered is highlighted throughout this article. Of course, my predictions for the future are based on educated guesswork and whether they happen or not remains to be seen. After all, 20 years ago we were told to expect a paperless society, flying cars and more leisure time by now! The objective of my webinar was to get people thinking beyond the here and now.

THE FUTURE

The future looks great providing:

- We're honest about the challenges (the facts).
- We get back to basics and break old, outdated habits.
- We all help each other and collaborate like never before.

THE FACTS

- We have 7.5 billion people in the world who need looking after. Sixty-five percent of all healthcare spending in developed nations will be on those aged 65+. The over 60s will also be the most powerful political lobbyist in the world if they so choose. They are more likely to vote for politicians who promise to meet their healthcare needs.
- By 2025, 85 percent of the global population will be in emerging nations.
- Governments simply can't afford to treat the sick any longer. Prevention will be preferred over treatment. Pricing and reimbursement schemes will drastically change. Increasing levels of antibiotic resistance will render "routine" medicine redundant. Governments will have to take a radically different approach to pricing and reimbursement unless they want society to return to the pre-antibiotic era.

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- Globalization, global warming, science and technology are all (for the first time in our history) accelerating at the same time. Everyone will be impacted. Drug shortages will continue, if not worsen, as supply chains are disrupted unless more is invested to improve resiliency.
- Medical technology will change our lives – 3D imaging, ultra-resolution microscopy, electronic patient records, computer aided diagnosis, low-cost gene readers and more. Wearable devices will put patients center stage and in greater control of their own healthcare.
- Short-termism will destroy corporations. Companies who run from one quarterly financial report to the next, ignoring the future, will not survive.
- Pharma currently spends, on average, $1.3 billion bringing a new medicine to market with an attrition rate of 90 percent. Clinical trial failures over the last five years cost the industry $240 billion. This level of inefficiency is not sustainable.
- Taking 15-20 years "from bench to bed" will not meet future healthcare needs.
- Much of the current regulatory framework is no longer fit for purpose and is guilty of stifling innovation when we need it most.
- Eighty percent of university students are pursuing degrees for jobs that will no longer exist. Any job with any level of repetition (manual or cognitive) is at risk of being automated. Expect pharmacy, law and financial professions to look very different.

THE PACE OF CHANGE IN HEALTHCARE TECHNOLOGY IS FASTER THAN OUR ABILITY TO UNDERSTAND ITS IMPACT AND FASTER THAN THE REGULATORY STANDARDS AND FRAMEWORK.

- Our world needs more economies of scale to achieve greater efficiencies. Expect to see more mergers (consolidation) and also demergers as mistakes are made.
- In Europe and North America, companies often struggle to find the talent they need. This is not the case elsewhere. More than 85 percent of the world's graduates in science, technology, engineering and math over the next two decades will be from Chinese and Indian universities.
- Although the impact of artificial intelligence (AI) in pharma is open for debate it will have a profound impact on healthcare. Did you know that one in 10 medical diagnoses is wrong? In some clinics AI can do a lot better. For example, AI is capable of predicting (with 80 percent accuracy) which patients would die of pulmonary hypertension within a year. Medics have only 20 percent accuracy. AI and wearable devices will allow medical interventions to be made earlier to cut back on treatment and hospital costs.

BACK TO BASICS: HOW TO PROSPER IN AN UNCERTAIN WORLD

Excellence in any walk of life comes down to doing the basics to Ph.D. level. The companies that will succeed in the future will, in my opinion, do the following exceptionally well.

LEADERSHIP: DYNAMIC, RISK-SMART AND FUTURE ORIENTATED

There is a big difference between leadership and management. Leadership is about doing the right thing. Management is doing things right. Pharma has relied too long on management. We need to recruit and develop risk-smart leaders at every level and get them onto the shop floor. Every leader needs to become a "futurist", not focused on the quarterly financials. The benefits and risks of AI are not being

correctly assessed by many senior leaders because many know so little about developments in technology and science.

WE MUST BECOME RISK-SMART

Companies still talk about zero risk as if it's real. It's not. Zero risk is an illusion. In fact, risk aversion is dangerous. It stifles innovation, increases complexity and (paradoxically) risk. We must become risk-smart. We have to admit risks and manage them intelligently and quickly.

SIMPLIFICATION IS SURVIVAL

Remember less is more. When we have simple systems, motivation improves, errors fall and productivity increases. Simple systems also allow us to "fail fast". In times of uncertainty we will make lots of mistakes. These only become learning opportunities if we fail fast.

STOP TRAINING AND START EDUCATING

Most companies' training programs just tick the compliance box and change little. Old behaviors remain. If you understand 10/20/70 and NSF's model for behavior change, B=M.A.t.H, your future looks bright. Your education programs must focus on providing the skills that will matter most: emotional intelligence, risk-based decision making, critical thinking and problem solving. Certainly not GMP compliance.

FROM CAPA TO PACA

When problems and errors occur, so many companies focus on the immediate correction. The "Band-Aid companies" who allow high levels of repeat errors and mistakes won't be around for much longer. The focus must be on prevention, not reaction, by designing out errors and mistakes in the first place and by brutally simplifying everything.

CHANGE MANAGEMENT: FAST AND EFFICIENT

Unless your change management system can review and approve changes in less than an hour, you are going to be in trouble. In this turbulent world agility is key. Your change management system must be quick (otherwise it won't be used) and only approve changes that add value and reject the rest (usually 80 percent!).

COLLABORATE LIKE NEVER BEFORE

I leave the most important and hardest to last. We will not meet future healthcare needs unless we all collaborate – regulators, industry, payers and patient groups. The latter have been ignored for too long. Unless we collaborate, we won't make it.

I still come across people and companies who are institutionally blind. They seem totally unaware and ill prepared for what is coming. Is it arrogance or ignorance? Who knows? For me it all boils down to simple economics:

> In 1960 healthcare represented less than 6 percent of the U.S. economy. By 2013 it had tripled to 18 percent of GDP. In the UK the total proportion of GDP dedicated to healthcare has increased from 6.6 percent in 1997 to 9.6 percent in 2010.
>
> If we as an industry fail to rise to the healthcare challenge, the results are likely to be soaring, unsustainable and a burden on us all.

REMEMBER YOUR TASK

> Listen to the webinar at your next team meeting. It's only 30 minutes long.

> Share this article with as many people as possible.

> If you have anything to add to The Facts and Back to Basics, please send them to me (martinlush@nsf.org). I will anonymize, collate and share in the next edition of the Journal.

> We're all in this together. This is your opportunity to contribute. There are 7.5 billion people depending on us.

Further Reading Resources

> White Paper: Is Fear of Risk Your Biggest Risk?

> White Paper: What's the Difference Between 10/20/70 and 70/20/10?

> White Paper: Changing Your Quality Culture and Improving GMP Behaviors: What Works and What Doesn't – including information on NSF's B=M.A.t.H behavioral change model

> Webinar: The Art and Science of Simplification – How to Win Your War on Complexity

Visit **www.nsf.org/info/pblibrary**

ABOUT THE AUTHOR

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Cite as: NSF International. May 2018. The Future of the Pharmaceutical Industry. NSF: York, UK.

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LPH-536-0418