

Entrepreneurial Aspirations for the Otolaryngologist

BY KENNETH T BELLIAN

Entrepreneurship is a process of identifying an idea and starting a business venture with this idea. It requires generation of a business model or plan that emphasises the value proposition for the customer. The model must identify the partners, resources, distribution channels, cost structure, revenue streams, customer relationships and segments. The entrepreneur is willing to assume both the risks and rewards associated with the venture. The entrepreneur is commonly seen as an innovator — a generator of new ideas and business processes (<http://www.investopedia.com/>). Management and leadership skills and strong team building abilities are often perceived as essential leadership attributes for successful entrepreneurs [1].

Many otolaryngologists feel that their only opportunity to become an entrepreneur is through the medical device industry. The ideas are generated by a simple modification or incremental innovation of an existing product. Sometimes a disruptive innovation occurs due to an attempt to solve a clinical problem. A disruptive innovation is one that creates a new market by applying a different set of values, which ultimately, overtakes an existing market. By performing this gap analysis, it is identified that no product exists to solve this problem. This is a very logical place to start, but there are many other opportunities that exist for innovation besides the device industry.

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The next most common area for innovation is in the fields of biotechnology and life sciences. With the advent of so many biologics being used in patient care, the clinician is bound to identify an opportunity for innovation. The use and types of biologics available for patient care will be dramatically changed by 3D printing. Examples of this are creation and manufacturing of artificial airways from cartilage. This innovation in printing can even make drug discovery an easier and less costly process. Consider the generation of cell lines which can manufacture tumours and organs for drug testing; 3D printing will create a much cheaper platform to test pharmaceuticals.

Health care is changing rapidly and one area where innovation can and will be needed is in the delivery of care. We must consider different practice paradigms to deliver the quality care we expect at lower costs. We most likely will need to accommodate more patient volume as in the USA, many of the underfunded or uninsured now access the insurance marketplace. One of the first areas will be to consider how to best utilise labour resources as they relate to the patient visit. We will need to consider the whole patient visit experience and segment it into discrete units which can be provided by different individuals of various levels of training. We can then assign the tasks to a person at the top level of their training and skill set. This would in essence embrace the ‘Toyota Production System’ and its concept of lean (http://www.toyota-global.com/company/vision_philosophy/toyota_production_system/). We would be using the right person for the right job at the right time without any waste or inefficiencies and can thus deliver a quality product. Creating a better process or flow for care requires creativity in thinking about the incorporation of advance practitioners. We will have to design new jobs and descriptions for individuals who will play an even

greater part in this delivery innovation.

We have been discussing the process as it relates to just one provider and the patient. Now we can consider how this practice of medicine is designed to include other providers. In the USA, as reimbursement decreases and costs steadily rise, it is becoming harder to provide care as an independent practitioner. This creates great opportunities to decide on how to structure the practice. Consolidation of several single specialty practices to form a large group is one option. Creation of a multi-specialty group can be considered advantageous in today’s medical climate. Some US practices have chosen not to be privately owned and have sold to hospitals for their management and direction. With these plans for practice design, US providers must consider if they want to be a part of an Accountable Care Organization (ACO) or a Patient Centred Medical Home (PCMH). These arrangements may be valuable as reimbursement changes from a fee for service to a value based reimbursement, with outcomes being measured or bundled payments. There are other creative solutions, but legal advice is recommended to avoid issues with Stark laws, anti-trust, pricing fixing, etc.

The entrepreneurial spirit does not stop with the process of care redesign and practice structure. We must reconsider the physical plant and how this must be adapted for the evolving care model. Redesign of the physical plant for all medical services is needed. This has been slowly evolving as care has moved away from hospitals to more of an outpatient setting. With the push for consolidation of care providers and the emphasis on preventive care, we must consider the ideal building which facilitates a patient friendly flow that is efficient and cost effective. The point of service will shortly begin to move outside the outpatient setting and to the patient’s workplace or home. This will accelerate as we utilise more technology

to provide care, such as telemedicine, wireless devices for home monitoring and electronic medical records. We will need to have a physical plant structure and a delivery care model which supports this type of distance or remote care.

Digital health and its associated products are extremely viable areas of innovation for the otolaryngologist. Many otolaryngologists have been actively participating in the design of electronic medical records to date. Mobile devices have gained popularity and their use in health care is becoming more commonplace. The development of applications which interface to existing medical programmes will be extremely valuable. These interfaces are for the electronic health record, billing and scheduling software. New mobile applications which assist in the delivery of care by making it safer, more efficient and more financially rewarding (cost saving and accuracy of charge capture) are needed. The use of telemedicine will provide a new way of accessing patients and referrals. Providing consultation care will begin to look very different as we incorporate tele-health into the normal daily routine. We can now visualise a day where many chronic medical issues can be addressed via telemedicine and the use of wireless health monitors. Some suggest that one of the three technologies which will revolutionise medicine is wireless monitoring and the Medical Body Area

Network (MBAN) devices.

Medicine is becoming more complex with so much data being collected from so many sources. Unfortunately, we are still knowledge poor with all this data until we design some systems to help us sift through it. Data analytics and ultimately predictive analytics will make this a reality. We will first consider ways to simplify all the data and draw conclusions from the existing data. Once we master this function, we must be able to use this to predict and prevent occurrences. Another great technological advance is cognitive computing, which is a system modelled after how the human brain works. Incorporating this computing function into the patient visit will assist in sorting through data and information more rapidly and ultimately in augmenting the decision-making process by the clinician.

This is not an exhaustive list but one that identifies a few areas where the entrepreneur can thrive and prosper. Shiv Gaglani believes there are three essential characteristics which both the entrepreneur and the medical professional possess: sustained effort and perseverance, focus and purpose. With these qualities he feels we can be innovative and successful. However, there are some differences between the entrepreneur and the practising provider that we will need to overcome to be successful. Entrepreneurs are generally risk-seeking, rebellious,

impatient, imaginative and scale-driven when planning projects, whereas medical students are risk-averse, obedient, patient, less creative and more individually-driven when trying to accomplish tasks [2]. As providers we will overcome these differences to create a new and transformative health care system. Mastering the entrepreneurial process with ideation, creation, execution and growth will spur innovation.

References

1. Prive T. Top 10 Qualities That Make A Great Leader. Forbes; December 19th, 2012.
2. Gaglani S. Why Medical Schools are Pumping out Entrepreneurs. Entrepreneur.com; October 30th, 2013.



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Declaration of Competing Interests

None declared.

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