

APTRA protects hospital workers against H1N1 and other body fluid, blood and viral threats

Made from APTRA® breathable microporous film, Provent 10,000 clothing does the job

When Carmichael, CA nurse Karen Ann Hays, a previously healthy 51-year-old triathlete, skydiver and marathon runner, died July 17th, 2009 of the H1N1 (swine) flu, she was the first reported H1N1-related healthcare worker death in the state. A month later, the California Nurses Association (CNA) released data from 190 facilities in nine states across the U.S. that showed “deficiencies in hospital swine flu readiness”, and called on all hospitals “to adhere to the highest standard of protection for patients and nurses to combat the expected onslaught of new cases this fall and winter.”

Hospitals need to be subjected to same protection standards as factories



APTRA® breathable microporous film offers protection as hospital workers face H1N1.

According to George Kappler, “If hospitals were subjected to the same protection standards as factories, many would have been shut down a long time ago.” Those are tough words for healthcare workers to hear as they brace for an onslaught of H1N1 patients, but the CEO of Kappler Inc., a 33-year veteran in the protective garment business, knows of what he speaks.

manufacturers protective apparel and fabrics for a wide range of global markets and applications including the world’s most dangerous environments, from chemical factories to military bases to nuclear plants to dedicated hazardous materials (HAZMAT) companies. Kappler’s R&D program has produced over 30 fabric and seaming technology patents issued or pending worldwide. Over its lifetime the company has pioneered many innovations that have redefined global standards for protective apparel.

Provent 10,000 garments certified for blood borne and viral penetration standards

Kappler’s line of health-care garments, called Provent 10,000, is made from APTRA®, a breathable microporous film made in Tiverton, ON, Canada by BI-AX Inc., creators of innovative plastic as well as compostable, biodegradable bio-plastic films. BI-AX produces APTRA microporous film under contract for RKW US, Inc. RKW US, Inc. is based in Rome, GA, USA and is a wholly owned subsidiary of RKW SE, Europe’s largest film producer. APTRA® is then turned into a fabric that passes ASTM international standards for blood borne pathogen and viral penetration by innovative technology companies like Kappler, Inc. and distributed worldwide.

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With \$18 million in sales and employing 190 people, Guntersville, AL-based Kappler, Inc. designs and



Kappler credits Morris Collins, now RKW's U.S. President, with bringing APTRA® to him in the early 90s when Collins was a research engineer. "We always keep our eyes and ears open for new ideas from our customers and suppliers," states Kappler. "So when Morris introduced us to APTRA®, we recognized we could help a lot of healthcare workers with garments that offered more protection than anything else out there."

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Provent 10,000 customers include the Centers for Disease Control (CDC), National Institutes of Health (NIH) and

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"in-the-know" orthopedic surgeons and nurses around the world who insist on the best protective clothing for operating theatres where contact, droplet and airborne transmission of pathogens is a constant risk.

H1N1 spreads by coughing or sneezing or touching something — such as a surface or object — with flu viruses on it and then touching the mouth or nose. Efforts by front-line healthcare organizations like CNA to increase H1N1 protection standards for their workers

have increased the number of inquiries for Provent 10,000 coveralls, lab coats, gowns, pants and boot covers.

"Our product has been available to the healthcare market since the early 90s," says Kappler, "and we always see spikes in interest when something like SARS or bird flu and now swine flu hits, but I admit the healthcare field's a much more challenging market than for industrial and security applications where we do most of our business."

Kappler says one reason healthcare workers are inadequately protected from diseases like H1N1 is that unlike a nuclear contamination incident, it's harder to pinpoint the work environment as the exact source of a life-threatening exposure.

Nuclear or chemical plants don't have the same wiggle room as hospitals

"When a pandemic is underway hospitals can get away with saying that a worker's disease might have come from outside the workplace," says Kappler. "And it can take a year or more for diseases like Hepatitis or HIV to show up. But the operators of a nuclear or chemical plant don't have the same wiggle room if one of their workers suffers from radiation poisoning or gets a bad burn. The cause and effect is clear and the lawsuits will fly, so they take protective clothing much more seriously in those environments."

Another reason the protection of front-line healthcare workers is compromised boils down to hospital economics. "A Provent 10,000 gown costs \$7 to \$10 and it'll protect against viral diseases like H1N1 as well as blood-borne diseases like HIV," says Kappler. "Yet we find it often gets compared to a little yellow gown that sells for a couple of bucks that would let a mosquito go through it. It's like comparing apples to raisins, but some hospitals buy what they can get away with to save a few dollars."

Saving a few dollars on protective garments is false economics

This is false economics, with or without a looming pandemic. Statistics from the Cambridge, MA-based Institute for Healthcare Improvement show it costs a U.S. hospital between \$50,000 and \$100,000 to replace one nurse, not including salary, because of overtime payments, payments to temporary nurses and the recruiting and training process for a permanent replacement.

"When something like H1N1 hits, a hospital needs every trained person healthy and working," says Kappler. "The upfront cost to properly protect those people is nothing compared to the cost of losing them."

Timing is right for Provent 10,000

"You know," continues Kappler philosophically, "We were so far ahead in the 90s with Provent 10,000 that it might be that only now the timing is right for this line of garments. I do see a lot of promise, but it's still going to take a lot of education to fulfill that promise. It takes something like H1N1 to focus people's minds to look for a better solution to the status quo. Well, we've got it right here for them." ▲