



NEWSLETTER

MINSIG 2015/2016 EXECUTIVE COMMITTEE MEMBERS

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As I write this editorial, my thoughts are on the issues discussed at the 4th World Congress on Vascular Access (WoCoVA). The focus of the congress which was held in Lisbon, Portugal from 22nd June to 24th June was on excellence in vascular access, safety, cost effectiveness and efficiency. Vascular access professionals also used this platform to deliberate on having a globally shared guideline for clinical practice. I was not there physically, but I was able to get a glimpse of the information presented at the congress online (<http://www.vascular-access.info/pub/wocova>) and through the immediate updates on Facebook and online by the IVTEAM. Do visit these websites for current information in the area of vascular access.

Compared to 2015, the early part of this year was rather quiet for MINSIG. Our executive committee members are juggling with work and home. It is understandable where their priority lies. Nevertheless they continued to be committed and on 21st January MINSIG successfully ran a seminar with the theme "Caring for Patients on Intravenous Chemotherapy". MINSIG took the opportunity to celebrate Global IV Day on the same day instead of January 25th. Corporate partners who had contributed to MINSIG's efforts to improve infusion care were invited to join the participants for lunch.

MINSIG members contributed to all the major activities organised by the mother body through their respective Branches. Snapshots of the community project (20th February) and 66th AGM (1st-4th April) were immediately made available on MINSIG Facebook. For the 2nd part of the year, MINSIG is jointly organising a seminar "Safe Practices to Reduce Intravenous Related Infections" with Department of Nursing, Faculty of Medicine UKM and Terumo Malaysia. It will be held on 23rd July 2016 at the Auditorium Hospital Canselor Tuanku Muhriz, UKM Medical Centre. The APIC Implementation Guide on Central Line Blood Stream

Infections (CLABSI) released on December 2015 would be a useful reference for participants to read and strengthen their knowledge with the information provided at the seminar (http://apic.org/Resource_/TinyMceFileManager/2015/APIC_CLABSI_WEB.pdf). The guideline outlines practices that are core to prevention efforts and demonstrates application through associated tools and resources.

MINSIG initially scheduled two workshops on Insertion and Management of Peripheral Intravenous Cannula for Adult Clients. Due to unforeseen circumstances we could only run one workshop and it is scheduled for 11 to 13 August 2016. Few more seats are available. MINSIG is also organising a one day refresher workshop for nurses with expired IV cannulation certificates. Please get in touch with us at minsig2015@gmail.com for further information regarding this course. There has been a request for another seminar on intravenous chemotherapy and we hope to organise it before the year ends.

MINSIG had reduced its newsletter from 3 issues to 2 issues in an effort to cut down paper prints and encourage online reading. The issues are available on MNA website. I do hope that the summaries of current research as well as new innovations related to vascular access available in this newsletter are useful for clinicians.

MINSIG would like to take the opportunity to congratulate the new President of MNA, Puan Sharipah Syed Al-Junid and wish her all the best. MINSIG is looking forward to advance further under her leadership. To the outgoing President, Puan Mariam Madhar Ali, MINSIG sincerely thank her for the invaluable contributions and support of our activities.

Jeya Devi Coomarasamy
Chairman, MINSIG

INTRAVENOUS NEEDLELESS CONNECTORS

INTRODUCTION

Needleless connectors (NCs) are devices used to connect catheters, administration sets, and/or syringes to deliver intravenous (IV) therapy. Originally NCs were designed to meet the 1992 recommendations by Occupational Safety and Health Administration (OSHA) for “engineering controls” to prevent needle stick injuries amongst health care professionals and decrease their risk of getting infection from blood borne pathogens. Despite manufacturers having complied with OSHA requirements, several evidences are surfacing to indicate that NCs are a source of contamination and contributing to hospital associated blood stream infection (HA-BSI). (Moureau & Flynn, 2015; Hardaway & Richardson, 2010; Jarvis, 2010). Catheter occlusion is another related problem with NCs which could also lead to infection. While the concern for safety of clinicians is admirable, the issue of patient safety cannot be overlooked. There is currently lack of experimental studies to identify the root cause of infection with NCs and identify which is the best NC for the patient and the clinician. Most of the studies are related to central venous line blood stream infections where NCs are used, but the findings are relevant in the management of intravenous peripheral lines.

The purpose of this article is to provide an overview of the design and function of NCs, and the underlying clinical implications that contribute to HA-BSI.

DESIGN AND FUNCTION

The design of the NCs have evolved through the years. Several generations of NCs are currently available with names such as “hep-locks”, “male adopters”, “Luer-locks”, “split septums” and “caps”. All NCs have four common elements: 1) an external housing, 2) a septum which is the entry point of the connector, 3) a fluid pathway and 4) a mechanism for returning the septum to its original closed system with disconnection (Chernecky & Macklin, 2014). As clinicians it is important to understand each of the design and function of the NCs that are available in the market if the goal is to reduce HA-BSI associated with NCs.

1. External Features

The external housing of of NCs are generally opaque, clear or colored. Those with a clear outer housing are transparent and makes it easy to visualize the internal surface of the device and determine whether flushing done was complete (Hadaway,2012; Jarvis, 2010). Whereas, in opaque NCs blood or other contaminants can be missed due to incomplete flushing resulting in the formation of biofilm. Similarly the coloured NC allows only partial visualization and there is always a risk of areas being missed during flushing.

The design of the external septum surfaces vary. Some have flat surface and others are designed with an angled post or with indentations in the centre of the surface. NCs with smooth, solid and sealed external septum surfaces allows for easy disinfection of the device (Chernecky & Macklin 2014; Jarvis, 2010). The more intricate the design, the more difficult it is to disinfect the device and will lead to fluid path contamination (Jarvis, 2010). Those with irregular surfaces are not only difficult to disinfect, but clinicians may also find it difficult to connect to the male luer end of the administration set or a syringe. During the process the NC can become contaminated.

NCs must have a tight seal between the septum and its housing. Anything outside this pathway (dead space or interstitial space) will not come in contact with the flushing solution. Blood and medication residue will provide an ideal environment for bacterial growth.

The external plastic cannula or the male luer tip on the administration set and the syringe are used to access the fluid pathway inside the NC. The blunt cannula is pushed through the split septum and manually held in place during an injection or by a locking mechanism which prevents disconnection. Devices that use the luer system includes the split system and the mechanical valve. The male luer lock end of the administration set or syringe is luer locked or screwed onto the needleless connector. In the split septum the male luer is pushed through the sides to open the split and allow fluid.

Some NCs have been designed to be used with sterile caps as a cover. Again the risk of intraluminal contamination is possible if the NCs are left uncapped. Sterile caps have to be made available in the clinical area.

2. Internal Features

External features of the NCs may look similar, but the internal features and the way the NCs functions especially in fluid displacement and fluid pathway may differ. NCs have been identified by category and functions.

NCs are categorized as simple or complex based on the complexity of the internal mechanisms. The simple devices have no internal mechanism and includes devices with an external split septum. The straight fluid pathway allows the fluid to flow straight through the device lumen as there are no moving internal pieces (Hadaway & Richardson, 2010).

Whereas, in the complex NCs there is some type of internal mechanism called a mechanical valve to control the flow of fluid within the system. Luer activated devices (LADs) are complex needleless connectors. The valve prevents fluid flow through the device until a male luer is inserted.

NCs are described as negative, positive or neutral based on the presence of fluid displacement within the device. In split-septum NCs with negative fluid displacement blood reflux occurs within the lumen of the vascular access device upon connection and disconnection of the blunt cannula or male luer end of the IV administration set or syringe. In NCs with mechanical valve the blood is pulled into the catheter lumen by the movement of the valve mechanism. There is a risk of complete or partial occlusion if blood is allowed to residue inside the lumen. In such devices it is important to adhere to effective flushing techniques to overcome the blood reflux. With negative fluid displacement NCs, the clinician needs to remember to clamp the IV catheter and then disconnect the NC (Jarvis, 2010).

NCs with positive fluid displacement have been designed to prevent blood reflux within the catheter lumen and there is a reservoir for holding small amount of fluid. Upon disconnection, the fluid in the reservoir is pushed out of the catheter lumen to overcome the intraluminal blood reflux. In this type of NCs, the clinician must disconnect the NC first and then clamp the IV catheter. An empty fluid container if allowed to remain connected can cause the blood to reflux into the catheter. Increase central line associated blood stream infection (CLABSI) and possible causes of death has been reported with this type of NC (Food and Drug Administration [FDA], 2010). However, a systematic review by Tabak et al (2014) did not concur with FDA and state CLABSI rate associated with positive fluid displacement NCs may not be class effect, but due to specific design features of individual devices which interferes with effective disinfection and IV line care resulting in CLABSI.

NCs with neutral displacement have been designed to prevent reflux with either connection or disconnection. A small amount (0.02mL) of reflux may occur. If this happens there is a risk of contamination.

The cupped silicone membrane with a slit that acts as a valve is an add-on neutral displacement connector which operates by pressure (Hadaway, 2012). It automatically closes when the fluid container empties.

Overall, a meta-analysis done by Tabak et al., (2014) shows that NCs with improved engineering devices are associated with lower CLABSI.

CLINICAL IMPLICATIONS

Having briefly looked at the design and function of the various NCs it is important to reflect on current practices in the clinical area and the underlying implications. It can be confusing for the busy clinicians who have to deal with several types of NCs floating in the clinical area. Not all clinicians may have been trained by the manufacturers on the disinfectant procedure, whether clamping is done before or after removing NC or in the type of flushing solution to be used or in the flushing technique. According to Jarvis (2010) confusion by the clinician leads to medical errors and ultimately HA-BSI. Thus, it is not the fault of the product.

It is critical for healthcare organisations to do a technology review on safety, efficacy, effectiveness and cost effectiveness of the NCs and to purchase one product following the review to avoid confusion at the time of use. Prior to purchase there must be a training for clinicians by the manufacturer on the NC technology covering areas such as the design and function of NC, type of disinfection to be used, technique of disinfecting the NC, clamping procedure, appropriate flushing solution and flushing technique (Chernecky & Macklin, 2014; Jarvis, 2010). A didactic lecture is insufficient. There must be a written demonstration to show the clinician's competency in handling and caring for intravenous NCs. Post purchase training and monitoring must be continued at regular intervals targeting clinicians at all level. Medical and nursing students should also be included in the training.

Clinicians who are the handling needless connectors must be checked if they are performing correct hand hygiene before handling NCs. All the education will be of waste if this basic procedure is not adhered.

Finally, all clinicians must be taught during basic training to be inquisitive and think critically before using any medical product. Clinicians must question manufacturers and get them to produce clinical papers on their product.

CONCLUSION

HA-BSI cannot be eliminated if the organisation does not have a culture of patient safety. There is a need for an effective mechanism to be in place for monitoring clinicians compliance to best practices. More clinical research on intravenous needless connectors will help to contribute to best practices.

REFERENCES

1. Chernecky, C., & Macklin, D. (2014). The role of IV needless connectors and IV complications management and prevention. *Advances in Research*, 2(4), 195-206.
2. Food & Drug Administration (2010). Letter to Infection Control Practitioners Regarding Positive Displacement Needleless Connectors <http://www.fda.gov/MedicalDevices/Safety/AlertsandNotices/ucm220459.htm>
3. Hadaway, L. (2012). Needleless connectors for IV catheters. *American Journal of Nursing*, 12(11), 32-46.
4. Hadaway, L & Richardson, D. (2010). Needleless connectors: A primer on terminology. *Journal of Infusion Nursing*, 33 (1), 22-31.
5. Jarvis, W.R. (2010). Choosing the best design for intravenous needless connectors to prevent healthcare associated blood stream infections. *Infection Control Today*, 14 (8).
6. Moureau, N.I., & Flynn, J. (2015). Disinfection of needless connector hubs: Clinical evidence systematic review. *Nursing Research and Practice*. <http://dx.org/10.1155/2015/96762>.

"I AM NOT A TEACHER, BUT AN AWAKENER"
Robert Frost

RECOMMENDED READINGS

1. Pandurangadu, A.V., Tucker, J., Bagan, M., & Bahl, A. (2016) Patient Satisfaction with Nurse Placed Ultrasound Guided Peripheral IV. *Emergency Medicine (Los Angel)* 6: 325. doi:10.4172/2165-7548.1000325

A randomized, prospective controlled study showed nurse performed ultrasound-guided peripheral IV (USGPV) placement increased patient satisfaction with the procedure compared to the standard of care (SOC palpation) technique to establish an IV in difficult access patients. Ten emergency department (ED) nurses were trained on USGPVs which included a didactic and supervised placement of 10 US-guided IVs on live subjects. Another cohort of 10 ED nurses had received a didactic instruction on using traditional techniques to obtain IVs on difficult vascular access patients.

Inclusion criteria were adult patients identified as having difficult vascular access. The patients randomized into either the US-guided arm or the standard of care (SOC) arm, where the designated study trained nurses carried out peripheral IV placement. A total of 124 patients were selected. Only 62 patients remained in the US-guided study arm and 53 patients in the SOC arm (2 were excluded due to lack of study nurse availability, and 7 patients were lost to follow-up).

The patient who were given a brief verbal survey rated their experience from 1-10 (1 was poor and 10 was excellent) regarding the IV technique used by the study nurse. The researchers reported that the median patient satisfaction in the US-guided group was 10 versus 8 for the SOC arm ($p < .05$)

The researchers recommend that nursing staff incorporate this method to IV access in difficult patients to enhance the quality of their patient care experience.

2. Report of Health Technology Hazards (2015). *Top 10 patient safety concerns for health care organizations*. ECRI Institute. <https://www.ecri.org/Pages/2015-Hazards.aspx>

IV line mix-ups leading to misadministration of drugs and solutions was identified as one of the top 10 patient safety concerns for healthcare organisations. The incident of mix-ups are more pronounced in critical care settings but the risk can also exist in other acute care areas where a patient has multiple IV lines as part of treatment.

ECRI recommends the following to reduce infusion line confusion:

- Trace all lines back to their origin before making connections. Doing so verifies that the correct lines will be joined. Lines should be rechecked upon the patient's arrival in a new setting or service and at shift changes as part of the handoff process.
- Develop a policy of positioning different lines on different sides of the patient. Consistently putting lines in the same place might make it easier for clinicians to correctly identify them and connect them appropriately.
- Label each infusion line with the name of the drug or solution being infused.
- Do not force connections. If a connection is difficult to make—that is, if it requires a lot of effort—chances are it should not be made.

3. Rundjan L, Rohsiswatmo R., Paramita T.N., & Oeswadi C.A. (2015). Closed Catheter Access System Implementation in Reducing the Bloodstream Infection Rate in Low Birth Weight Preterm Infants. *Pediatr.* 3:20

A randomized clinical trial was conducted on low birth weight preterm infants shows that the implementation of needleless connector reduces 10 times the risk of bloodstream infection. Reduction in CRBSI leads to shorter hospital stay, subsequently reduce hospital costs

4. Dolan, S.A., Arias, K.M., Felizardo, G., Barnes, S., Kraska, S., Patrick, M., & Bumsted, A. (2016). *APIC position paper: safe injection, infusion, and medication vial practices in health care*.

The transmission of bloodborne viruses and other microbial pathogens to patients during routine healthcare procedures continues to occur because of the use of improper injection, infusion, medication vial, and point-of-care testing practices by healthcare personnel. This document updates the Association for Professionals in Infection Control and Epidemiology (APIC) 2010 position paper on safe injection, infusion, and medication vial practices in healthcare.

SENSORS TO HELP NURSES MONITOR IV DRIPS



A team of researchers led by young scientist Dr. Ajay Kottapalli at the Singapore-MIT Alliance for Research and Technology (SMART) have developed a micro-electro-mechanical systems (MEMS) flow sensor that can monitor and regulate the speed of fluid flow in an IV drip.

The tiny MEMS sensor which appears as a speck on a fivecent coin, is implanted in an intravenous drip and said to significantly reduce nurses' workload while increasing their productivity by 30 percent and decreasing the complications of drug infusion via IV.

The single use disposal sensor is said to cost less than one Singapore dollar.

Source: Asian Scientist Magazine at: <http://www.asianscientist.com/2016/02/tech/iv-flow-sensor-inspired-blind-cave-fish/>

HIGHLIGHTS

SEMINAR "CARING FOR PATIENTS ON INTRAVENOUS CHEMOTHERAPY"

21st January 2016 at Wisma Jururawat, Petaling Jaya

The seminar which was attended by more than 150 participants was officiated by President of MNA, Puan Mariam Madhar Ali. The seminar was organised to mark IV Global Day. Also present were members form corporate organisations (3M Malaysia Sdn, BBrauns Malaysia, and Terumo Malaysia Sdn Bhd) who participate actively in programs organised by MINSIG. Puan Mariam in her speech highlighted the need for nurses to be competent and credentialed before caring for patients on intravenous chemotherapy. Dr Nahjatul Kursyah Abd Ghafar, clinical oncologist from National Cancer Institute, Putrajaya spoke on management of chaemotherapy extravasation. Puan Kamarun Neasa Begum Mohd Kassim, clinical pharmacist from the same institute touched on hazards due to chaemotherapy drugs. The last speaker for the morning was MINSIG faculty member, Assoc. Prof. Raja Lexhimi Raja Gopal from Department of Nursing, Faculty of Medicine, UKM. She emphasized on the nursing care and management of patients on intravenous chaemotherapy and on the need to follow several recommended nursing standards.



"Oh dear! Do we have the standards?"



"I will continue to stress on competency of nurses....!"



"Do be careful and observe carefully your patient...!"



"Be aware of the effects of chaemo drugs!"



"Follow nursing standards!"

PRESENTATION OF CERTIFICATES OF ACCOMPLISHMENT

21st January 2016 at Wisma Jururawat, Petaling Jaya

Certificates of accomplishment was presented by President Puan Madhar Ali to 28 participants of the two IV workshops on "Insertion and Management of Peripheral Intravenous Cannula for Adult Clients" held in 2015.



"Well Done! You have been certified for 2 years".



" We are proud to have received the Certificate of Accomplishment"

COMMUNITY PROJECT "GAYA HIDUP SIHAT"

20TH FEBRUARY AT TASEK PERMAISURI, CHERAS. KUALA LUMPUR



MINSIG executive committee members were at hand to support the community project on "Gaya Hidup Sihat" organised by MNA with SMJK Bandar Tun Razak. The members joined 700 young students and other members of MNA to walk around Tasek Permaisuri, Cheras. President, Puan Madhar Ali flagged-off the event. The weather was extremely hot but it did not deter the excitement of those participating in the walk,

"We do really need to walk with the young ones!"

66TH MALAYSIAN NURSES ASSOCIATION ANNUAL GENERAL MEETING

1-4 APRIL AT LANGKAWI



"Not bad for one of the youngest SIGs!"



"The growing MINSIG family!"



"We are part of MINSIG family!"



" Fill the form and join us!"

MINSIG was awarded third place for meeting the requirements of MNA during the 66th AGM. We received a certificate and RM 300 for our efforts put in for the year 2015. During the AGM, a total of 30 MNA members from all over the country signed up to become MINSIG members. These members will receive special recognition for any activities organised by MINSIG.

RECEIPIENTS OF CERTIFICATE OF ACCOMPLISHMENT

6 to 8 August 2015 IV Workshop 1/2015

1.	Rebecca Anak Ikok	Hospital Limbang, Sarawak
2.	Quah Le Tien	Sunway Medical Centre, Selangor
3.	Soh Ai Lim	Borneo Medical Centre, Sarawak
4.	Ramziah binti Mat Saman	Institut Jantung Negara, KL
5.	Christina Jong Siew Lan	Sarawak General Hospital, Kuching, Sarawak
6.	Dr. Chan Kim Geok	Universiti Malaysia Sarawak
7.	Foo Siew Foong	Lam Wah Ee Hospital, Penang
8.	Yong Suk Moi	Hospital Sibul, Sarawak
9.	Wong Chen Chen	Hospital Sibul, Sarawak
10.	Ooi Sock Yee	Hospital Lam Wah Ee, Penang
11.	Nik Rohaya Mohamad	Institut Perubatan Respiratory, Kuala Lumpur
12.	Quek Lian Leu	Institut Perubatan Respiratory Kuala Lumpur
13.	Moganasri Mahendran	Institut Perubatan Respiratory Kuala Lumpur
14.	Nor Azliani Binti Saary	Institut Perubatan Respiratory Kuala Lumpur
15.	Noor Ul-Hayaan binti Samsudin	Institut Perubatan Respiratory Kuala Lumpur
16.	Nurhidayah binti Baba	Institut Perubatan Respiratory Kuala Lumpur
17.	Sabrina anne a/p Santhara Dass	Institut Perubatan Respiratory Kuala Lumpur
18.	Nurul Ashyidda Abdullah	Hospital Sibul, Sarawak
19.	Fatimah Hamid	Hospital Sibul, Sarawak

19 to 21 November 2015 IV Workshop 1/2015

1.	S. Nagamma a/p Supramaniam	Kinta Medical Centre, Perak
2.	Darshini a/p Chandrasegaran	Kinta Medical Centre, Perak
3.	Norzaimah binti Zolkurnain	Kinta Medical Centre, Perak
4.	Paramewary a/p Manikam	Kinta Medical Centre, Perak
5.	Muhammad Faris bin Azhar	KPJ Klang, Selangor
6.	Masmida Ali	Hospital Tengku Ampuan Afzan, Kuantan
7.	Zuliwa Mat Yaacob	Hospital Tengku Ampuan Afzan, Kuantan
8.	Siti Sandora Abu Jalil	National Cancer Centre, Putrajaya
9.	Khoo Ah Choo	Prince Court Medical Centre, Kuala Lumpur

MINSIG IV WORKSHOP REQUIREMENTS NOT MET

The following participants **DID NOT** comply with the requirements and were **NOT** awarded a certificate for accomplishment.

6 to 8 August 2015 IV Workshop 1/2015

1.	Noor Hasina Wazir Mohamed	Hospital Raja Permaisuri Bainun, Perak
2.	Nor Zaida Nordin	Hospital Raja Permaisuri Bainun, Perak
3.	Norhalima Saim @ Matsham	Columbia Shah Alam
4.	Nur Junidah Saharuddin	Columbia Shah Alam
5.	Suad Kamaruddin	Hospital Teluk Intan Perak
6.	Norlida Mokhtar	Hospital Teluk Intan Perak
7.	Venni Krishnan	Hospital Labuan, Sabah
8.	Nurdiyana binti zubir	Institut Jantung Negara
9.	Sazalia Mohamad Saad	Institut Jantung Negara
10.	Suliyana Soib	Institut Jantung Negara
11.	Salbiah Hashim	Institut Jantung Negara
12.	Vishaalini Devarajoo	Institut Jantung Negara
13.	Nor Farida Mohd Aripin	Institut Jantung Negara
14.	Nadzirah Jusoh	Institut Jantung Negara
15.	Effany Eva Anak Dehan	Institut Jantung Negara
16.	Siti Fatimah Talib	Institut Jantung Negara
17.	Puanamalar Mutaragan	Institut Jantung Negara
18.	Raja Nur Farihan Raja Semail	Institut Jantung Negara
19.	Farizahanom Joppery	Institut Jantung Negara
20.	Rahiza Zaidan	KPJ Kajang
21.	Ida Haryanti Mat Arshad	KPJ Kajang
22.	Amelia ak. Angnga	KPJ Kajang
23.	Teh Siew Fah	Hospital Sultanah Aminah, Johor
24.	Lim Chuei Peng	Institut Jantung Negara
25.	J. Zarinah Mohd Ishak	Institut Jantung Negara
26.	Nurasyidah Pidek	Institut Jantung Negara
27.	Jamiyah Ismail	Hospital Jerantut
28.	Nor Ashikin Ibrahim	Hospital Muadzam Shah, Pahang
29.	Hanifah Nazihah Muthalib	Hospital Muadzam Shah, Pahang
30.	Wan Nurul Hijjah Wan Zahari	Hospital Jerantut, Pahang
31.	Siting anak lasauw	Hospital Simunjan Sarawak
32.	Nurhasfida Abdul Sami @ Hassan	Hospital Simunjan Sarawak
33.	Nurul Huda Abu Hassan	Hospital Batu Gajah
34.	Nor Nadia Johanif	KPJ Damansara

MINSIG IV WORKSHOP REQUIREMENTS NOT MET

The following participants **DID NOT** comply with the requirements and were **NOT** awarded a certificate for accomplishment.

19 to 21 November 2015 IV Workshop 2/2015

1.	Lim Chuei Peng	Institut Jantung Negara
2.	J. Zarinah Mohd Ishak	Institut Jantung Negara
3.	Nurasyidah Pidek	Institut Jantung Negara
4.	Jamiyah Ismail	Hospital Jerantut
5.	Nor Ashikin Ibrahim	Hospital Muadzam Shah, Pahang
6.	Hanifah Nazihah Muthalib	Hospital Muadzam Shah, Pahang
7.	Wan Nurul Hijjah Wan Zahari	Hospital Jerantut, Pahang
8.	Siting anak lasauw	Hospital Simunjan Sarawak
9.	Nurhasfida Abdul Sami @ Hassan	Hospital Simunjan Sarawak
10.	Nurul Huda Abu Hassan	Hospital Batu Gajah
11.	Nor Nadia Johanif	KPJ Damansara
12.	Siti Anirah Mahat	KPJ Klang
13.	Ida Syamimi Mohamed Padzil	KPJ Klang
14.	Nur Ikhwanuddin Anuar	KPJ Klang
15.	Jessica Tuntun Ak Jerah	General Hospital Sarawak
16.	Muslihah Chek	General Hospital Sarawak
17.	Melinda Ang	General Hospital Sarawak
18.	Lim Wan Ke	Sunway Medical Centre.
19.	Rajeswary Subramaniam	Sunway Medical Centre.
20.	Nurul Faizah Kasmani	Sunway Medical Centre.
21.	Siti Khatijah Selamat	Darul Ehsan Medical Centre
22.	Rahimah Yunus	Darul Ehsan Medical Centre
23.	Norashikin Hedhir	KPJ Johor
24.	Aysuria C. Saygaron	KPJ Johor
25.	Aminah Ramli	Universiti Kuala Lumpur

UPCOMING SEMINAR PROGRAM

Theme of Seminar :	Safe Practices to Reduce Intravenous Related Infections
Venue :	Auditorium Hospital Canselor Tuanku Muhriz (PPUKM)
Date and Time :	23 July 2016 (9.00 am – 5.00pm)
Learning Outcomes :	At the end of the seminar the participants will be able to: <ol style="list-style-type: none"> 1. Identify risk factors causing catheter associated blood-stream infections. 2. Reflect on best practices to reduce catheter related infections.

PROGRAM

0830 - 0900	Registration	MINSIG EXCO
0900 - 0915	Welcoming Address	Puan Sharifah Asiah Al Junid President MNA
0915 - 0945	Building a Safety Culture	Dr. Zainah Mohamed Head, Department of Nursing, UKM
0945 - 1015	IV Related Blood Stream Infections	Dr. Benedict Sim Consultant Infectious Diseases Physician Hospital Sungai Buloh
1015 - 1100	MORNING TEA	
1100 - 1130	Risk Factors Of Peripheral Venous Catheterization Thrombophlebitis	Dr. Abdul Rashid Abdul Kader Head, Quality Department, PPUKM
1130 - 1200	Hand Hygiene: Culprit in Disguise	Assoc Prof Dr. Ho Siew Eng Head, Nursing Department, IMU
1200-1230	Needless Connectors: Friend or Foe	Dr. Jeya Devi Coomarasamy Chairman, MINSIG
1230 - 1300	Safety Engineer Device: Surplug	Mr. Vincent Low Sales & Marketing Manager, Terumo Malaysia
1300 - 1330	Flushing Vascular Access Devices – Technology Versus Technique	Ms Hee Kim Lan Chief Matron, Hospital Melaka
1330 - 1430	LUNCH	
1430 - 1500	Chlorhexidine Gluconate Dressings – Safety, Cost Effectiveness and Efficiency	Ms. Sandra So Clinical Manager, 3M Malaysia
1500 - 1530	Staff Competency and IV Infection Rates	Ms. Sin Lian Thye Chief Matron, National Cancer Centre, Putrajaya
END OF SEMINAR		

