

STANDARD DEVIATIONS: X-Factors

Excuse me, excuse me....

...coming through; got a paycheck to earn and deadline to meet.

{Oh, no! He's climbing back on his Soapbox!}

Well, I'm All about keeping my people safe, and your people safe, on the bench. So, I think it's OK to talk about risk. A lot.

Risk is all about knowns and unknowns.

Seems simple, but in combination, there's: known knowns, known unknowns, unknown unknowns, and, finally, unknown knowns That's where were headed today. Here's my consideration on knowns, unknowns, how we think about them, and how they affect our safety in clinical laboratories.

Known knowns. These are the risks and conditions that we're certain of. We understand that sharps are risks. We know the infectious dose of pathogens. Their morphology and characteristics are known. The importance of PPE is a known known. Hazard is known when we use strong acids or bases. Some things grow, some things glow, it's all part of our medical technology profession.

Known unknowns. These are the risks that we are susceptible to and understand, walking in the door, that these may be part of our day. Our work with Bloodborne Pathogens or suspected influenza, the fastidious growth from a wound culture, and sharps. these are the unknowns known to be lurking around.

Unknown unknowns. A tsunami in Malaysia, a tsunami in Japan, the sudden increase in tornadoes across the country , the breached levy after Katrina in New Orleans that stranded hospital staff and patients at Memorial Hospital for 5 days are examples of unknown unknown risk. But there is also the patient who presents in your emergency Department with a travel history and a fever, there's the fact that we live on an active fault line, unknown unknowns are exactly that, unknown in their source , severity, and presentation. These are surprises.

And then there are **unknown knowns**. These are a little trickier. These are surprises we should have seen coming.

Unknown knowns are different, more esoteric, less tangible. These are the **X-factors** in the equation we create as risk assessment, variables of significant impact. The essence of risk assessment, unknown knowns are why we practice safe behavior. These are what allow us to understand risk, and the value of mitigation.



Consider this Banksy,



4th and Main, Park City, UT, 2010.

we see the result, but we don't know its origin, unexpected but not incredible. a surprise when, but only until, it appeared . The pipette tip or broken glass slide or scalpel that punctures our glove, unexpected growth on a plate opened on the bench, the slip and fall, escaped steam from the autoclave; risks that are unanticipated, unexpected, and yet known. Like the Banksy, we see the result but never saw it coming. Spills, splashes, breaches in PPE, aerosols, a broken tube in a centrifuge, etc. These are risks we can imagine and yet, they still sneak up and bite us. The X-factors drive our lab safety and biosafety mission.

As biosafety officer, as lab manager, as lead tech, and as the bench tech the X-factors keep us on our toes and aware of the unknown.

Have a great week and, yes, be safe.

Bryan

