

LEADER IN INFECTION CONTROL SOLUTIONS

Improving the safety of patients, clinics, their staff and the environment



ANNUAL GENERAL MEETING
7 November 2014

Nanosonics Board, Secretaries and Auditor



Maurie Stang Maurie Stang



Michael Kavanagh CEO and Executive Director



Richard England
Non-Executive Director



David FisherNon-Executive Director



Ron Weinberger
President Technology Development / Commercialisation





McGregor Grant
CFO / Company Secretary



Rob Waring Company Secretary



Mark Nicholaeff
Auditor, UHY Haines Norton



ANNUAL GENERAL MEETING

2614

Resolution 1

Election of a Director - Dr David Fisher

Resolution: That Dr David Fisher, who retires as a Director pursuant to the Company's Constitution and, being eligible, offers himself for re-election, be elected a Director.

Proxy votes received

Votes for : 120,187,812

Against : 24,646,228

Abstained/Excluded : 28,114

Discretion : 1,088,974



Resolution 2

Remuneration Report

Resolution: That the Remuneration Report for the financial year ended 30 June 2014 be adopted.

Proxy votes received

Votes for : 115,401,669

Against : 498,748

Abstained/Excluded : 28,961,738

Discretion : 1,088,974





Chairman's Address Mr Maurie Stang

Disclaimer

This presentation is intended to provide a general outline only and is not intended to be a definitive statement on the subject matter. The information in this presentation, whether written or verbal, has been prepared without taking into account the commercial, financial or other needs of any individual or organisation. Certain information may relate to protected intellectual property rights owned by Nanosonics (the "Company"). While Nanosonics has taken due care in compiling the information, neither the Company nor its officers or advisors or any other person warrants the accuracy, reliability, completeness or timeliness of the information or guarantees the commercial or investment performance of the Company. The information does not constitute advice of any kind and should not be relied on as such. Investors must make their own independent assessment of the Company and undertake such additional enquiries as they deem necessary or appropriate for their own investment purposes. Any and all use of the information is at your own risk.



Strengthening Case for Increased Investment in Preventing HAIs





May 2014 NEJM paper recommended increasing surveillance and prevention activities to fight HAIs

"Our nation is making progress in preventing healthcare-associated infections through three main mechanisms:

- financial incentives to improve quality;
- performance measures and public reporting to improve transparency; and
- and the spreading and scaling of effective interventions.

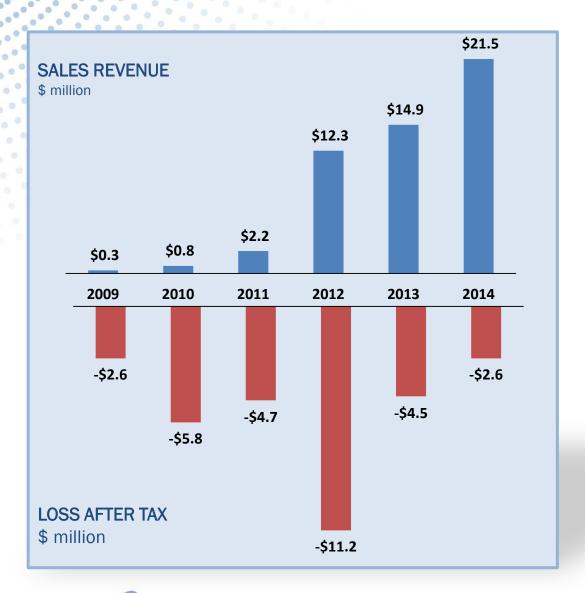
This progress represents thousands of lives saved, prevented patient harm, and the associated reduction in costs across our

1. Patrick Conway, MD, deputy administrator for innovation and quality for the Centers for Medicare & Medicaid Services (CMS), and CMS Chief Medical Officer

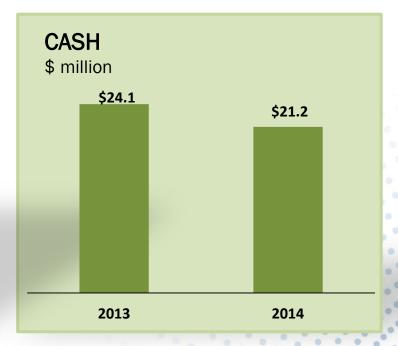




FY2014: A Year of Solid Financial Growth



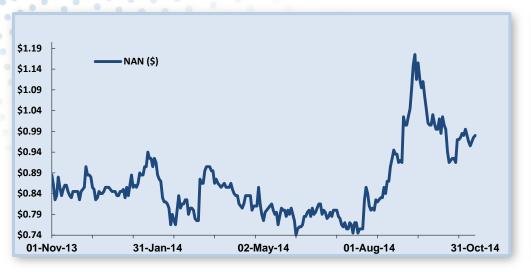
- ✓ Solid revenue growth
- ✓ Trending to profitability
- **✓** Strong cash reserves





FY14: Strong Market Capitalisation Growth

12 months (1 Nov '13 - 31 Oct '14)





	31 Oct 14	30 Jun 14	30 Jun 13
Total shares issued (million)	264.33	263.82	261.99
Share price	\$0.975	\$0.79	\$0.61
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The Australian

- Company profiled by stock watch expert Tim Boreham.
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- Company profiled by leading small caps writer Trevor Hoey.
- Story also appeared in AFR.
- Story seen by possible 230,000 readers.

Smartinvestor Nanosonics to keep up momentum

Australian Financial Review

- Story profiled CEO Michael Kavanagh and objectives for the Company.
- Story read by a possible 60,000 people.





Media Coverage Highlights

It's time to get biotechnical

Nanosonics is up 125 per cent since early May as UK orders pick up for its Trophon ultrasound probe disinfector.

Nanosonics named healthcare industry's Company of the Year for 2013

Diagnosis positive for medical advances

3 biotech stocks for a healthy portfolio

Under the Radar Richard Hemming

Ultrasound probes rife with bugs: study

Biotech comes out of the wilderness









Biotechs lead Uncapped 100 higher

Intelligent Investor Nathan Bell







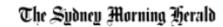








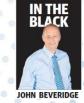
























FY14: Participated in More Than 40 Major Trade **Shows/Conferences**

















APIC

Learn.Lead.Share.

Learn, Lead, Share





FY15 Coming Conferences



















Nanosonics Board and Sub-Committees

	Audit and Risk Committee	Remuneration Committee	Nomination Committee	R&D and Innovation Committee (Est. July 2014)
Maurie Stang Non-Executive Chairman	✓	✓	✓	
Michael Kavanagh CEO and President, Managing Director				
Richard England Non-Executive Director	*	*	*	
David Fisher Non-Executive Director		✓		*
Ron Weinberger President Technology Development / Commercialisation				





CEO and President Address Mr Michael Kavanagh



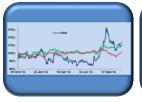




























A Year of Transformation and Growth



Executive Team



Michael Kavanagh CEO and President



Ron Weinberger
President
Technology
Development/
Commercialisation



McGregor Grant
CFO and Company
Secretary



Gerard Putt
Head of
Manufacturing &
Operations



Michael Potas Head of RD&D



Vincent Wang Head of Global Services



Ruth Cremin Head of Quality and Regulatory



Kirste Courtney Human Resources Manager



Ron Bacskal
President and CEO
Nanosonics Inc.



Bryn Tudor-Owen Country Manager - UK



Ralf Schmähling Country Manager - Germany



Julien Laronze
Country Manager
- France



20

Corporate Mission



We improve the safety of patients, clinics, their staff and the environment by transforming the way infection prevention practices are understood and conducted, and introducing innovative technologies that deliver improved standards of care.

Johns Hopkins Photo Credit: American Nurse Project. Does not imply endorsement



Core Corporate Objectives

We improve the safety of patients, clinics, their staff and the environment by transforming the way infection prevention practices are understood and conducted, and introducing innovative technologies that deliver improved standards of care.



Customer Experience



Product Innovation



Operational Excellence



People Engagement



Value Creation





trophon® EPR



Fast

Fast automated high level disinfection



Helps protect

Fully enclosed system limits exposure to harmful chemicals



Consistent

Quality assured consistency



Probe friendly

Probe friendly process. Compatible with more than 600 probe models



Environmentally Friendly

Harmless oxygen and water by-products. More than 70% recyclable components



Cost Efficient

Integrates into HLD process at point of care and improves workflows



Effective

Clinically validated trophon EPR disinfects both probe shaft AND handle

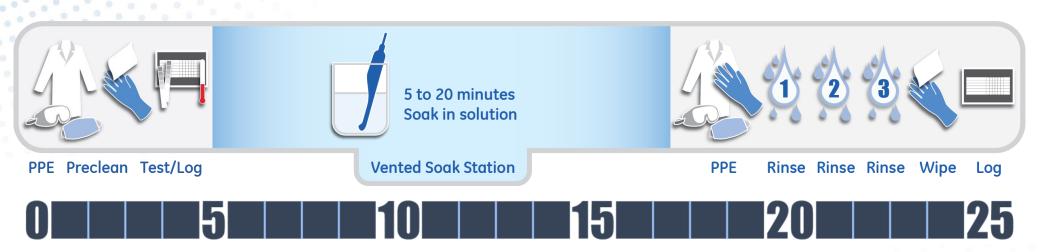


Traceability

Best practice documentation solution

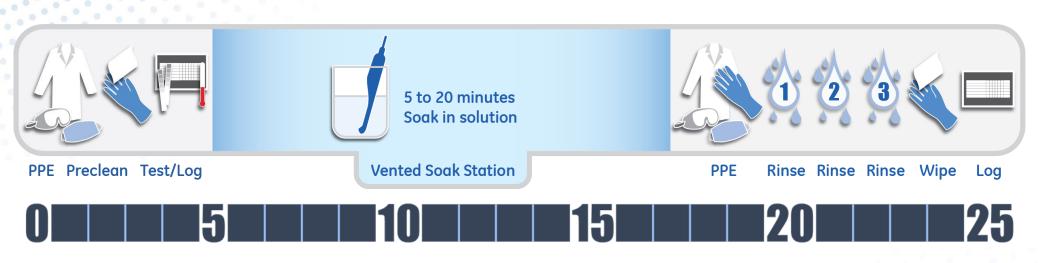


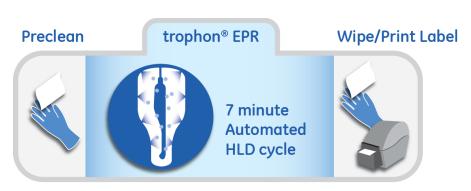
Current Workflow with Soaking





Delivering Superior Performance and Workflow







"...complete and safer protection for our patients and staff"

"The trophon EPR has been the biggest thing to hit ultrasound since colour Doppler.

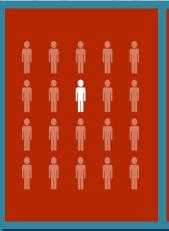
"trophon was an answered prayer! It has solved so many high level disinfection (HLD) issues while offering more complete and safer protection for our patients and staff – in half the time.

Robert De Jong Jr., RDMS, RDCS, RVT, Radiology Technical Manager, Ultrasound, The Johns Hopkins Hospital, Baltimore, US





Infection Control - a Major Healthcare Issue



1 in 25

patients will acquire an infection during a hospital stay¹



1.7 Million

people are infected in U.S. hospitals every year¹, more than breast and prostate cancer combined²



HAI's cost the U.S. up to

\$147 Billion

annually in direct and indirect costs³



70%

of HAIs are preventable using existing infection prevention practices⁴ 3.2 Million

people are infected in European hospitals every year⁵ Of the 1.7 million infected in the US.

98,987

die each year¹

1. Electronically accessed:

http://www.cdc.gov/nchs/data/nvsr/nvsr61_nvsr61_04.pdf electronically accessed from the European Centre for Disease Prevention and Control, www.ecdc.eu October 15, 2014

2. 2013 National Vital Statistics, CDC, Deaths: Final Data for 2010

- **3.** Marchetti, A et al., Economic Burden of healthcare-associated infection in US acute care hospitals, *Journal of Medical Economics* 12:1399-404, 2013.
- **4.** Scott, RD. 2009. *Centers for Disease Control and Prevention*. Pgs. 1–13. Electronically accessed from the European Centre for Disease Prevention and Control, www.ecdc.eu October 15, 2014



Growing Awareness of Imaging Procedure HAIs



- 0.9 9% of barrier sheaths and condoms leak¹
- A meta-analysis has shown that 12.9% of transducers are contaminated with pathogenic bacteria following routine disinfection²
- HPV, a known cause of cervical cancer, has been found on up to 7.5% of transvaginal ultrasound transducers following routine disinfection³
- A fatal case of hepatitis B and non-fatal case of hepatitis C have been attributed to improper ultrasound transducer disinfection^{4,5}
- Ultrasound transducer handles are not routinely disinfected and can harbour pathogens including MRSA⁶
- 1. Vickery et al, J Inf Pub Health 2013; in press
- 2. Leroy, S. J Hosp Infect 2013 83(2): 99-106.
- 3. Ma S et al. Emerg Med J. 2013 30(6):472-5
- 4. Ferhi K, et al. Case Rep Urol, 2013: p. 797248.

- Medicines and Healthcare products Regulatory Agency (UK), Medical Device Alert Ref: MDA/2012/037
- 6. McNally G, Ngu A, ISUOG world congress, Sydney, 2013



trophon EPR Assists Compliance with Guidelines

- TJC Quick Safety 2014 identified Infection Control as one of the top five non-compliant TJC requirements¹
- In addition¹
 - Of 13 immediate threat to life (ITL) discoveries from surveys conducted in 2013, seven were directly related to improperly sterilized or high level disinfected equipment
 - Breaches in equipment sterilization and high level disinfection processes can result in outbreaks of HIV, and hepatitis B and C, as well as the transmission of bacterial infecting agents
- Customers in the US have achieved uniform high compliance and no known rejections from TJC to date





1.The Joint Commission Quick Safety May 2014
The Joint Commission (TJC) accredits more than 20,000 health care organizations and programs in the US

trophon EPR Positioned to Meet Stricter Reprocessing Controls



Guidelines for Cleaning and Preparing External- and Internal-Use Ultrasound Probes Between Patients

Approved 4/2/2014

The purpose of this document is to provide guidance regarding the cleaning and preparation of external and internal ultrasound probes. Some manufacturers use the term "transducers" or "imaging arrays."

Medical instruments fall into different categories with respect to their potential for pathogen transmission. The most critical instruments are those that are intended to penetrate skin or mucous membranes. These require sterilization. Less critical instruments (often called "semicritical" instruments) that simply come into contact with mucous membranes, such as fiber-optic endoscopes, require high-level disinfection rather than sterilization. "Noncritical" devices come into contact with intact skin but not mucous membranes.

External probes that only come into contact with clean, intact skin are considered noncritical devices and require cleaning after every use as described below.

All **internal probes** should be covered with a single-use barrier. If condoms are used as barriers, they should be nonlubricated and nonmedicated. Although internal ultrasound probes are routinely protected by single-use disposable probe covers, leakage rates of 0.9% to 2% for condoms and 8% to 81% for commercial probe covers have been observed in recent studies (Rutala and Weber, 2011). These probes are therefore classified as semicritical devices.

Note: Practitioners should be aware that condoms have been shown to be less prone to leakage than commercial probe covers and have a 6-fold enhanced acceptable quality level (AQL) when compared to standard examination gloves. They have an AQL equal to that of surgical gloves. Users should be aware of latex sensitivity issues and have non-latex-containing barriers available.

For maximum safety, one should therefore perform high-level disinfection of the probe between each use and use a probe cover or condom as an aid to keep the probe clean. For the purpose of this document, "internal probes" refer to all vaginal, rectal, and transesophageal probes, as well as intraoperative probes and all probes that are in contact with bodily fluids/blood or have a remote chance to be in contact with dry/cracked skin and body fluids, including blood.

Definitions

All cleaning, disinfection, and sterilization represent a statistical reduction in the number of microbes present on a surface rather than their complete elimination. Meticulous cleaning of the instrument is the key to an initial reduction of the microbial/organic load by at least 99%. This cleaning is followed by a disinfecting procedure to ensure a high degree of protection from infectious disease transmission, even if a disposable barrier covers the instrument during use.

According to the Centers for Disease Control and Prevention (CDC) "Guideline for Disinfection and Sterilization in Healthcare Facilities" (2008):

"Cleaning is the removal of visible soil (eg, organic and inorganic material) from objects and surfaces and normally is accomplished manually or mechanically using water with detergents or enzymatic products. Thorough cleaning is essential before high-level disinfection and sterilization because inorganic and organic material that remains on the surfaces of instruments interfere with the effectiveness of these processes."

"Disinfection describes a process that eliminates many or all pathogenic microorganisms, except bacterial spores."

Low-Level Disinfection—Destruction of most bacteria, some viruses, and some fungi. Low-level disinfection will not necessarily inactivate *Mycobacterium tuberculosis* or bacterial spores.

New American Institute of Ultrasound in Medicine (AIUM) guidelines released in May reinforce importance of high level disinfection





trophon EPR Positioned to Meet Stricter Reprocessing Controls

WHTM 01-06

Welsh Health Technical Memorandum

Decontamination of flexible endoscopes

Part C: Operational management (Including guidance on non-channelled endoscopes and ultrasound probes)



New NHS Wales Guidelines position automated, validated decontamination systems as the optimal solution for ultrasound probe decontamination



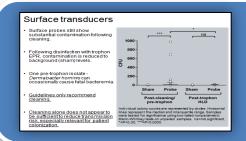




New Studies Continue to Demonstrate Superior Clinical Efficacy of trophon EPR



European study showed trophon EPR to be significantly more effective than manual quaternary ammonium compound wipe disinfection.



Study at The John Hopkins Hospital in the US showed need for disinfection of intracavity and surface probes (heads and handles)



Independent efficacy testing against a range of microorganisms underway at leading laboratory in US. Includes adenovirus, rotavirus, HIV, human hepatitis B (surrogate), norovirus (surrogate), *Chlamydia trachomatis* and *Neisseria gonorrhea*. So far showing efficacy against all these organisms



Evidence Emerging for Need to Decontaminate Surface Probes

- The recent John Hopkins study showed bacterial contamination on both intracavity and surface probes (heads and handles) prior to disinfection
- In all cases, disinfection in the trophon EPR produced a statistically significant reduction in contaminants
- Study showed there is a need to review the requirements for high level disinfection to reduce transmission risks with surface probes

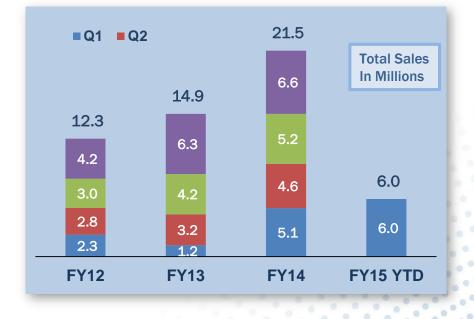
nanosonics

 Study presented at ISUOG World Congress in September 2014 showed surface probe contamination was a major concern and highlighted need for appropriate disinfection



2014: Sales Revenue up 44%

\$ million	H1	H2	FY14	FY13
Operating revenue	9.7	11.8	21.5	14.9
Gross Profit	6.0	7.9	13.9	8.5
%	62%	67%	65%	57%
Other Income	0.8	2.6	3.4	1.5
Operating expenses	(10.3)	(9.8)	(20.1)	(16.4)
EBIT	(3.5)	0.7	(2.8)	(6.4)
Interest (net)	0.1	0.1	0.2	0.7
Pre-tax loss / profit	(3.4)	0.8	(2.6)	(5.7)
Net loss / profit	(3.5)	0.9	(2.6)	(5.8)
Cash Balance			21.2	24.1





Strong Market Capitalisation Growth

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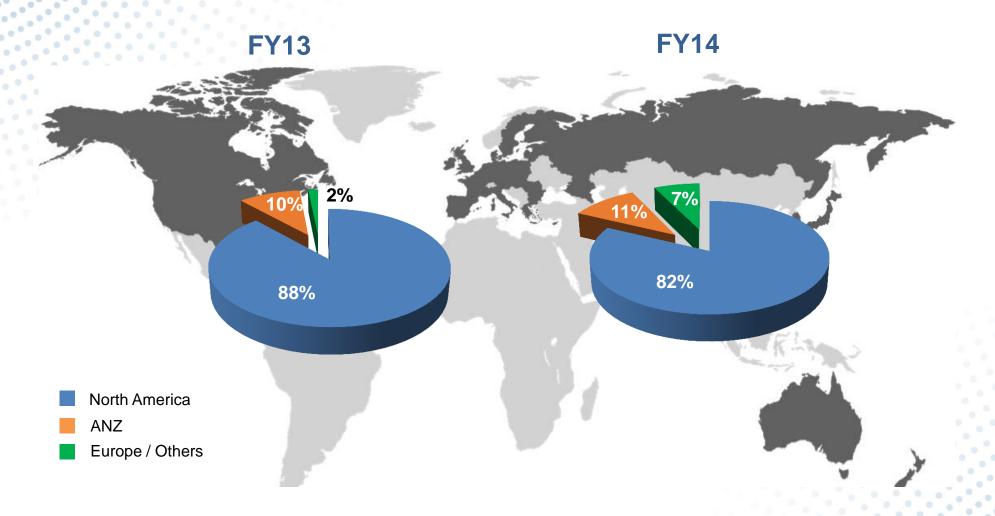






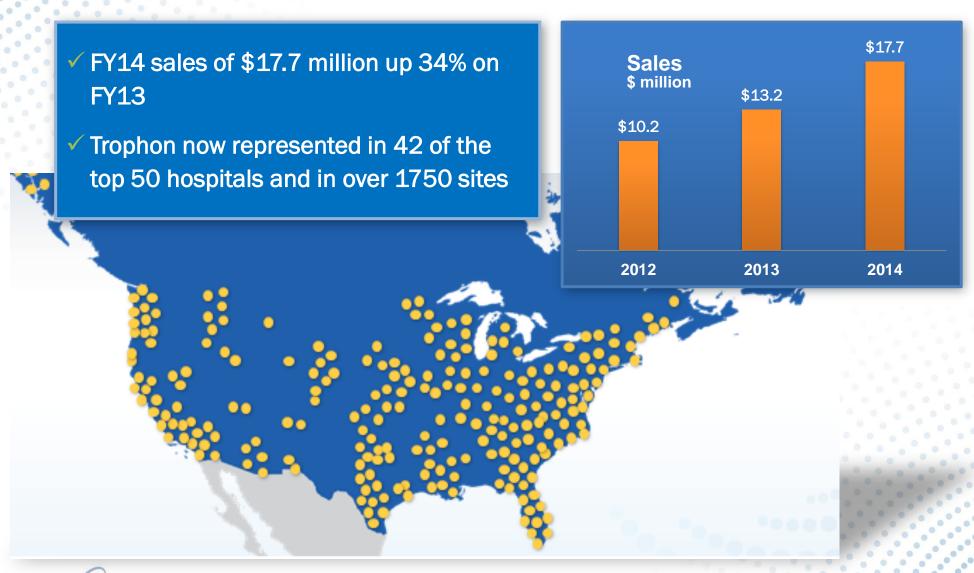


2014 Sales – All Regions Contributing



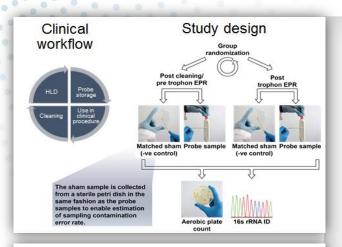


Strong Sales Growth in North America



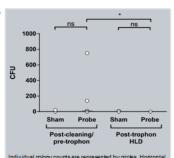


Johns Hopkins Study



Intracavity transducer heads

- Intracavity transducer heads still show contamination despite coverage with a sheath and contamination is still present following cleaning.
- After disinfection with trophon EPR contamination is reduced to background (sham) levels.
- One pre-trophon isolate a Streptococcus sp is a potential pathogen.
- <u>Guidelines are justified: cleaning and use of probe covers alone do not sufficiently reduce transmission risk.</u>
 <u>HLD is required</u>



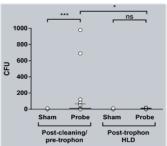
lines represent the median and interquartle range. Samples were tested for significance using two-tailed nonparametric

Mann-Whitney tests on unpaired samples. ns=not significant, =P<0.05. ***=P<0.0005.

- ✓ Confirmed trophon EPR efficacy & Guidelines are justified: cleaning and use of probe covers alone do not sufficiently reduce transmission risk. HLD is required
- ✓ SURFACE TRANSDUCER EVIDENCE – "Cleaning alone does not appear to be sufficient to reduce transmission risk"
- ✓ Handles may present a transmission risk if they are not properly disinfected
- ✓ AIUM abstract submitted

Surface transducers

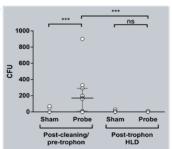
- Surface probes still show substantial contamination following cleaning.
- Following disinfection with trophon EPR, contamination is reduced to background (sham) levels.
- One pre-trophon isolate -Dermabacter hominis can occasionally cause fatal bacteremia.
- Guidelines only recommend cleaning.
- Cleaning alone does not appear to be sufficient to reduce transmission risk, especially relevant for patient colonization.



Individual colony counts are represented by circles. Horizontal lines represent the median and interquartie range. Samples were tested for significance using two-taled nonparametrio Mann-Whitney tests on unpaired samples. ns=not significant, =P<0.05. "=P<0.005"

Intracavity transducer handles

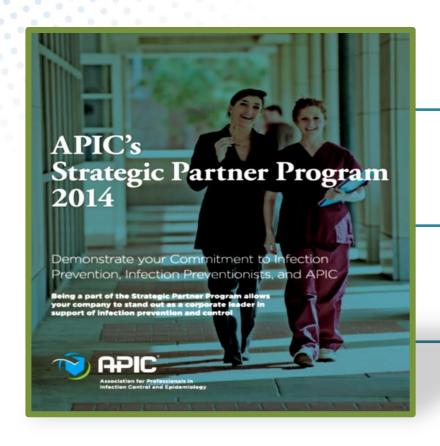
- Intracavity transducer handles show a large amount of contamination.
- After disinfection with trophon EPR, contamination is reduced to background (sham) levels.
- One pre-trophon isolate -Corynebacterieum aurimucosum has been associated with spontaneous abortion
- Other isolates were of low pathogenicity (predominantly coagulase negative staphylococci)
- Handles may present a transmission risk if they are not properly disinfected.



Individual colony counts are represented by circles. Horizont lines represent the median and interquartie range. Samples were tested for significance using two-tafed nonparametric Mann-Whitney tests on unpaired samples. ns=not significan "⇒P<0.05." "⇒P<0.005."



Strategic Partnership established with the Association for Professionals in Infection Control and Epidemiology (APIC)



Provides consistent visibility through out the year

40% growth in APIC membership in last 5 years

More than 15,000 APIC members

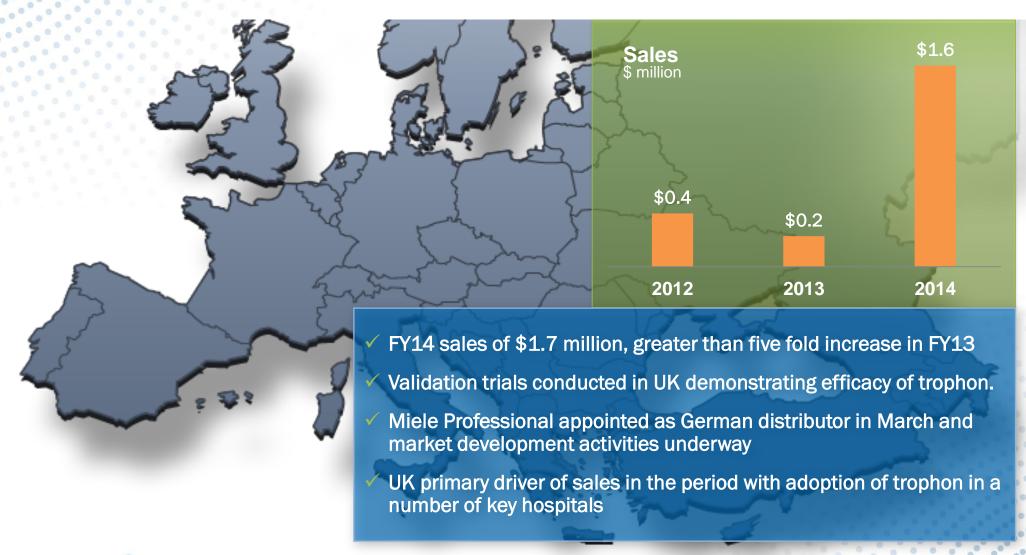


Nanosonics US Service and Repair Facility Established





European Highlights



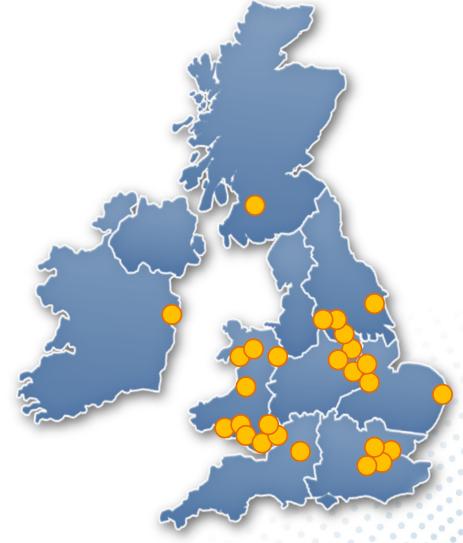


European Market Expanding



Strong Growth in the UK ... and Ireland

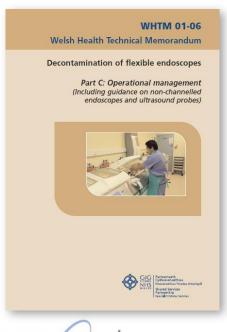
Trophon EPR
now present in
27 hospital
sites throughout
UK and Ireland





New Ultrasound Probe Guidance Published in Wales

- ✓ An automated, validated system positioned as optimal solution
- ✓ The decontamination of transvaginal and transrectal probes should take place in the location they are being used, ie, point of care
- ✓ For quality assurance/traceability purposes, a document system must be in place to ensure contamination/decontamination status of each individual probe



nanosonics





An example of technology designed to provide validated decontamination process of TVLES/TVUR probes



Momentum Building in Germany



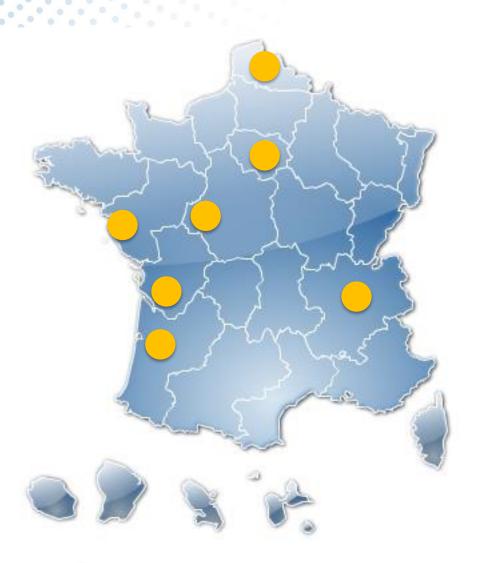
- ✓ Miele distribution partnership signed
- Congress of German society of hospital hygiene (DGKH, April 2014)
- ✓ Publications Heeg/Gauer, VAH negative virucidal efficacy of wipes, first 1yr customer experience
- ✓ M&K Award winner 2014
- Scientific presentations at expert meetings and number of conferences attended
- University of Münster study
- ✓ Miele European expansion





Zentralsterilisation 1/14

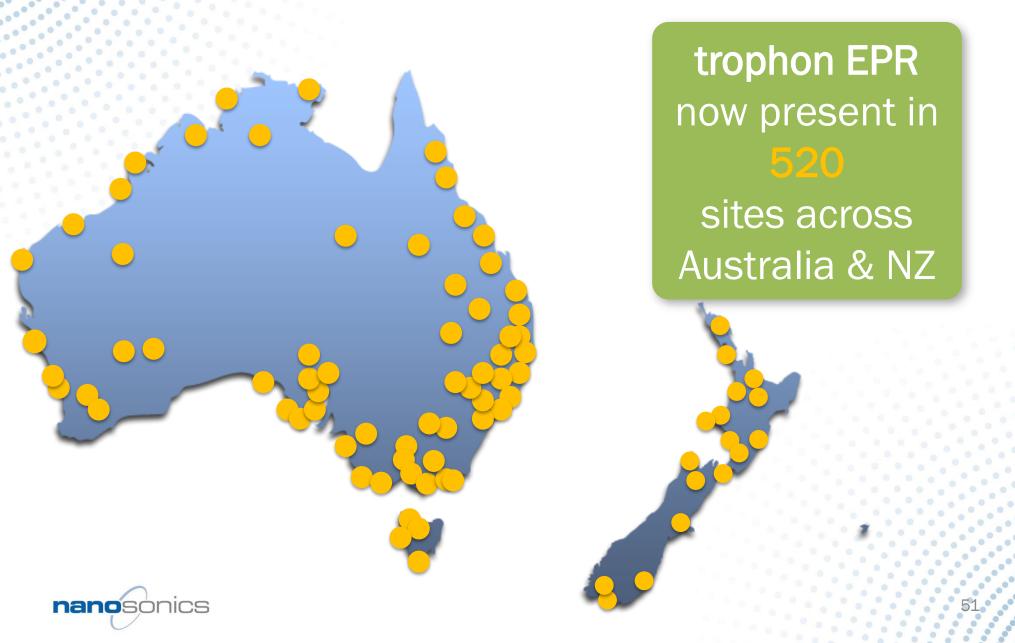
Market development in France progressing well



- trophon EPR now on a number of Public and Private Hospital Tenders (UGAP, AGEPS, HELPEVIA & CACIC)
- Presented at a number of KeyConferences and Educational Events
- KOL program development
- Local clinical trial plans under development



Continued Growth in Australia and NZ



Japan Regulatory Approval Granted







Active R&D Program



- Manufacturing Engineering
- Sustaining Engineering
- Next Generation trophon
- New Products

Number of granted/accepted patents has doubled since April 2013 – from 47 to 95



Active R&D











Chemistries

Accessories

trophon EPR

Future products



Identifying New Markets

ORIGINAL ARTICLE

Contamination of blood pressure cuffs by methicillin-resistant Staphylococcus aureus and preventive measures

M. Matsuo · S. Oie · H. Furukawa

Received: 20 September 2012/Accepted: 22 April 2013/Published online: 3 May 2013 © The Author(s) 2013. This article is published with open access at Springerlin

Background Although blood pressure cuffs are commonly used and shared in medical facilities, their routine disinfection is performed infrequently. Aims. We investigated the contamination of blood pres-

sure cuffs by methicillin-resistant Staphylococcus aureus Methods The MRSA level on the inner side (the surface

in contact with patients' skin) of blood pressure cuffs used in the wards and outpatient clinics of a university hospital (733 beds) was determined using the gauze and swab wiping methods.

Results Using the gauze wiping method (n = 35), the MRSA contamination rate was 31.4 %, and the MRSA contamination level was 1,702.6 ± 9,996.1 (0-58, 320) colony-forming units (cfu)/cuff. No MRSA was detected on blood pressure cuffs after washing (n = 30) or wiping with 80 vol% ethanol (n = 18).

Conclusions Blood pressure cuffs are frequently contaminated by MRSA

Keywords Blood pressure cuff - Contamination -Methicillin-resistant Staphylococcus aureus · MRSA

Previously, concerns regarding mobile phone electroma;

netic interference (EMI) with the function of medical equipment

led to UK National Health Service (NHS) restrictions on their utilization in the clinical arena [8]. Further concerns regarding

patient confidentiality, data storage, privacy and noise disrup-

tion have also been raised (reviewed in Ref. [2]). However,

since January 2009, restrictions on the use of mobile phones by

medical staff and patients have been removed in the UK 191.

This was principally due to the absence of supportive evidence

to demonstrate risks [10,11], advances in handset technology,

the reality that many HCWs and patients were using the

logical advances in avoiding isolation from contacts [12,13].

evices irrespective of restrictions and putative patient psycho-

Although blood pressure cuffs are commonly used and shared in medical facilities, their routine disinfection is performed infrequently. There have been a few studies of

M. Matsuo · S. Oie (🖾) · H. Furukawa Department of Pharmacy, Yamaguchi University Hospital, 1-1-1 Minamikogushi, Ube 755-8505, Japan e-mail: oie-ygc@umin.ac.jp

blood pressure cuff contaminati Staphylococcus aureus qualitative survey

studies on th blood press

with pa

Pharma

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Yellow

Contents lists evaluable at ScienceOrect American Journal of Infection Control

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iPads, droids, and bugs: Infection prevention for mobile handheld devices at

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mediti can provides are increasingly using wheteve media tables, suck as the Apple that especially in the bropical verting, to the absence of specific tabler dissificacing publishers the authors applied what is known about the composition of other assembled mobile communication devices to create American sense ¹ builders to guide workers media tablet bilection prevention practices.

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homes, schools, and health care facilities. The Apple il'ad (Apple Corp. Cupertion, CA), debuted in 2010, is one of several worders media tablets and represents about 20% of the nearly 100 million tablets worldwide." The device, and others like it, provide a light, nortable delivery and visualization medium for stored and online documents, images, and vides, as well as a portal to a rest array of downloadable application software serving a variety of purposes." As technology in this area has evolved, there has also been a untained crowth in the number and diservity of health care-related applications making the tablet a powerful clinical tool."

Nonmedical electronic equipment, such as cell phones, personal digital assistants (TCA), and, most recently, worders media tablets his this article now referred to as mobile handbuilt devices (MERD). tend to corep quarily into health care facilities with little notice or attention paid to appropriate use or effective cleaning and disinlection. Induction preventionists (IP) and bropital epidemiologists must be aware of the expanding use of MHDs by health care professionals as they provide care both directly to and in close proximity to hospitalized patients, thereby potentially creating as ideal vehicle for the transmission of nesocomial pathogens.

Health care providers practicing at the point of acute care have been swift to adopt wireless media technology to improve the practice and delivery of clinical care. In addition to a sophisticated munication device, illuds are being used by intensive care unit

* Address composition to Mary Los Mantag, Phil. CENF, CK, Thomas pri-lesses University priferon School of Nazaing Philadelphia, PA 1992. E-mail salitive marylumanhymalicom (M.). Maningli. Conflicts of interest. Stone to project

physicians during bedside rounds to engage fellow clinicians. students, and patients in viewing laboratory and imaging results (eg. natlographs); by surgeons in the operating room to view patient data; and to take, store, and transmit photographic images; by bedride nurses to access pharmacoutical inventories and other health care literature and to conduct nations and family education: and by health professions faculty and students as an instructional tool to facilitate learning and clinical performance.14.7 Ottawa Nospital in Canada recently developed a native illud version of the electrosis: braith record software and put 3000 d'ads directly in the hands of frontline workers revitalizing bedside patient rounds and direct care activities." The hospital mobile strategy includes sendors to add speech recognition. Most recently, the editor of (Medical Appa.com suggests that the new iPad Mini, because of its lighter weight and functionality, is the electronic "clipboard" for which physicians in the clinical setting have been waiting."

It is imperative that infection prevention and control programs be actively engaged in providing bright care worker (HCW) goldance and education in how to mitigate the risk of bacterial contamination of their MHDs. Programs also have an important role in working together with health care providers to establish and implement organizational MHD policies and procedures. We know of no published wireless tablet contamination studies, published or protocols. Therefore, the aim of this article is to apply what in known about the contamination of other nonmedical mobile mication devices (eg. cell phones, PDA) and to suggest an "iffluedie" or a nackage of continon wour interventions that when used together, could result in better outcomes [eg, less hacterial cross contamination) than when implemented individually

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Laryngoscope blades and handles as sources of cross-infection: an integrative review

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SUMMARY

The lack of standardization of efficient procedures to clean and distribut laryingoscope blades and handles, which may be important sources of infection during their clinical use, has been reported previously, revealing contamination with blood, body fluids and microorganisms. This paper aimed to evaluate the evidence available in the literature regarding the risk of laryngoscope blades and handles as a source of patient contamination. An integrative review of the literature was performed using databases such as Medine, LILACS, SciELO, Cochrane Library, BDENF and PubMed, and keywords in Medical Subject Headings (MeSHs. The sample comprised 20 articles published between 1994 and 2012. The studies demonstrated risk of cross-infection and no consensus in current guidelines regarding clears

ORIGINAL ARTICLE

Contamination of Stethoscopes and Physicians' Hands After a Physical Examination

Yves Longtin, MD; Alexis Schneider, MD; Clément Tschopp, MD; Gesuèle Renzi, MS; Angèle Gayet-Ageron, MD, PhD; Jacques Schrenzel, MD; and Dider Pittet, MD, MS

Objectives: To compare the contamination level of physicians' hands and stethoscopes and to explore the ion of microorganisms through the use of stethoscopes

Patients and Methods: We conducted a structured prospective study between January 1, 2009, and May 31, 2009, involving 83 inpatients at a Swiss university teaching hospital. After a standardized physical examination, 4 regions of the physician's gloved or ungloved dominant hand and 2 sections of the stethoscopes were pressed onto selective and nonselective media; 489 surfaces were sampled. Total aerobic colony counts (ACCs) and total methicillin-resistant Staphylococcus aureus (MRSA) colony-forming unit

Results: Median total ACCs (interquartile range) for fingertips, thenar eminence, bypothenar eminence hand dorsum, stethoscope diaphragm, and tube were 467, 37, 34, 8, 89, and 18, respectively. The contamination level of the diaphragm was lower than the contamination level of the fingertips (P < .001) but higher than the contamination level of the therar eminence (P = .004). The MRSA contamination level of the diaphraem was higher than the MRSA contamination level of the thenar eminence (7 CFUs/25 cm2 vs 4 CFUs/25 cm2; P= 004). The correlation analysis for both total ACCs and MRSA CFU counts revealed that the contamination level of the disphragm was associated with the contamination level of the fingertip (Spearman's rank correlation coefficient, ρ =0.80, P<.001 and ρ =0.76, P<.001, respectively). Similarly, the contamination level of the stethoscope tube increased with the increase in the contamination level of the fingertips for both total ACCs and MRSA CFU courts (ρ =0.56; P<.001 and ρ =.59; P<.001, respectively). Conclusion: These results suggest that the contamination level of the stethoscope is substantial after a single physical examination and comparable to the contamination of parts of the physician's dominant hand.

icant morbidity and mortality. The present evi-dence indicates that health care workers' hands by studying I step at a time.

Many factors must be considered when conare the main route of cross-transmission.12 ducting such studies. For example, as no piece may also contribute to the dissemination of mihypothesis is less robust and their role in micro-organism propagation is poorly understood. when sampled. However, the clinical signifi-cance of detecting low levels of contamination Similar to any piece of medical equipment, is uncertain. One way to solve this difficulty stethoscopes have the theoretical capacity to be and better understand the relative contribution vectors of pathogens through a multistep pro-cess. First, stethoscopes must acquire microor-ganisms is to place their levels of contamination ganisms after contact with a source patient."

microorganisms is a major threat to the risk of transmission at each of these steps. hospitalized patients and causes signif- and assessing transmissibility is better achieved For editorial

organisms, but the evidence supporting this care environment will yield microorganisms inisms after contact with a source patient, into perspective with those of a universally recognized vector of dissemination, that is, the the object for at least several minutes and be transferred to the skin of a second patient during. physician's own hands. If the number of bacte-ria recovered from stethoscopes is much lower



ORIGINAL ARTICLE

Abstract

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Mobile phone technology and hospitalized patients: a cros

surveillance study of bacterial colonization, and patient of

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Hospitals and 3) Ebidemiology and Statistics Care, WTCRF, University of Edinburgh Western General Hospital, Edinburgh, U

Healthcare workers' mobile phones provide a reservoir of bacteria known to cause nosocomial infec

restrictions on the utilization of mobile phones within hospicals have been relaxed; however, utilization and the risk of cross-contamination are currently unknown. Here, we examine demographics and characte

tion by impatients and phone surface microbial contamination. One hundred and two out of 145 (70 3%)

questionnaire detailing their opinions and utilization of mobile phones, also provided their mobile phones for

comparative bacteriological swabs from their nasal cavities: 92.4% of patients support utilization of mobile of

24.5% of patients stated that mobile phones were vital to their inpatient stay. Patients in younger age ca

possess a mobile phone both inside and outside hospital (p <0.01) but there was no gender association.

patients' mobile phone swabs were positive for microbial contamination. Twelve (11.8%) phones grew bac

mial infection. Seven (6.9%) phones and 32 (31.4%) nasal swabs demonstrated Stophylococcus dureus contam

ination of phones was associated with concomitant nasal colonization. Patient utilization of mobile pho-

popular and common: however, we recommend that patients are educated by clear guidelines and advice

etiquette, power charging safety, regular cleaning of phones and hand hygiene, and advised not to share

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with other inpatients in order to prevent transmission of bacteria

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A number of studies have consistently reported that 5-21% of healthcare workers' mobile phones provide a reservoir of

bacteria known to cause nosocomial infections [1-7].

Despite this knowledge, there exists a paucity of advice pro

vided to either healthcare workers (HCWs) or inpatients on

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the use or decontamination of mobile phones in hospitals.

Keywords: Bacteria, contamination, infection control, mobile phones, patients





Business Outlook – Positioned for Continued Growth

Market fundamentals continue to strengthen

- Increasing awareness of imaging related healthcare acquired infections
- Supporting Guidelines for automated HLD solutions
- Excellent clinical data and customer value propositions

Continuing to Expand within existing markets

 Growth demonstrated in the US, Europe, Australia and NZ with opportunity to expand facilities and sites within facilities

Continuing to Expand Regional Operations

- Entering five new European Markets
- Entering Korea
- Approval received and preparations underway for Japanese launch

Investment in R&D

Opportunities for expansion of portfolio under investigation and development





Thank You