# Medical Device Communiqué

Q4 2015




# 2015's TOP 10 MOST-CRITICAL GMP TOPICS

The "Top 10" GMP training topics are based on our experience having administered 70,000+ eLearning course completions to companies of all sizes since 2012, as well as our ongoing client interactions. Based on actual usage data, we have identified these 10 most-used Medical Device GMP/QSR eLearning topics in 2015:

1. Orientation to GMP Compliance
2. Introduction to the Quality System Regulation (QSR)
3. An Introduction to ISO 13485 – The Quality Management System for Medical Devices
4. Understanding GMPs for Facilities and Equipment
5. Handling an FDA Inspection
6. QS Regulation 9: Records
7. Good Documentation Practices
8. Quality Systems Inspection Technique (QSIT)
9. A Step-by-Step Approach to Process Validation
10. Principles of Sterilization

*(continued...)*

# 2015'S TOP 10 MOST-CRITICAL GMP TOPICS *(Continued)*

## Training is Most Effective When eLearning is Combined with Traditional Classroom Training (Blended Learning)

Many Life Science organizations are still conducting classroom and on-the-job training for most employees. However, adding eLearning enables training teams to reach more remote users at reduced costs. The advantages go beyond dollars, according to our clients' experience (as illustrated in our Five A's).

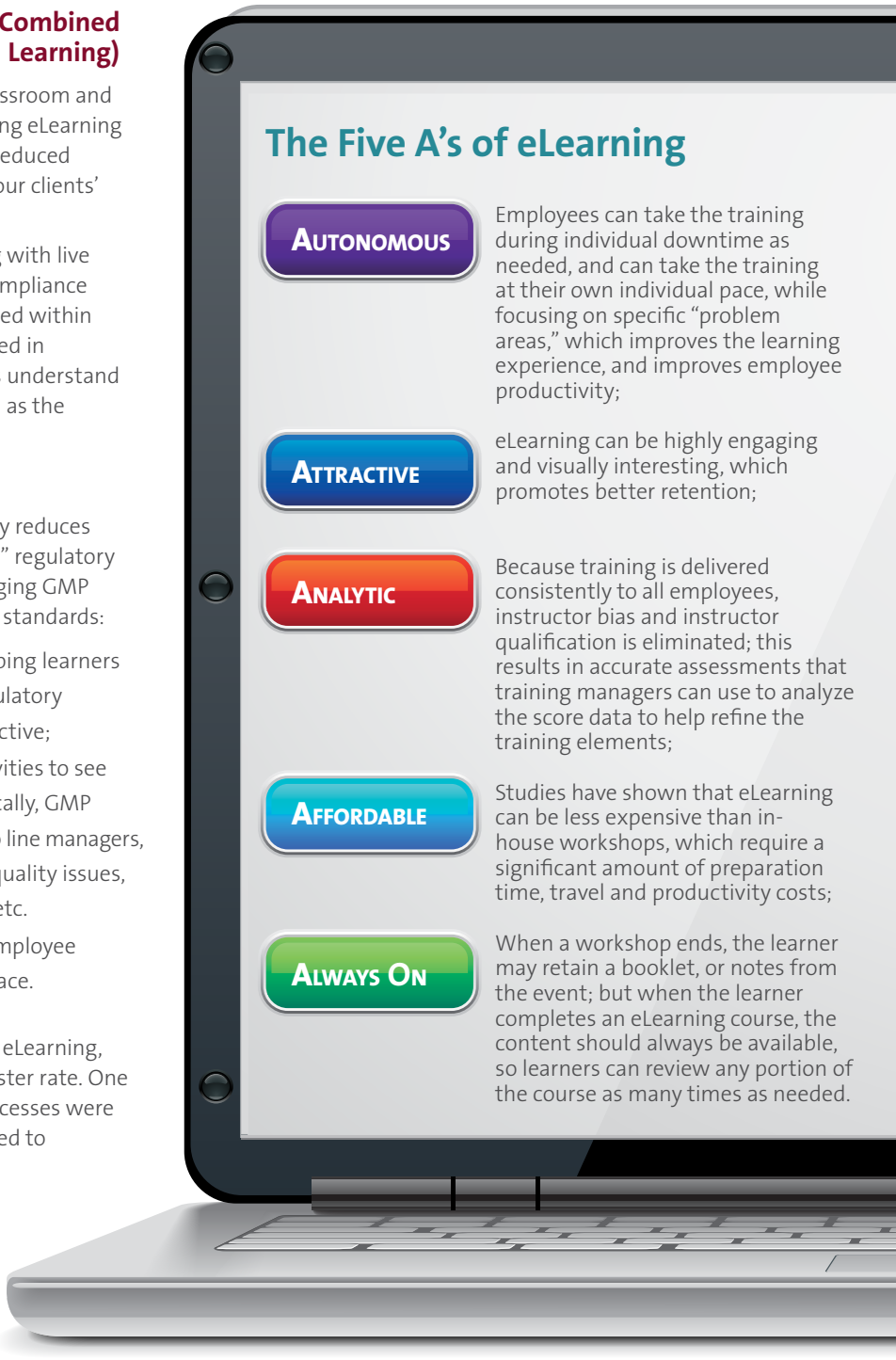
The blended learning approach of combining eLearning with live training is even more valuable when the topic is of a compliance nature. For GMP Trainers, regulations are often presented within eLearning courses, while "hands-on" topics are presented in classroom or "on the floor" situations – to help learners understand how these regulations impact company policies as well as the employees' day-to-day activities.

## Meeting Continuous Training Requirements

UL's clients find that using our eLearning courses greatly reduces the effort of their training teams to deliver "continuous" regulatory expectations, as they pertain to specific and ever-changing GMP regulations, GCP regulations, federal laws and industry standards:

- Employees gain additional training touch points, helping learners understand why a company focuses on meeting regulatory obligations, thus empowering them to be more proactive;
- Employees are able to rise above the day-to-day activities to see the bigger picture, improving quality culture; specifically, GMP eLearning training which provides extra motivation to line managers, operators and even knowledge workers to focus on quality issues, risk management, visual inspections, data integrity, etc.
- Studies have shown that eLearning fosters greater employee satisfaction due to the ability to learn at their own pace.

What's more, "training delivery" time is improved with eLearning, which may also result in improved performance at a faster rate. One eLearning study demonstrated that company-wide processes were introduced to employees 12 months sooner as compared to relying solely on classroom-only training activities.




**To set up a no-obligation demo or learn more about these courses, contact Pat Thunell at pat.thunell@ul.com or visit uleduneering.com/QCE.**

# RISK MANAGEMENT AND THE TOTAL PRODUCT LIFECYCLE APPROACH

*Can the Medical Device industry adopt a more holistic model to manage risk?*

That was the question posed during the Association for the Advancement of Medical Instrumentation (AAMI)'s two-day Risk Management summit, held in September 2015. This summit was attended by more than 400 attendees and led by QA and risk management experts, including UL's own Mark Leimbeck, who spoke about risk management best practices for startup companies.

UL EduNeering is building an eLearning course for AAMI, based on key topics discussed during the event, where instructional designers were on hand. AAMI will be using this course so that both attendees and non-attendees can recognize emerging consensus around best risk management practices in the medical device industry and within FDA. AAMI is also going to publish a comprehensive report in December based on the event and the outcomes of the facilitated discussions.

One of the sessions focused on the need for a Total Product Lifecycle (TPLC) Approach, as some individuals noted that today's risk management practices often do not allow for cross-functional input or use all possible sources of data. Attendees agreed that a successful model for risk management is one where the risk management process is applied across all lifecycle activities, and where the risk management file is regularly and comprehensively updated. Panelists and participants noted a number of places to begin examining and improving the current state of risk management in the medical device industry.

## Risk Management Workshop/Advisory Services from UL

UL provides a comprehensive workshop and Advisory Services focused on Risk Management and ISO 14971. Presented by UL ISO 14971 experts, our 14971 learning program includes a self-paced eLearning course and a two-day hands-on case study workshop, which covers all basic Risk Management product lifecycle steps.

Our workshop provides practical examples and concepts that QA and RA Managers, Risk Management professionals, and Engineering Design and Production staff can apply to their own situations.

Learn about our Risk Management Workshop on page 9.

## RISK MANAGEMENT AND THE TOTAL PRODUCT LIFECYCLE APPROACH *(Continued)*

# Communication & Input

**There is often little or no cross-functional input** into the risk management process throughout the product's lifecycle, as confirmed by Panelists – thereby limiting the perspective of those tasked with making risk-based decisions. Panelists also expressed a desire to improve integration of postmarket monitoring and feedback of information into the risk management process.

## UNDERUSE of Risk Management Information

**Participants agreed that Risk Management** is useful in identifying whether changes introduced during the lifecycle of a device have resulted in a risk that is no longer acceptable, and panelists emphasized that the Risk Management File (RMF) should be updated and assessed regularly for this reason.

## Legacy and Postmarket Risks

**Legacy products were of particular concern;** manufacturers should be considering how product changes, as well as new regulations, impact their risk files. Additionally, manufacturers should regularly review their complaint files and resolutions, and ensure that the product history is documented. This creates a record of institutional experience that can be drawn from to ensure residual risks are maintained at the lowest level possible, for both legacy and new products.

## Theoretical Risks

**Theoretical Risk scenarios** were another common concern; participants felt that manufacturers can become paralyzed by unlikely scenarios and make risk management decisions that are not in the manufacturer's or customer's best interest. Participants stressed the need to focus on risks that are less theoretical and more representative of actual field experience and data.

## Outside Risks

**To avoid Outside Risks such as an adverse event or product failure**, the audience agreed, greater focus should be placed on the context of use of the product that may have caused or contributed to the event or failure. Participants discussed manufacturers' tendency to look at a product and its risk in isolation — not noting the context or "ecosystem" in which the product will be used or installed.

## Cybersecurity

**The cybersecurity of medical devices is an area of alarm**, as per a great number of participants and panelists discussed – indicating that they felt manufacturers simply aren't prepared enough for this threat and that they have not adequately addressed the new and evolving risks associated with it.

# UNDERSTANDING MDR "USER FACILITY" REQUIREMENTS (21 CFR PART 803)

The Medical Device Reporting (MDR) regulation is one way in which the US FDA and manufacturers identify and monitor significant adverse events involving medical devices. The purpose of the MDR regulation is to detect and correct product problems in a timely manner.

This article focuses on the "device user facility," which is defined as a hospital, ambulatory surgical facility, nursing home, outpatient diagnostic facility or outpatient treatment facility but not a physician's office.

A "physician's office" has a specific definition in 21 CFR 803.3 as a facility that operates as the office of a physician or other health care professional for the primary purpose of examination, evaluation and treatment or referral of patients. The term physician's office includes dentist offices, chiropractor offices, optometrist offices, nurse practitioner offices, school nurse offices, school clinics, employee health clinics and freestanding care units. A physician's office may be independent, a group practice, or part of a Health Maintenance Organization.

While general reporting requirements for user facilities are contained in 21 CFR 803.10(a), specific reporting requirements are delineated in 21 CFR Part 803 Subpart C. Depending on the circumstances of an event, a user facility is required to make reports on the device causing the adverse event to its manufacturer, the FDA or both. These reports must contain the information required by 21 CFR 803.32 and be submitted on an FDA Form 3500A or an approved electronic equivalent. Reports must be made whether the event involved a patient, employee or individual affiliated with the user facility.

# UNDERSTANDING MDR "USER FACILITY" REQUIREMENTS (21 CFR PART 803) *(Continued)*

**Reporting to FDA –** A user facility must report to FDA as soon as practicable but no more than 10 work days after the day it became aware <glossary term: become aware – A user facility is deemed to have "become aware" when medical personnel of the facility become aware of a reportable event. The term "medical personnel" is defined in 21 CFR 803.3 as an individual who: (1) is licensed, registered, or certified by a state, territory, or other governing body, to administer healthcare; (2) has received a diploma or degree in a professional or scientific discipline; (3) is an employee responsible for receiving medical complaints or adverse event reports; or (4) is a supervisor of these persons.> of information, from any source, that reasonably suggests that a device has or may have caused or contributed to the death of a patient of the facility. A report must also be sent to the manufacturer of the medical device (if known).

**Reporting to Manufacturer –** A user facility must report to the manufacturer of the device no later than 10 work days after the day it becomes aware of information, from any source, that reasonably suggests that a device has or may have caused or contributed to a serious injury <glossary term: serious injury –an injury or illness that: (1) is life-threatening; (2) results in permanent impairment of a body function or permanent damage to a body structure; or (3) necessitates medical or surgical intervention to preclude permanent impairment of a body function or permanent damage to a body structure. "Permanent" means irreversible impairment or damage to a body structure or function, excluding trivial impairment or damage.> to a patient of the facility. If the manufacturer is not known, the user facility must submit the report to FDA.

**Voluntary Reports –** A user facility may also elect voluntarily to submit reports of device malfunction to the manufacturer. A malfunction is defined as the failure of a device to meet its performance specifications or otherwise perform as intended. Performance specifications include all claims made in the labeling (e.g., labels, instructions for use). User facilities are encouraged, but not required, to report malfunctions to manufacturers and distributors.

**Form 3500A –** The user facility is responsible for completing all information on the FDA Form 3500A that is reasonably known to it as described in 21 CFR 803.32. This includes information found in documents in the possession of the user facility as well as information that becomes available as a result of reasonable follow-up within the facility. The user facility is not required to evaluate or investigate the event by obtaining or evaluating information that it does not reasonably know.

**Annual Reports –** According to 21 CFR 803.10(a)(2), and as further delineated in 21 CFR 803.33, user facilities must submit to FDA annual reports including copies of or summaries of the death and serious injury medical device reports submitted for that year. These annual reports must be submitted by January 1 of each year using FDA Form 3419 or an approved electronic equivalent. This submission must be clearly identified as an annual report. If the user facility did not submit any death or serious injury medical device reports to the manufacturers or FDA for a reporting period, no annual report submission is required.

One of three UL courses in the **FDA MDR Course Series** – ***MDR Regulation 2: Device User Facility, Importer and Manufacturer Reporting Requirements***, was authored by FDA officials for their Agency investigators, and identifies MDR requirements as they relate to user facilities, importers and manufacturers.

All three of the MDR-focused courses are used by the FDA to train global investigators – over 36,000 to date. The courses are available exclusively to UL clients. They are mobile-ready and available in multiple languages.

**For more information, or to schedule a demo, contact Pat Thunell at pat.thunell@ul.com.**

# WHAT EU EXPECTS FROM THE STERILIZATION PROCESS

One of the Medical Device industry's top training needs is **Principles of Sterilization**. This includes the basics of sterilization and principles of several commonly used sterilization techniques, such as: Moist Heat, Dry Heat, Gas, Radiation, Chemical and Filtration. Here are examples of how EU regulations impact the Sterilization process and the methods used:

### 1. Re-Verifying the Sterilization Process

- Once validated, no changes should be made to the cycle parameters or equipment without evaluating if the proposed change requires additional validation work or a regulatory submission.
- Because changes can occur without our knowledge, it's important to re-verify that any sterilization process continues to work as expected over time. This involves conducting requalification studies to confirm, on a defined periodic basis (typically annually), that sterilization processes remain effective.

  EU regulations: EU specifically requires that sterilization processes be revalidated at least annually.

### 2. Moist Heat Method

- Moist heat, in the form of saturated steam under pressure, is the most widely used and the most dependable method of sterilization. Moist heat is used to sterilize liquids, cloth, small parts, sterilizing filters, stainless steel processing lines, and equipment.

  EU regulation: EU regulations state that the use of moist heat or dry heat is preferred. If one of these methods is not possible, written justification is expected.

### 3. Radiation Use

- Some materials cannot be sterilized using heat, and the use of gas sterilization may be impractical. In these cases, radiation sterilization may be used.
- Radiation works by breaking chemical bonds in DNA and other cell structures that lead to the destruction of the microorganism. It is generally more costly and requires the use of outside contract sterilizers. It has limited penetration, depending on the type of radiation used and causes some materials, such as polyvinyl chloride plastics (PVC), to yellow or become brittle when exposed to it.

  EU Regulation: UV irradiation as a sterilization method is not acceptable in the EU.

### 4. Filtration

- Some liquid pharmaceutical products cannot withstand moist heat sterilization. In these cases, filtration is the sterilization method of choice. Filtration differs from other methods of sterilization in that microorganisms are physically removed from the product rather than being deactivated or killed.

  EU Regulation: "Due to the potential additional risks of the filtration method as compared with other sterilization processes, a second filtration via a further sterilized microorganism retaining filter, immediately prior to filling, may be advisable. The final sterile filtration should be carried out as close as possible to the filling point."

UL's Principles of Sterilization course is one of our top 10 GMP eLearning topics in 2015. This course discusses the basics of sterilization and principles of several commonly used sterilization techniques, such as: Moist Heat, Dry Heat, Gas, Radiation, Chemical, and Filtration. Our subject matter expert for the course, Ann Early, of Early Mentoring Partners, has added commentary based on two EU regulations:

- EudraLex Vol. 4, EU Guidelines for GMP for Human and Veterinary Use - Annex 1 – Manufacture of Sterile Medicinal Products, 2008
- EudraLex Vol. 4, EU Guidelines for GMP for Human and Veterinary Use - Annex 2 (rev. 1) – Manufacture of Biological active substances and Medicinal Products for Human Use, 2013


To learn more about our Principles of Sterilization course, contact Pat Thunell at pat.thunell@ul.com.

# A NEW APPROACH TO MEET YOUR LEARNING NEEDS

## Introducing UL's New Quality & Compliance Essentials Program

To meet the needs of the Life Science industry – particularly smaller companies with fewer resources and need of only the core GMP training, UL has created an unprecedented solution.

Our new "Quality & Compliance Essentials" program provides sets of five of our most critical GMP courses targeted to specific areas of Life Science organizations.

Current subscribers of our eLearning courses are already familiar with these courses, as they have targeted these courses to specific curricula and qualification programs. **Now, clients can select a particular set of 5 cours es – pay one affordable price – and receive unlimited usage.**

The *GMP/QSR Essentials for Medical Device Organizations* includes these five courses (Learn more):

- Orientation to GMP Compliance
- Introduction to QSR
- Understanding ISO 13485 – The Quality Management System for Medical Devices
- Understanding GMPs for Facilities and Equipment
- Good Documentation Practices


Other Quality & Compliance Essentials sets are available, each focused on specific topics. Content is provided as SCORM files to host on your own learning management system. Other delivery methods are available, including AICC or hosting on our own industry-standard LMS – ComplianceWire®.

# RISK MANAGEMENT WORKSHOP

## *...presented by UL EduNeering's Advisory Services*

UL's comprehensive **Risk Management Workshop** is presented by Mark Leimbeck of UL EduNeering's Advisory Services team and focuses on Risk Management and ISO 14971. This learning program includes a self-paced eLearning course and a two-day hands-on workshop, covering basic risk management product lifecycle.

This Workshop includes case study exercises throughout, providing participants first-hand experience implementing Risk Management concepts to facilitate application in their own situations.

The Workshop also covers the Content Deviations of the EN ISO 14971: 2012 version of the standard, exploring strategies and examples to demonstrate what is needed for regulatory compliance. Other implementation considerations covered include:

- Best practices to help organizations streamline their implementations;
- Common misconceptions that frequently hinder implementation of Risk Management principles in an organization;
- Where and how Risk Management directly supports and enables compliance with regulatory requirements, such as:

  21 CFR Part 820 of the Food and Drug Administration's Quality System Regulation, and

  ISO 13485 (the foundation for many Regulatory programs throughout the world).

Instruction is targeted to professionals involved in risk management and ensuring effective implementations. Given the broad application of risk management, this material is extremely valuable to professionals working across the entire product lifecycle, including: R&D, manufacturing, packaging, logistics, supplier quality, marketing, sales, product support and regulatory affairs.

**Register for the Risk Management Workshop HERE. Multiple dates are available, or arrange a Private Workshop at your location.**

ACCREDITED IACET PROVIDER

### About the Presenter:

**Mark Leimbeck** is an Advisory Services Consultant and Program Manager for UL EduNeering.

Through his career, Mark has served UL in Management, Technical and Program Development roles, and led development of Certification Programs and services covering; Risk Management, Product Safety, Supplier Controls, and Restriction of Hazardous Substances (RoHS);

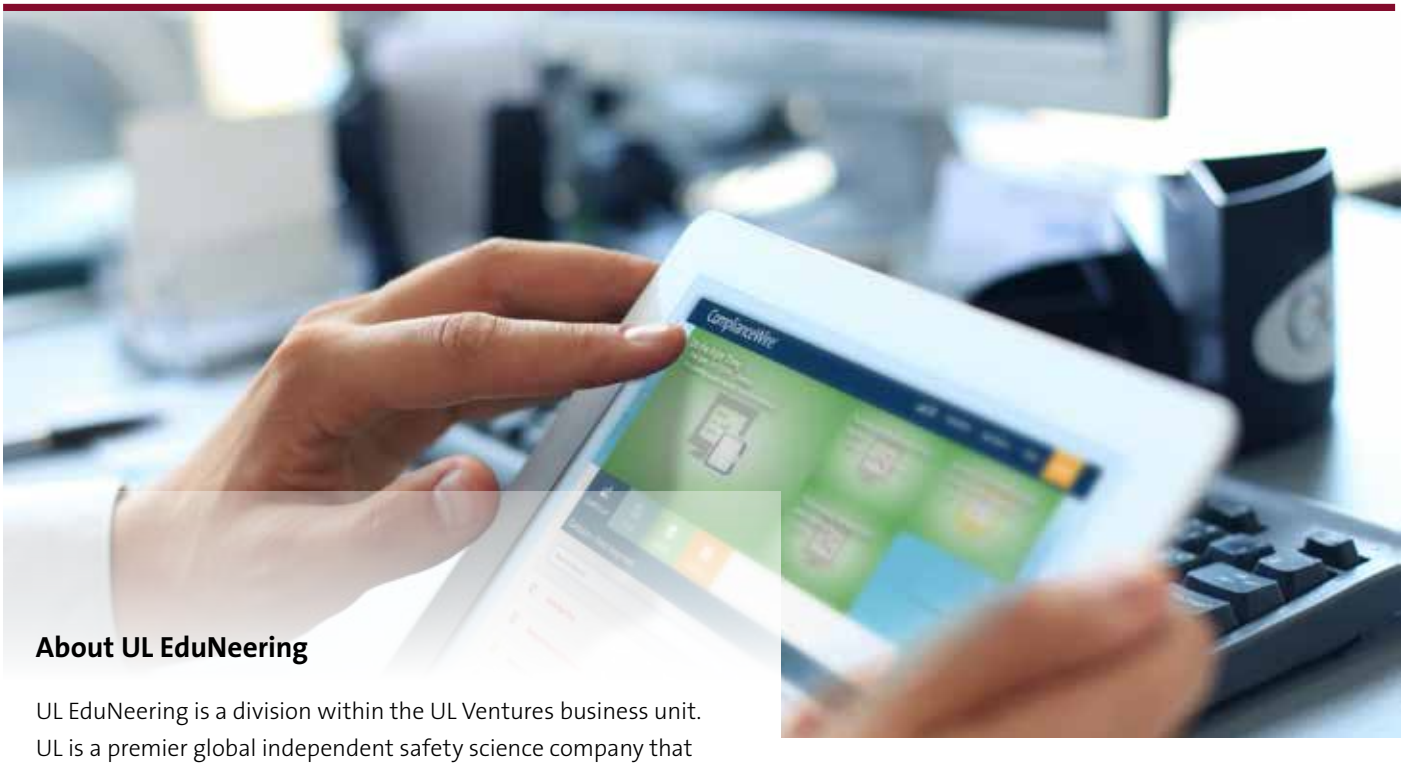
Mark is the Chair of UL's Health Sciences Council; he is also currently serving on the following committees:

- FDA CDRH/AAMI Risk Framework Initiative, Sub-Group 4
- ISO (International Organization for Standardization) ISO/TC210 – IEC/SC62A/JWG1Application of Risk Management to Medical Devices
- USTAG for IEC (International Electrotechnical Commission) TC 62 Electrical Equipment in Medical Practice
- IECEE (CB Scheme) Risk Management Task Force

Mark is a Registered Professional Engineer, a Registered RABQSA Auditor, and holds a B.S.E.E.T. from Southern Illinois University and an M.B.A. from the University of Chicago.

## Advisory Services for Risk Management

In addition to Risk Management support, UL's Advisory Services provides expertise in deploying enterprise-wide learning, processes and documentation for regulated industries. This includes an array of services from LMS Optimization & Best Practices to Audit and Compliance Services. Our experts work along-side your team to build a quality and compliance program to meet regulatory requirements as well as your unique objectives. We focus on meeting customer-specific needs, resulting in an improvement of their quality processes and systems.



## About UL EduNeering

UL EduNeering is a division within the UL Ventures business unit. UL is a premier global independent safety science company that has championed progress for 120 years. Its more than 10,000 professionals are guided by the UL mission to promote safe working and living environments for all people.

UL EduNeering develops technology-driven solutions to help organizations mitigate risks, improve business performance and establish qualification and training programs through a proprietary, cloud-based platform, ComplianceWire®. In addition, UL offers a talent management suite that provides companies the ability to improve workforce skills & competencies within established role-based talent training programs to drive business performance.

For more than 30 years, UL has served corporate and government customers in the Life Science, Health Care, Energy and Industrial sectors. Our global quality and compliance management approach integrates ComplianceWire, training content and advisory services, enabling clients to align learning strategies with their quality and compliance objectives.

Since 1999, under a unique partnership with the FDA's Office of Regulatory Affairs (ORA), UL has provided the online training, documentation tracking and 21 CFR Part 11-validated platform for ORA-U, the FDA's virtual university. Additionally, maintains exclusive partnerships with leading regulatory and industry trade organizations, including AdvaMed, the Drug Information Association, the Personal Care Products Council and the Duke Clinical Research Institute.


At AdvaMed 2015, UL's Anil Patel categorizes the company's offerings in three areas: Risk associated with a product, risk associated with manufacturing processes, and risk associated with regulatory compliance. UL continues to develop new technologies in testing, auditing, and more. The company prides itself on having services that can be replicated, duplicated, and that help manufacturers and society have a higher quality of life. Test labs and training services are also available to help companies with compliance needs.

Click here or on the image above to view the full interview.