Singapore TORS ASSOCIATION OF DIABETES EDUCATORS (SINGAPORE) JAN - JUN 2019 MICA (P) 142/08/2017

Message from President

A new year brings more opportunities for us to continue our role in improving lives of people living with diabetes. We will not shift from our mission but refocus our efforts on 3 E i.e. Equip, Empower, Engage.



With fast changing diabetes management, we need to keep ourselves updated and equipped with new and latest technologies and management. Seminars and workshops e.g. Ambulatory Glucose Profile: Application in Clinical Practice, Updates on Diabetes Therapy are organized to equip all nurses to provide excellent education to their patients.

ADES Certified Diabetes Educator (CDE) programme serves to empower and promote continuing commitment to best practices, current standards and knowledge in diabetes management. In memory of late Dr John Tambyah who was a champion of diabetes education and patient care in his lifetime, we are pleased to announce John A. Tambyah Book Prize for the top CDE each year.

MOH Disease Management work group initiated a Patient Empowerment for Self-Care Framework (PE). As a resource panelist to the PE work group, ADES has been providing input in the development of an educational flipchart. This flipchart will be a beneficial tool in training volunteers to engage people living with diabetes make lifestyle changes and improve treatment adherence.

Let me encourage you to expand your scope of practice and continue active participation in our seminars, CDE programme and outreach activities.

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World Diabetes Day 2018

by Ms Ee Moi Na

World Diabetes Day 2018 were held on the 4th November at the Suntec Singapore International Convention Exhibition and Centre. organized by Diabetes Singapore. The World Diabetes Day 2018 Theme was "The Family and Diabetes". This year, ADES was pleased to be allocated an educational booth together with many health associations in reaching out to the public.ADES prepared games and quizzes at the booth for the public to participate. The activities had raised public awareness on diabetes symptoms and its complications.ADES volunteers also managed to provide encouragement and dispel myths of diabetes amongst those with diabetes Ten ADES volunteers mellitus. had reached out to about 300 people at the ADES educational booth.

"We are pleased to see our ADES volunteers whom passionately volunteer on weekends to create diabetes awareness, we would like to wish everyone pink health ahead in 2019!" exclaimed ADES Vice President, Ms Winnie Poh



















World Psoriasis Day

By Ms Agnes Ngoh

On 20th October 2018, ADES join forces with trained health volunteers that had attended ADES -Basic diabetes education program held previously. They had provided health screening and education at World Psoriasis Day held at Bedok Town Square from 12 noon to 5 pm.

This marked the third event where health volunteers had put their knowledge into practice such as blood glucose and blood pressure test as part of basic health screening check for the public under supervision of ADES educators.

A total of 240 interested people participated in the health screening and education.

Ms Joanna, who was a first timerhealth volunteer shared, "It was a great experience and a rewarding event for me. I felt great that I could contribute to the community ". She is looking forward to the next opportunity to participate with other volunteers.



ADES would continue to support community projects to fight war against diabetes.

Certified Diabetes Educators Graduation Ceremony



Association of Diabetes Educators Singapore (ADES) and Endocrine Metabolic Society Singapore (EMSS) had been collaboratively conducting Diabetes Educators certification program since 2003. Candidates who have successfully completed the program will be credentialed as "Certified Diabetes Educator (CDE)".

by Ms Lim Suan Tee

This year, 16 nurses successfully undergone the certification and recertification process. Till date, ADES is proud to present 75 DNEs who are practicing from various healthcare institutions across Singapore and are Certified Diabetes Educators(CDEs)

ADES celebration of 21st Anniversary

By Ms Sharifah Shahira

ADES marked it's 21st year as an organization in supporting diabetes care and health care professionals in Singapore. We are pleased to share our commitment to better serve the community and is keen to continuously, provide the pivotal role in diabetes education. To mark this important milestone. ADES launched the FIT-SG, "Forum for Injection Technique Singapore" (FIT-SG), where latest evidence-based updates were compiled as "Recommendations for Best Practice in Injection Technique". FIT was widely introduced in other countries such as in Canada, Irish, Europe, UK, Philippines, Malaysia India and Indonesia. Ms Brenda Lim, being the Project Chairperson (FIT-SG) highlighted that FIT-SG aim to raise awareness of existing and emerging research in relation to injection technique.

ADES will continue to promote optimal health, well-being of people with diabetes and broaden the awareness of new injection recommendations to all levels of healthcare professionals and caregivers, upholding the standard of care in caring for people with diabetes. On this special occasion, two honorable speakers were invited to share their expertise.

Dr Florence A. Santos from the Philippines, shared on the "Updates on Injection Technique and Advances on Injection Practices – Little things that Matter Most". Multi factors to consider in treating diabetes namely: - Age, weight, current diet, exercise habits, work schedule, prior health problems, duration of diabetes, type of diabetes. She further shared on new targeted treatments for mediating pathways of hyperglycemia – the Egregious Eleven.

She highlighted that in Philippines, there are increasing prevalence in



T2DM due to rapid urbanization and Westernization. Most Filipinos are facing heavy financial burden - they do not have comprehensive insurance for maintenance medications, hence leading to poor compliance with follow ups (distance factor), affordability of anti-diabetes agents, costs of laboratory tests.

Different societies in Philippines had initiated programs such as: Diabetes Awareness Programs, Advocacy programs, Insulin Summit, Nutrition Summit and Camps catered for their DM patients.

Mr Cavvy Chin, on the other hand, shared his expertise on "Anytime Anywhere". He is a Founder, Director and Instructional Designer of Urchiniz Pte Ltd. He highlighted that common challenges of e-learning that adults are facing; learners are full time working



adults and adopting e-learning using the latest technology. Nonetheless, he shared that to gain engagement in learning, one had to look beyond the classroom setting. He encouraged educators to explore on some new resources for e-learning that include learning objective maker, Kahoot!, Pigeonhole, Mentimeter, Padlet, Sli. do, Pixton.

For a downloadable copy of FIT SG please visit ADES website, link http://ades.org.sg/assets/FITSG.pdf

Clinical paper sharing

Original research

Ultrasound-guided measurement of skin and subcutaneous tissue thickness in children with diabetes and recommendations for giving insulin injections Soo Ting Joyce Lim^a, Yuen Ching Angela Hui^a, Pei Kwee Lim^a, Chin Choo Evelyn Lim^b, Yen Yen Chia^b, Rashida Farhad Vasanwala^{6,*}

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KKH Paediatric Diabetes Nurses led by APN Joyce Lim had published a clinical research paper reporting the skin thickness (ST) and skin + subcutaneous layer thickness (SCT) by ultrasound and estimate the risk of intramuscular injection (IM) with different needle lengths across injection sites according to age group. The paper revealed that patient should have an opportunity to make informed decisions about their care and treatment, taking into account their needs and preferences while optimizing physical comfort and emotional support. Institute of Medicine (IOM, 2016) illustrates eight principles of patient centred care which can differ based on context. There had been an increased interest in integrating recommendation and education to improve care of insulin administration for people with diabetes. This had initiated new guidelines on the role of insulin needle length and skin thickness that contribute to the overall glycemia control based on evidence-based research.

For further reading, you can go to link : <u>https://www.sciencedirect.</u> <u>com/science/article/pii/</u> S2214623718300231

Ambulatory Glucose Profile: Application in Clinical Practice

ADES has kick-started the year of 2019 with an impactful seminar consisting 45 participants learning how to apply Ambulatory Glucose Profile (AGP) in clinical practice. This session was held for 3 hours on 12th January 2019, at Tan Tock Seng Hospital.

Emphasis has been placed on AGP in the recent years since the Freestyle Libre Flash Glucose Monitoring System was introduced in Singapore. Ms Lim Pei Kwee shared that KK Women's & Children's Hospital was the first restructured hospital to adopt such technology in diabetes care. The syllabus shared during the seminar were adapted from AGP Clinical Academy Core Curriculum, developed by Professor Roger Mazze and Dr lain Cranston. There is also an online module with certification made available in Singapore.

This AGP session was conducted interactively using case study presentations amongst four groups and using exercises in applying theory into practice via interpretation of AGP reports. The diurnal glucose patterns over 5-14 days are collapsed and plotted in a graph as if they occurred



on a single day. AGP allows the discovery of glucose excursions, glucose exposure, variability, stability, risk of hypoglycaemia, and risk of hyperglycaemia. These key characteristics have given the patients and clinicians the opportunity to overcome the limitations of current methods in assessing glycaemic control, such as those in HbA1c, self-monitoring blood glucose (SMBG), and continuous glucose monitoring system (CGMS).

Participants were delighted that they were able to interpret any AGP report following the simple steps shared during the seminar. In order to begin interpreting the report, the data quality has to be validated, which should be above 70% of sensor data captured. In Step 1, it is recommended to set the target range from 3.9-10 mmol/L then look out for time in range to be at least 70%. In Step 2, clinicians are to identify trends and occurrence of hypoglycaemia. Lastly, in Step 3, analysing glucose variability to determine the possible causes of dysglycaemia. Equipped with this new knowledge, many were able to recommend more precise and individualise regimens to each case scenarios discussed.

In summary, the uses of AGP are to better understand the glucose perturbations that underlie the diagnosis of diabetes, as well as to detect the underlying dysglycaemia as a basis for selection and adjustment of treatment or therapy.

12th IDF -WPR Congress & 10th AASD Scientific Meeting in Kuala Lumpur

This year, ADES joined the rest of the other delegates from Singapore and overseas to attend the IDF WPR conference held in Kuala Lumpur from 22nd November to 25th November 2018. We are happy to be part of this learning journey in updating on the latest update and trend in Diabetes care

ADES team participated in the poster presentation titled : Diabetes Training Program for Volunteers:

from Classroom to the Community. Congratulations to Brenda Lim, Agnes Ngoh and Ee Moi Na for their poster presentation. We are also delighted to share an interesting poster presented by our ADES member - Ms Nursyafiqah and her team from NUH.

In this poster presentation, the team had introduced a rescue resource box in their quest to improve inpatient diabetes care for hypoglycemia. Well done NurSyafiqah and team !





If you have an interesting case report, poster presention or publication on diabetes care to share, do email to us at admin@ades.org.sg or editorial1@ades.org.sg.



Diabetes Training Program for Volunteers : from Classroom to the Community

Brenda Lim, Agnes Ngoh , Ee Moi Na Association of Diabetes Educators, Singapore

INTRODUCTION

Arising of prevalence of people with diabetes has led Association of Diabetes Educators (Singapore) to develop a training program for the community health volunteers to support the shortage of formal health care providers. The primary objective of the training aims to equip volunteers to develop skillsets in performing blood glucose, blood pressure measurements, support health screening event in the community to allow diabetes educators to have more time to spend in reaching out to people with and without diabetes of the risk and care management.

RESULTS

There were 3 sessions were conducted by diabetes educators and a total of forty two (42) were recruited. Four (4) community health screening events were organized at various locations. 50% (N:12) of volunteers from the initial two sessions (N: 25) participated in community health screening events after post training. 100% of volunteers' feedback that they had acquired new skills on blood glucose and blood pressure monitoring, improved knowledge in understanding diabetes and its comorbidities. 80% reflected positive in confident in their interaction and performing glucose and blood pressure measurement , including interacting with strangers during the health screening events.

CONCLUSION

Collaboration with resident committee groups to organize opportunities for volunteers to practice new skillsets help motivate volunteers in participate in the community health activities. The diabetes training program for volunteers allows transfer of learning from classroom to the community, and reduces reliance of health professionals to support the community health activities.

METHOD

Association of Diabetes Educators (Singapore) collaborated with community organizations from 3 March 2018 to 28 July 2018 to provide basic diabetes education training program to reach out to the community. Volunteers were screened for whether with or without community volunteering experiences. Volunteers without community service experiences assigned to attend an eight (8) hours training and volunteers with community service experiences were provided a four (4) hours training program respectively. The training program comprises of didactic lectures on diabetes and hypertension, training videos and sharing of challenges in interacting with public. Direct observation of volunteers on return demonstration on blood glucose monitoring and blood pressure were assessed by two (2) diabetes educators in A voluntary and anonymous each session. reflective learning upon post training was conducted through web-based sent through smart phone devices.



Evaluating the Effectiveness of a Rescue Resource Box in Improving Time Taken to Re-check Blood ational University Hospital **Glucose After Initial Hypoglycemia** A member of the NUHS

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Introduction

Hypoglycemia is one of the commonest complications of diabetes treatment and delayed intervention can cause severe morbidity and death. An audit was conducted to review the time taken to recheck blood glucose after initial hypoglycemia events (defined as capillary glucose < 4mmol/L) across general wards within a Singaporean tertiary hospital between January and October 2017 and significant delays were noted when compared to the recommended 15-minute interval. A common reason for the delay in hypoglycemia rescue was the time taken to gather items required for rescue as they were kept in various location in the wards.

Objectives: To (1) evaluate the effectiveness of a rescue resource box in improving time taken to re-check blood glucose after initial hypoglycaemia (2) determine if the implementation of the resource box causes any changes to hypoglycemia normalisation time.

Methods

Intervention

The resource boxes were introduced in a pilot study involving two adult medical wards. All boxes contained fast-acting (e.g. dextrose powder sachets) and complex carbohydrates (e.g. biscuits and milk supplements) for hypoglycaemia rescue in alert patients. The resource boxes were kept in the ward cubicles and pantry for easy access. Users were also guided on the use of the box and reminded to perform timely blood glucose re-checks with a card-sized instruction guide (recipe card) and digital timer provided within the box. Coaching sessions were conducted internally by team leaders and diabetes nurse educators to familiarise all nurses to the use of the rescue resource box.





Figure 1: Hypoglycemia Box

Figure 2: Contents in Hypoglycemia Box



Figure 3: Recipe card for users' reference when using hypoglycemia box

Data Collection

Data collected included the total number of hypoglycemia episodes (blood glucose < 4mmol/L), response time to first blood glucose recheck and time taken for normalisation of blood glucose after initial hypoglycemia. Data were collected for a period of 3 months pre-intervention (October to December 2017) and compared against data 3 months post-intervention (March to May 2018) after allowing time for the ward staff to adapt to the use of the new resource box.

Results

In the three-month pre-intervention period, the two wards had 81 and 75 episodes of hypoglycemia and had a median blood glucose re-check time interval of 23.0 and 23.5 minutes respectively. Pre-intervention, the time taken for normalisation of blood glucose after hypoglycemia in both pilot wards were 23.5 minutes.

Post intervention, the median time intervals for blood glucose re-check improved to 17 (p < 0.01, 70 hypoglycemia episodes) and 20 minutes (p = 0.07, 71 hypoglycemia episodes) in the two respective wards over three months without significant change in the time taken for normalisation of blood glucose after hypoglycemia.

Ward A	Pre-intervention (Oct – Dec 17)	Post – intervention (Mar – May 18)
Number of hypoglycemia episode (BG < 4 mmol/L)	81	70
Median time interval of BSL recheck after hypoglycemia (min)	23.0	17.0 (p < 0.01)
Median time interval for hypoglycemia normalisation (min)	23.5	20.0 (p = 0.523)

Figure 4: Pre and post intervention comparison in Ward A

Ward B	Pre-intervention (Oct – Dec 17)	Post – intervention (Mar – May 18)
Number of hypoglycemia episode (BG < 4 mmol/L)	75	71
Median time interval of BSL recheck after hypoglycemia (min)	23.5	20.0 (p = 0.07)
Median time interval for hypoglycemia normalisation (min)	23.5	24.0 (p = 0.705)

Figure 5:Pre and post intervention comparison in Ward B



Conclusion

The resource rescue boxes, coupled with enhanced nursing education, promoted timely rescue of hypoglycemia events and quicker post-rescue blood glucose re-check by effectively consolidating items needed for rescue. This was not associated with any deterioration in blood glucose normalisation time after hypoglycemia. Further study in larger cohorts is required to confirm its utility and to explore nursing satisfaction.