**Plenary Talk**

**IUVA HEALTHCARE WORKING GROUP -   
Working for UV Disinfection Device Efficacy Standards for The Healthcare Industry**

Troy E. Cowan\*

Coordinator, for IUVA’s Healthcare/UV Working Group; Owner, Vision Based Consulting

\* Corresponding author: troy@visionbasedconsulting.us

ABSTRACT –

The effort to get efficacy standards for UV devices in the Healthcare Sector began five years ago as a citizen's initiative pitched to Congress. But after 25 letters to key Senators and Representatives, four sessions with Senior Senate/House Staffers, and full day with a Key Congresswoman, the message received was clear – Why Not Let the Marketplace Work It Out?

Looking to the Marketplace, the initiative found a home in IUVA. The first panel discussion was held IUVA Americas in Austin (Feb 2017); with several of those panel members are still involved. This was followed by two more panels at IUVA Americas – Redondo Beach (March 2018), and the formation of our Healthcare/UV Working Group. Initially at ~20 people; we’re now at 42 members that are multi-faceted (ASHRAE, ASTM, SHEA, SPIE, IES, and APIC), multi-talented (OEM CEO’s, Research PhD’s, Practicing MD’s & MPH’s, and current IUVA Board Members) and multi-national (USA, Canada, Israel, France, Sweden, China, Germany).

What We’ve Learned through the Working Group is that when it comes to measuring UV-C efficacy - the light source matters (e.g., gas discharge vs. solid state vs. laser), the wavelength matters (new wavelengths of interest range from 207-220nm up to 407nm), the pathogen matters (e.g., published results for dosages to get a 3-log reduction of Clostridium difficile ATCC 9689 varied by over 500%) and the healthcare setting matters (e.g., how do we standardize a test covering a typical patient room with more than 250 different surface types to be treated).

How we’re addressing all of these variables is through active collaborating with other organizations and involving highly esteemed UV-C peers using workshops (e.g., Yale, Sept 2018), and our subgroups – e.g., Light Physics Testing (Dr. Cameron Miller, Panel III), Pathogen Testing (Dr. John Boyce, Panel II), and Efficacy Testing (Dr. Matthew Hardwick, Panel III). We’re collaborating with other organizations, e.g., IES (Alex Baker, Panel III), ASHRAE (Sam Guzman, Panel I), HIS, SPIE, ISO and with other IUVA initiatives – e.g., the IUVA Task Forces on Medium Pressure Hg Bulbs (Dr. Jim Bolton), LED UV sources (Dr.’s Gordon Knight and Natalie Hull), and UV Food Processing (Peter Gordon, Panel I).

The end goal is to develop voluntary industry consensus standards on measuring UV-C efficacy for the Healthcare industry that are Nationally recognized and certified. Standards that industry can live by, Federal regulators can accept, and that the Healthcare industry can rely on.   
Our hope is that this this will lead to increased application of proven UV-C technologies to combat HAI’s, thereby reducing HAI fatalities. Remember - It’s all about saving lives.

BIO –

Troy E. Cowan, is the owner and founder of Vision Based Consulting, LLC, supporting clients in Federal program development, business development, marketing and regulatory compliance tasks. Troy has worked both in and outside of multiple Government Agencies to include DOE and NNSA, DoD (USAF, DTRA, Army), NASA, HUD, GSA, DHS (FEMA, USCG), as well as several State and Local agencies. While supporting a UV commercial client on regulatory issues, Troy became an advocate for UV-C’s potential to save lives by reducing the risk of Hospital Acquired Infections (HAIs), and the need for standards to demonstrate efficacy to healthcare providers. Over the last five plus years, Troy has met with several Senate and House Committee staffers to promote the development of UV-C efficacy standards, presented to IUVA, SPIE and ISO, organized workshops and panels on using UV-C to combat HAIs, established the IUVA Healthcare/UV Working Group, and has published related articles in the Journals of Infection Control and Hospital Epidemiology, the SPIE Journal and UV Solutions on this critical issue.

