



NAME International Newsletter

APRIL 2016 - VOLUME 1, ISSUE 2

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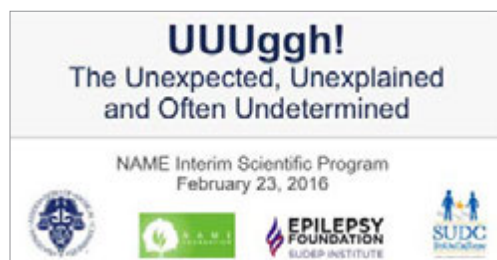
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UUUGGH! THE UNEXPECTED, UNEXPLAINED AND OFTEN UNDETERMINED



Laura Crandall

More than 245 attendees participated in the National Association of Medical Examiner's 2016 Interim Meeting in Las Vegas last month. International representation was strong, with 69 members (28%) attending from 28 countries outside the U.S.!



The theme of this year's meeting was investigating sudden unexpected deaths highlighting new research findings, public health efforts and collaborative resources.

THE EVENT FEATURED 10 DISTINGUISHED SPEAKERS, INCLUDING:

- Zian Tseng, M.D. of University of California, San Francisco and Ellen Moffat, M.D. of the San Francisco Medical Examiner's Office discussing insights from the San Francisco POST SCD Study and redefining sudden cardiac death.
- Michael Ackerman, MD of Mayo Clinic Windland Smith Rice Sudden Death Genomics Laboratory provided an update regarding Cardiac Channelopathies and Genetic Testing in Post Mortem Cases- including cautionary tales.
- Orrin Devinsky, M.D. of the NYU Comprehensive Epilepsy Center and George Richerson, M.D. of the University of Iowa College of Medicine discussing Sudden unexpected death in epilepsy, Sudden unexplained death in childhood and the research findings regarding the mechanisms of cardiorespiratory collapse after seizures.

Additional speakers and panelists discussed public health efforts, trends in R99 (undetermined deaths) and the limitations of tracking due to death certificate data and variations in death certification.

The day ended with a panel discussion of various stakeholders' perspectives (medical examiners, research, public health, clinical medical and families) regarding their specific needs from the death investigation process, resources available to medical examiners and opportunities to form



L-R: Orrin Devinsky (NAME Interim meeting speaker), actor and supporter Harrison Ford, and NAME member Laura Crandall, organizer of the Interim educational meeting.



Full house at the NAME Interim meeting.

successful collaborative partnerships to better understand these tragedies.

RESOURCES INCLUDED:

Mayo Clinic's Sudden Death Genomics Laboratory:
<http://www.mayo.edu/research/labs/sudden-death-genomics/overview>

North American SUDEP Registry:
<http://sudep-registry.org>

SUDC Registry and Research Collaborative:
<http://sudc.org/Research/SUDCRRC>

SUDEP Center Without Walls:
http://csr.case.edu/index.php/Main_Page

Sudden Death In the Young Registry:
<http://www.nhlbi.nih.gov/news/spotlight/fact-sheet/frequently-asked-questions-about-sudden-death-young-case-registry>

SUID Case Registry:
<http://www.cdc.gov/sids/CaseRegistry.htm>

SADS Foundation:
<http://www.sads.org>

SUDC Foundation:
<http://sudc.org>



Pat Lantz, MD, Medical Examiner (North Carolina) attending the NAME Interim meeting.



Attending the NAME Interim meeting in Las Vegas L-R
 Dr. Bamidele Adeagbo (Canada)
 Dr. Ibrahim K. Ramahi (Qatar)



All attendees were invited to approach the microphone with any questions or comments for the speakers as well as for the audience members.



Very active question and answer period during the meeting with all speakers available for discussion.



US and International attendees spent the day learning the latest on unexplained childhood deaths.



L-R

Dr. Keen Garvin
(Forensic Pathologist, Newberry Pathology)

Dr. Kim A. Collins
(Forensic Pathologist, Newberry Pathology)

Kelly Kraus
(Deputy Coroner, Charleston, SC)

Bobbi Jo O'Neal, RN
(Chief Deputy Coroner, Charleston, SC)

Dr. Demi J. Garvin
(Forensic Toxicologist, Forensic
Science Network)



Dr. Amy Gruszecki enjoying a meal at the Rio host hotel during the NAME interim meeting!



Incredible panel of expert speakers for “Unexplained Deaths in Medicolegal Investigation” at the Interim NAME meeting. The individual presentations and the question and answer period at the end were extremely well-received.



Drs. Tom Noguchi and Victor Weedn (President of the AAFS) getting prepared for a daring adventure on the Rio zip line. Do we think that they and their courage will sustain them past the waiting line?



And our fearless leaders are off! They will zip high above the roads and buildings of Las Vegas in a daring feat of strength and courage!



AMAZING! Drs. Tom Noguchi and Victor Weedn have risked life and limb to soar above the sky scrapers of Las Vegas. Actually Dr. Noguchi looks extremely relaxed as he and Dr. Weedn have their lives dangling on two cables with the wind whipping at their faces!

SUDEP Institute:

<http://www.epilepsy.com/sudep-institute>

DNA Banking:

<http://sudc.org/Medical-Forensic/Securing-and-Banking-DNA-after-SUDC>

The Meeting was co-sponsored by the NAME Foundation, the SUDEP Institute and the Sudden Unexplained Death In Childhood (SUDC) Foundation. The program chair was Laura Gould Crandall



THE NAME FOUNDATION



Joseph A. Prahlow, MD

INTRODUCTION & HISTORY:

The NAME Foundation was conceived of and created by Tom Noguchi, MD, retired Chief of the Los Angeles Coroners Office, former President of the National Association of Medical Examiners, and Co-Chair of NAME's International Relations Committee. The NAME Foundation is a nonprofit charitable corporation established in 1996. It is organized and operated exclusively for public charitable, educational, and scientific uses and purposes, in such ways as the Board of Trustees of the corporation shall determine at its discretion. Over the years, the Foundation has largely remained "behind the scenes," visible only to NAME members, typically at the Annual and Interim NAME meetings, and occasionally via postal or electronic communications. The overall goals of the Foundation are to advocate for the profession of Forensic Pathology, particularly via maintaining its history and promoting education and research. Over the years, the Foundation has, through the generous donation of its members, built a fund of more than \$300,000. As we move forward, the NAME Foundation hopes to substantially build its financial resources and commit to more actively promoting forensic pathology. It's quite easy to become a member of the Foundation. Membership is open to all NAME members, including affiliate members. Required annual donation: \$50 US for NAME members and \$20 US for NAME Affiliates. Membership is also open to non-NAME individuals and entities.

ACTIVITIES: The Foundation exists to promote forensic pathology and death investigation, specifically via advocating for research and education, and by preserving history. Four times a year, the NAME Foundation creates and electronically distributes a Newsletter, informing NAME members of various activities. In most issues, a particular individual is highlighted. Prior issues are available via the NAME website. Specific activities and highlights of the Foundation include the following:

- Sponsoring the Awards for Best Papers and Posters (by Residents and Students) at the NAME Annual meeting.
- Sponsoring NAME Annual Meeting activities, such as the silent auction, the 50/50 raffle, morning yoga sessions, and entertainment activities (such as magicians and celebrity impersonators at the opening banquet).
- Financially supporting guest speakers at NAME meetings.
- Providing scholarships to students and residents to offset the costs associated with attending meetings to present papers/posters.
- Participating in a recent campaign in honor of Dr. Noguchi's late wife, Hisako, where donations totaled greater than \$20,000, including the \$10,000 matching contribution from the Fredric Rieders Family Foundation.
- Celebrating NAME's 50th Anniversary in 2016 by producing a commemorative coin (see image).

MEETINGS & LEADERSHIP: An annual meeting of the Foundation membership occurs in conjunction with the NAME Annual Meeting. The leadership of the Foundation consists of a Board of Trustees (BoT), elected by the Foundation membership, who serve 3-year terms, with a maximum of 2 consecutive terms. The BoT annually elects a Chair, a Vice Chair, a Secretary, and a Treasurer, who serve as the Officers of the corporation. Tom Noguchi is the Foundation's "Founding Director," and serves as a lifetime Board member. The BoT has two face-to-face meetings per year, in conjunction with NAME's Annual and Interim meetings. In addition, conference calls occur throughout the year, at least once every two months. A list of the

current NAME Foundation BoT is included at the end of this article. In addition to the BoT, the Foundation now has an official “Advocate,” Dr. Jan Garavaglia. In certain ways, she will become the “face of the NAME Foundation,” as we move forward in advocating for forensic pathology and death investigation. Please refer to Volume 2, Issue 3 of the Foundation Newsletter for more details about our official Advocate. A number of Foundation Committees exist to ensure that the Foundation can be successful in achieving its goals. Committees include: Membership, Bylaws, Investment/Finance, Fundraising, Advocacy, Newsletter, Silent Auction/Meeting, Research, Education, History, and Long-Range Planning. While BoT members lead and serve on committees, committee membership is open to all Foundation members. International member participation is welcome!

INVITATION: The NAME Foundation welcomes all NAME members (and others) who have a desire to advance the causes of research, education, and history preservation within the world of forensic pathology and death investigation. In this inaugural issue of the International Newsletter, the NAME Foundation would especially like to invite NAME’s international members to consider joining this organization that was started by our very own Tom Noguchi. Remember that non-individual, corporate/institutional membership is also an option. Thank you for your consideration.

NAME FOUNDATION BOARD OF TRUSTEES (2016)

Chair – Joseph A. Prahlow

Vice Chair – Margaret S. Greenwald

Secretary – Gregory A. Schmunk

Treasurer – Michael Graham

Founding Director – Thomas Noguchi

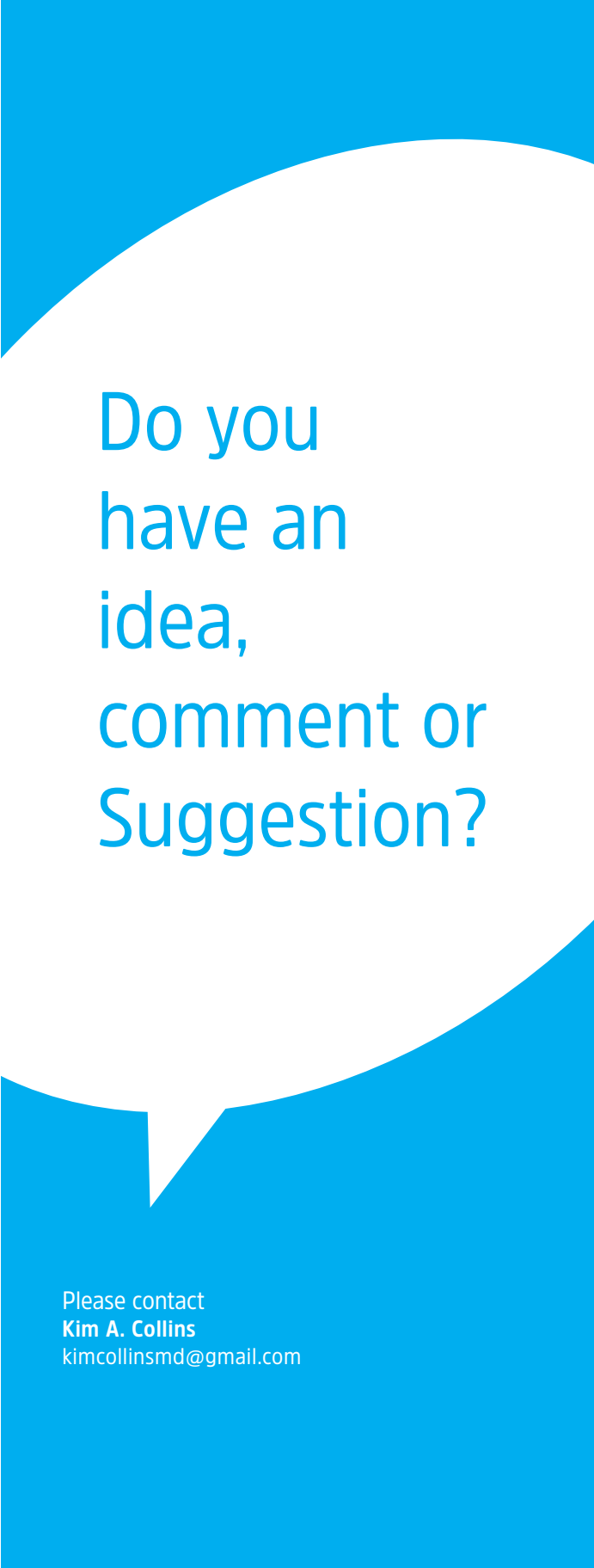
Trustees: John Butts, Mary Case, Joe Felo, Marcella Fierro, Jan Garavaglia, Mary Goolsby, Jim Luke, Amy Martin, Yvonne Milewski, Chris Milroy, Michael F. Reiders, Joel Sexton

Ex-Officio:

Steve Cina,

David Fowler,

Marcus Nashelsky



Do you
have an
idea,
comment or
Suggestion?

Please contact
Kim A. Collins
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DEATH INVESTIGATION AND AUTOPSY PRACTICE IN SINGAPORE



While the written history of Singapore can be traced as far back as the third century, modern Singapore came to be founded in 1819 when the British established it as a colony and trading port. Following a short merger with Malaysia in 1963-1965, it became an independent country in 1965.

The population of Singapore has always seen a diverse mixture of cultures and ethnicity, with a predominant Chinese majority (74%), Malays (13%), Indians (9%) and Others (3%). The current population stands at 5.5 million which include 3.3 Million Citizens, 0.5 Million permanent residents and 1.6 million non-residents. The total foreign workforce is about 1.4 million of whom about 50,000 Malaysians commute daily between Singapore

and Malaysia. Some 15 million tourists passed through Singapore in 2014.

DEATH INVESTIGATION SYSTEM

The death investigation system is a coronial system historically inherited. The laws that embody the practice, previously contained within the Criminal Procedure Code became a separate Act in 2010, the Coroner's Act. Within the Act itself, the roles and responsibilities of various parties involved are defined. The Police carry out death investigations. The Coroner is advised by the forensic pathologist on the need for an autopsy, and authorizes the Forensic pathologist to carry out the examination. His decision overrides the wishes of the next of kin in regard for an autopsy to be carried out. Who qualifies to practice as a forensic pathologist is spelt out. For an individual to be recognised as a forensic pathologist under the Coroner's Act, the individual needs to be recognised as a pathologist in the Specialist Register of Ministry of Health's Specialist Accreditation Board, and be appointed by the government's gazette notification by the Chief Executive of the Health Sciences Authority. The Act also provides powers for the forensic pathologist to obtain medical records from healthcare facilities, recall or retain material from healthcare institutions that may be pertinent to the investigation of the cases.

The Act explicitly provides for the forensic pathologist to retain any part of the body as required, in the conduct of the examination. Where the Coroner is satisfied that the deceased had died due to natural

disease processes, he can terminate inquiry without a public hearing. However, he may still do so if it is deemed expedient in public interest to do so. For unnatural deaths, public hearings are conducted, save in cases where the inquiry is suspended pending the outcome of other criminal proceedings related to the death.

At the inquiry, the Coroner hears the circumstances of the case and autopsy findings and records his findings. Typically, the forensic pathologist corresponds with the Police Investigator prior to the inquiry to clarify matters of concern. Autopsy reports are admissible as prima facie evidence, and the expert's attendance in court is not required, unless interested parties have issues to clarify.

The Coroner can conduct the inquiry in the manner he feels fit, and admit hearsay evidence, as he is not bound not by the rules of evidence (under the Evidence Act). The facts and findings of the Coroner's Inquiry cannot be used in subsequent judicial proceedings or disciplinary hearings. The Coroner does not determine the manner. While the Coroner may make his recommendations on the case, he/she is not permitted to indict any individual for offences of criminal liability. Any indictment rests with the Attorney-General's chambers.

The discipline of forensic pathology started in the early 1960's as part of the Pathology Department of the Ministry of Health. Over time, with various restructuring and reorganization of healthcare services in Singapore, the service has evolved into the Forensic Medicine

Division, which is now part of the Health Sciences Authority of Singapore, a statutory board of the Ministry of Health. Operationally, it is independent of all the hospitals as well as law enforcement, and the judiciary. It is the sole provider of forensic pathology services for the entire country. In terms of funding, the Division bills the Police on a per case fee-for-service basis, and is expected to recover as much of its total costs as feasible.

STAFFING AND FACILITY

The Division has currently 8 consultant forensic pathologists (including the Chief), and two forensic fellows (trainees). They are supported by a pool of Forensic Technical Officers who are trained to carry out evisceration, photography, operate the radiological equipment, as well as assisting in various ancillary work on a rotational roster basis. A small pool of administrative staff provide administrative services as well as carry out death registration, and issue of cremation/burial permits. From time to time, Anatomical Pathology fellows from public hospitals do a 6-month rotational posting through the department to fulfill their training in autopsy pathology. Facilities include an 11-table general autopsy suite, a decomposed and infectious cases autopsy suite with two tables, a small in-house histology laboratory, a forensic anthropology wet lab, a CT scanner and a newly acquired low-dose x-ray scanner. Visiting consultants in forensic odontology, forensic anthropology, histopathology and neuropathology have been appointed to supplement the expertise pool. Toxicology services are provided by the

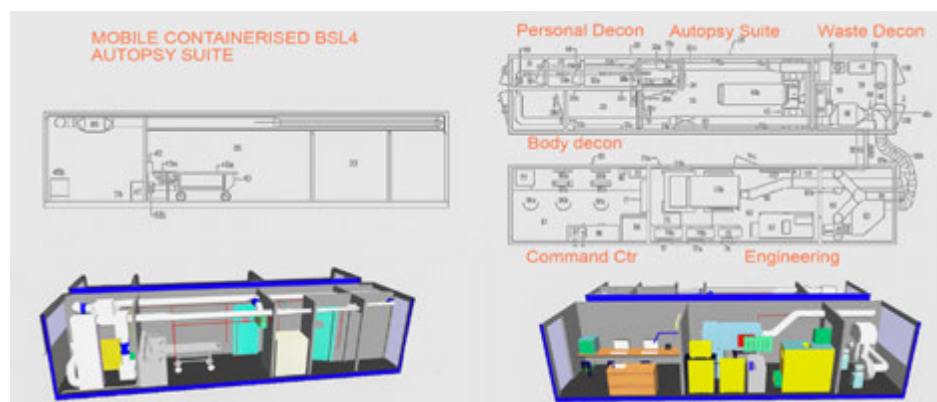


Diagram depicting the key zones within the twin container facility. All the necessary engineering for liquid/air decontamination are housed in the two containers.

Analytical Toxicology Laboratory, not under FMD but which is part of the Health Sciences Authority.

NATURE OF WORKLOAD

Most of the workload relate to Coroner's cases within the jurisdiction of the Singapore Coroner. The annual throughput of cases is just over 4000 Coroner's cases a year. Almost all bodies are routinely x-rayed or CT scanned.

Not all cases are autopsied. A little less than two-thirds of the cases are released after an external examination, photographic documentation and a radiological scan (i.e. signed up cases). These would be cases of deaths in non-

suspicious, natural circumstances with history of potentially fatal medical conditions, which is usually obtained through direct access to electronic national medical records on-demand and electronic transfer of case notes from other practitioners. The majority of unnatural deaths come from self-inflicted injuries in the form of falling from high buildings and hangings. Road traffic accidents are in the top three, with motorcyclists and pedestrians being in the majority. Firearm related deaths and deaths due to drug abuse are uncommon due to severe restrictions on firearm possession and drug trafficking. Homicides



A general view of the current public waiting area for the next of kin. A larger area is being renovated and will replace the current area in a few months' time.

are low compared to many other jurisdictions and are predominantly associated with non-stranger assailants, usually from the use of knives or blunt objects. Forensic pathologists attend to scenes of homicides or suspicious deaths. Therapy related deaths form a fairly common group that is referred to the Office. As such, autopsy reports are often requested by hospitals for their mortality audits.

The mortuary operates every day of the year, which enables about 90% of the bodies are released and claimed within 24 hours of arrival at the mortuary. The socio-cultural context within which we work places a high expectation on the expeditious processing and return of the bodies back to the next of kin. The office is actively involved in system integration efforts with other government agencies and the hospitals, so as to minimize the next-of-kin's distress arising from bureaucratic processes. These include interagency data



View of the Autopsy suite within the BSL4 container. The yellow hoses carry air to the operators in their BSL4 suits.

transfers, education of healthcare professionals to reduce unnecessary reporting, logistic improvements and performance monitoring across the entire 'value-chain'.

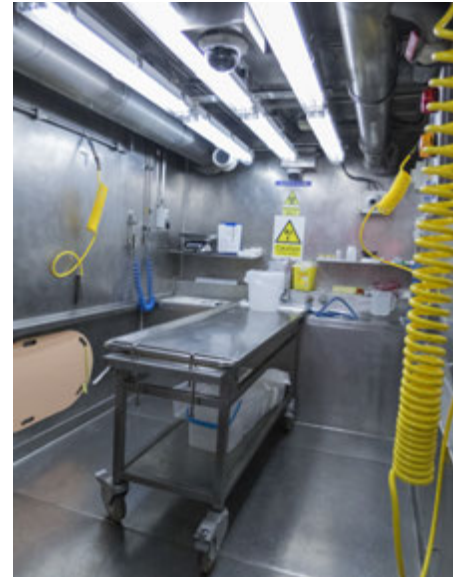
The Division participates in undergraduate medical education, and a number of consultants are on the teaching faculty of one of the local medical schools. Undergraduates in their third/ fourth year spend a few days at the mortuary and department. Occasionally, forensic pathologists are consulted for their secondary expert opinion in forensic review of clinical cases.

The Office is capable of sending rapid deployment of teams overseas at short notice. Our staff had also participated in the Asian Tsunami and other overseas work as part of the Singapore Police Force's Disaster Victim Identification Teams.

FOCUS ON BIOSAFETY

When the SARS epidemic broke out in 2003, the department was called upon to assist in the conduct of autopsies of deaths arising from an unknown organism, as part of the national effort to contain the epidemic. While many had been hospitalized, a few cases presented as sudden deaths in the community without any prior history of known exposure.

Given the fact that Singapore is a travel hub with high volumes of people moving in and out of the country, there is a need for the public health system to remain vigilant and maintain the capability in detecting cases early and containing the spread of the organism early – on in its spread.



View of the Autopsy suite within the BSL4 container. The yellow hoses carry air to the operators in their BSL4 suits.

FMD has a role as being part of the sentinel system.

The building that houses the autopsy suite which was built back in the 1980's had undergone several rounds of upgrading. The autopsy suite currently operates at a BSL2+ environment while the decomposed room is revamped for BSL3. The organizational culture towards biosafety has evolved significantly. Use of universal precautions with



A single autopsy station that allows demonstration to medical students without the latter having to don PPE to observe an ongoing autopsy.



A forensic pathologist and a forensic technical officer in their BSL 4 gear receive the body through the body pass through channel into the autopsy suite.

N95 masks is routine. Stringent practice protocols are laid down for compliance.

Arising from the experience from SARS, FMD conceived of and implemented the idea of a mobile containerized BSL-4 autopsy facility in the form of two interlinked 40-footer shipping

containers. Since 2005, this provides the capability for BSL4 work to be carried out safely while keeping construction and maintenance costs to a minimum. Following established protocols and procedures that had evolved through regular practice reviews, a pathologist and a technician can carry out a high risk autopsy safely with minimized risks to themselves, and then be able to decontaminate the body properly before the body leaves the autopsy suite. The entire operation is observed and monitored real time at a command centre within the other container. The containers can be moved on trailers or ship to any location for deployment, together with mobile generators and a water supply. Both pathologists and FTO teams are trained and exercised regularly with actual autopsies (simulating high risk cases) carried out to keep their skill sets current. Every two years, field deployment exercises are carried out to test deployment readiness. The overall benefit of this programme has been the reinforcement of an

increased awareness of biorisk and strengthening of the biosafety culture within the department.

NAME ACCREDITATION AND THE OFFICE

For several decades now, the Public Service in Singapore subscribes strongly to the ideas of international benchmarking and continued innovation and improvement. Forensic Medicine Division began its journey, and looked to NAME accreditation in the early 2000's. It is due for its reaccreditation this year.

The office sees the accreditation model as one being comprehensive in covering both professional and operational perspectives. There is no doubt that seeking accreditation and retaining accreditation had and continues to require ongoing effort. Initial adoption was, admittedly, not without resistance. However, over time, NAME accreditation has been and continues to be advantageous, from our perspective, as:

- a. It provides a common platform for internal discourse as what constitutes good and rational professional as well as operational practices, how we can continue to maintain professional standards and embed good practices systematically, so as to provide consistent quality service over time. The NAME autopsy performance standards was the basis of many a discussion for adoption and adaption to suit specific local needs.



Every two years, the containers are loaded onto trailers and deployed at alternate sites, to maintain deployment readiness.



A general view of one of two banks of autopsy stations in the general autopsy suite.



A support team of two forensic technical officers delivering a suspected case into the body pass through channel. The team also serve as an emergency evacuation team should either of the operators in the autopsy suite encounter sudden disability during the autopsy procedure.

- b. It facilitates the engagement of and conversation with key stakeholders, external and internal, in aiding the department to securing and protecting the necessary manpower and other resources needed for a sustainable service in the longer term. Issues raised during external audits become the foci for further improvement.
- c. It requires other operational partners such as the police, toxicology laboratories, etc to work collaboratively with FMD as part of the death investigation eco-system, to raise the quality of forensic service to the community.
- d. It requires everyone in the department to review policies and processes regularly, to respond to changes, so that people do not fall asleep at the wheel. Previous unforeseen incidents that arise become valuable opportunities to surface gaps and then to close them. This enables the development of consistent logical policy positions.
- e. It provides a form of external audit and quality assurance to external stakeholders such as the Courts, Public prosecution, law enforcement, the defense, Government and the public that good forensic practices are in place. Professional practice is difficult to measure in terms of outcomes. However, putting in place the proper standards and measures in upstream inputs and processes go some way to promote quality outputs and outcomes.
- f. It facilitates the communication of the office's expectations and policies to new staff joining the department, as well as to other departments within HSA on which FMD depends to deliver its goals.

CONCLUSION

The near to intermediate future will see the department focusing its attention in three key areas: the need to develop a sustainable pipeline of specialists; relocation to a new facility (probably a decade from now); and strengthening its operational capacity with its key partners to deal with sudden surges in workload.

FUTURE MEETINGS

Of Affiliated National Associations and Collaborating Organizations

Euthanasia 2016

May 11 – 14, 2016

Amsterdam, Netherlands

Website: www.euthanasia2016.com

Fourth International Conference on Ethics Education

May 25th-27th, 2016

Logroño, Spain

Website: <http://4iaee.cibir.es>

23rd International Academy of Legal Medicine

June 21 – 24, 2016

Venice, Italy

Website: www.ialm.info

22nd Annual WAML World Congress

August 7-11, 2016

Los Angeles, CA (USA)

Website: www.thewaml.com

50th Annual Meeting of the National Association of Medical Examiners

September 9-13, 2016

Minneapolis, MN (USA)

Website: www.thename.org

10th International Symposium Advances in Legal Medicine (ISALM) combined with the 96th Annual Conference German Society of Legal Medicine

September 11-15, 2017

Düsseldorf/Cologne, Germany

Website: <http://www.isalm2017.de>

51st Annual Meeting of the National Association of Medical Examiners

October 13-17, 2017

Scottsdale, AZ, USA

Website: www.thename.org

2017 (dates to be announced)

6th International Conference on Evidence Law and Forensic Science

Baltimore, MD (USA)

Languages that NAME members speak other than English

- | | |
|-----------------|----------------------|
| 1. Bengali | 14. Malayalam |
| 2. Bulgarian | 15. Mandarin Chinese |
| 3. Chinese | 16. Marathi |
| 4. Dutch | 17. Polish |
| 5. French | 18. Portuguese |
| 6. German | 19. Punjabi |
| 7. Gulla/Geeche | 20. Russian |
| 8. Hindi | 21. Sinhala |
| 9. Irish Gaelic | 22. Spanish |
| 10. Italian | 23. Tamil |
| 11. Japanese | 24. Urdu |
| 12. Kannada | |
| 13. Korean | |

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