

## BIOSECURITY AND INFECTION CONTROL BEST PRACTICE CAMPAIGN

### STAGE 2: HAND HYGIENE - THE CORNERSTONE OF INFECTION CONTROL

#### Progress of the biosecurity campaign to date

The Health and Hygiene team has over the past four months been visiting practices around the country with the message that compliance with infection control best practices as proposed by MEDCO and endorsed by SAVA and the SAVC is in fact achievable and most importantly, affordable. The driving force behind this campaign is our passion for the veterinary profession, our unyielding belief in the performance of the F10 range of products and the team's desire to make a difference in the standard of hygiene and infection control in veterinary practice. We are pleased to report that by far the majority of practices have welcomed this initiative and bought into our proposals.

#### It's affordable

An in-depth analysis of product usage necessary to maintain high level disinfection and best practice hygiene procedures in a one to three man companion animal practice determined that even using the very best products money can buy, F10 products of course, would cost no more than R25.00 per day in total for **both** environmental and hand hygiene. We've had feedback from the profession that this is indeed affordable!

#### Hand Hygiene

*Clean hands are the single most important factor in preventing the spread of dangerous germs and antibiotic resistance in health care settings," said Dr. Julie Gerberding, director of the CDC in Atlanta.*

Nosocomial infections have been recognized as a critical problem in modern medicine and are associated with the quality of health care provided in human hospitals. On average, 7 - 10% of hospitalized patients acquire an infection after hospital admission. A substantial proportion is the result of cross-contamination. Transmission of micro-organisms by the hands of health care workers was the main cause of spreading disease. During 2002 the Centre for Disease Control and Prevention (CDC) experts known as the Healthcare Infection Control Practices Advisory Committee (HICPAC) issued a revised document

"Hand Hygiene in Healthcare: Playing by the New Rules" Hand hygiene includes terms such as hand washing, antiseptic hand wash, hand-rub and surgical hand antisepsis. We have incorporated the main points of these recommendations into our practice guidelines.



Photo from Citizen showing palm print

#### Hand washing

Even though it is well documented that proper hand washing can result in statistically significant reductions in patient morbidity and mortality from nosocomial infections and further that hand washing with antimicrobial agents significantly reduces the number of potential pathogens carried on hands, recent studies in health care facilities indicate that hand washing practices are less than optimal (Larson et al. 1995).

*During our training sessions with veterinary support staff we found that many only washed their hands ONCE a day - just before going off duty. Factors leading to non-compliance include time constraints, lack of hand washing facilities and ignorance regarding the importance of this procedure.*

It is even more surprising that some knowledgeable professionals disregard hand washing guidance in favour of more casual hand washing practices. It is recognized that antiseptic hand washing, including the surgical scrub, is a very repetitive, tedious, mundane and sometimes painful task!

#### Clostridium difficile

The CDC guideline also highlights the fact that none of the traditional chemical agents used for hand hygiene

are sporicidal against *Bacillus anthracis* or *Clostridium difficile*. These gram positive, anaerobic, spore forming motile rod bacteria are now considered endemic in most UK and USA hospitals and have already caused more deaths than the notorious organism MRSA.

F10 has proven efficacy against *Bacillus* spp. It was recently tested against *Clostridium difficile* at the SABS microbiology laboratories and completely eliminated a log<sup>6</sup> challenge at a concentration of 1:250 of F10SC (this is less than the level of actives in the hand soaps).

#### Is your choice of products up to today's challenge?

For those of you who already use the F10 Hand Hygiene products as part of our practice hygiene package - well done! For those who still believe that chlorhexidine and povidone iodine are the only skin antiseptics out there - please read on!

A rational approach in the selection and use of a product for hand hygiene in veterinary practice is necessary to achieve more than just dried and cracked hands. There are dozens of different disinfectant soaps and gels/rubs on the market made up of different chemical ingredients; some are more effective than others at killing certain microbes, however few are really broad spectrum and some have significant drawbacks in terms of safety to the user. Hand hygiene can be damaging to the skin of staff which will result in poor compliance and in turn increases the risk of cross infection. Therefore the product selected for use must be acceptable to the staff!

#### What challenge?

CDC studies have determined that the size of the microbial challenge on the intact areas of skin for health care worker can vary from 100 to 6 million microbes per cm<sup>2</sup>. In recent efficacy tests F10 has shown significant depth of performance by achieving > log<sup>6</sup> (> 1,000,000) reduction in microbial counts when tested in accordance with the AOAC (USA) Standard against *Staphylococcus aureus*, *Salmonella choleraesuis* and *Pseudomonas aeruginosa*. Now THAT'S test data I've not seen the "traditional" products achieve! And, as required for this extremely demanding protocol, F10 did it for 180 repeats.





F10 Hand Scrub in elbow dispenser

**Contact times**

Contact time is a critical factor in determining the efficacy of surface acting agents and yet very few hand hygiene products are specific about this. CDC research has shown that in practice contact times can commonly be as low as 15 seconds and even for surgical preparation as little as 2 minutes. F10 hand hygiene products offers you practical contact times - a >99% kill after 30 seconds against *Staphylococcus* spp and 60 seconds against *Pseudomonas* spp.



Pre-operative scrub-up using F10 Hand Scrub

**Residual effect**

Generally the residual effect of hand hygiene preparations should not be relied upon because of the wide variation in the size of the potential challenge (100 to 1,000,000 organisms / cm<sup>2</sup>). It is however desirable for a preoperative surgical scrub to have residual properties. When the F10 Hand Scrub was tested in an independent GLP (Good Laboratory Practice) laboratory recently it demonstrated overwhelming performance - even after 2 successive challenges of over 5 million *Staphylococcus* spp. microbes at 30 minutes, 1 hr, 2 hrs, and 3 hrs intervals, with contact times of only 1 minute, a kill of > 99% was achieved at all time stages.

**Skin irritation**

Staff acceptance is important. If the product of choice is not liked due to its consistency, smell or adverse effects, one can be sure that this will result in poor compliance from staff which in turn will increase the risk for the spread of infections. The F10 hand hygiene products have proven to be a most suitable alternative to preparations containing chlorhexidine and iodines which have given rise to skin irritation problems. The products are highly effective, yet mild.

*F10 is widely used in private practices as well as referral hospitals for general purpose hand decontamination and preoperative surgical scrub. One of many satisfied users is Prof Louis Coetzee from Hatfield Bird and Animal Hospital who suffered with eczema on his hands and forearms due to the repeated usage of surgical scrubs. Since he started using the F10 Hand Scrub almost a year ago, he has not had any of the symptoms or problems he's had before and the entire surgical team at this referral facility use the F10 Hand Hygiene products on a daily basis.*

**Summary**

Today hand hygiene is no longer simply good practice or a healthy habit; it has become an essential method of protecting ourselves and our patients. Compliance with recommended hand washing standards and guidelines is today considered by many infection control professionals to be a cornerstone in addressing the challenge of infection control.

It is essential that a product's credentials can substantiate the claims made for it whether this is efficacy or its safety aspects. We have collated all relevant data on the F10 hand hygiene products into a leaflet entitled F10 Hand Hygiene Products. This leaflet sets out in some detail the products attributes.

This second stage of our biosecurity campaign, hand hygiene, will be implemented in the same way as has been done for the environmental hygiene initiative in stage one. Our team of professionals will present the case for hand hygiene and assist in staff compliance through awareness training and compliance aids.

We look forward to assisting you.

**Sr Linda Muller**  
Companion Animal Business Manager

**Acknowledgements**

- 1. Dr Dave Kenyon, Prof Louis Coetzee, Sr Cornelia Hanekom of Hatfield Bird and Animal Hospital

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