

International Asean Wound Conference 2022

# BOOK OF ABSTRACT

*"Together For a Better Health Care"*



**INTERNATIONAL ASEAN WOUND  
CONFERENCE 2022**

**BOOK OF ABSTRACT**

*"Together For A Better Health Care"*

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## **BOOKS OF ABSTRACT**

### **INTERNATIONAL ASEAN WOUND CONFERENCE 2022 (IAWC2022)**

#### **“Together For a Better Health Care”**

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Wocare Indonesia Foundation

Jl. KH. Soleh Iskandar, RT 01 RW 04 Kel. Cibadak

Kec. Sareal, Bogor - West Java 16166

T. 0251 8312928 | F. 0251 8312346

Mobile : +62 812 8000 3814

Email : [wocarecenter@yahoo.co.id](mailto:wocarecenter@yahoo.co.id)

Website : [wocare.id](http://wocare.id)



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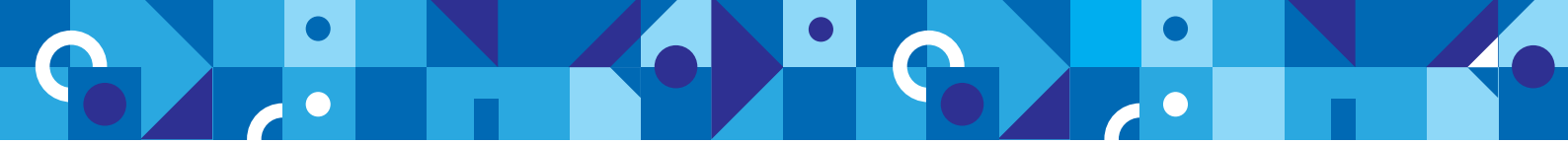
During the Covid-19 Pandemic, our healthcare system was vulnerable, particularly in care for people with long-term conditions such as diabetes, as the burden of healthcare was huge and the focus was treating COVID-19 patients. However, the Pandemic also showed us that working together as a team benefits healthcare resiliency. The world was united, working in the same direction to solve the issues related to COVID-19. The healthcare professional strives to provide and locate the best available treatment for the patient, while the scientist, government, and industry contribute to the advancement of the COVID-19 vaccine, and the general public minimizes covid-19 transmission. All industries contribute to the government's efforts to combat the global threat posed by the Pandemic. It teaches us two things. First, we are taught that the healthcare industry is the cornerstone of our existence. Once it is severely affected by a certain condition like COVID, all the sectors follow, waiting for its way to crumble. Second, it shows that the multidisciplinary work that not only consists of health professionals but the government, the public, social workers, and the industry are working together to survive one of the most unimaginable health crises in the 20th century. We need to keep this spirit of collaboration beyond the Pandemic to enhance the quality of healthcare so that we can optimize public well-being.

The risk of having a wound is present for everyone because wounds are a typical occurrence in our everyday lives. Chronic wounds, in particular, can cause significant problems for an individual's quality of life. This condition poses a risk to an individual's well-being because it has negative effects not just physically but also psychologically and financially. A wound, particularly an infected one, places a high cost on the healthcare system. According to a study conducted in Singapore, it results in hospital admissions that are 2.4 times longer than average and cost around \$12,967 USD for every wound episode per individual (Lo et al., 2020). Consequently, there is an immediate need to resolve this issue through the collaboration of other disciplines. So that the general people do not have to suffer any further and so that we can regulate our healthcare costs. These initiatives aimed at bringing together wound practitioners across ASEAN nations are the first step toward establishing collaboration to strengthen wound care in ASEAN, bridging inequalities in healthcare advances for the benefit of ASEAN citizens.

We appreciate it and hope that meaningful action will result from this event. At the very least, I hope that after this event concludes, we all gain an understanding of multidisciplinary wound

## **WELCOME MESSAGE**

MEMBER OF INDONESIAN PARLIAMENT COMMISSION IX



management that can be implemented in our clinical setting to improve patient outcomes and, more importantly, that we all gain an understanding of our respective roles in patient-centred wound care. Bridging the gap between science and practice for the greater good. Corresponding with the spirit of recover together, recover stronger, the theme of the G20 that now is held in Bali, Indonesia, the Indonesian House of Representatives, particularly Commission IXs, is supporting this spirit of multidisciplinary work to fight health issues in wounds. We are committing to give a supportive environment for healthcare professionals and people working in healthcare, creating room for professional education and room for collaborative action. Our programs always incorporate the issues that the public is now facing.

We believe that Indonesia holds a special role in wound care research and development that can benefit the whole world. By working together, we can accelerate the convergence of previously disparate data and previously discrete tools to generate new scientific insight, identify risk factors and define interventions that can make a difference in relieving the burden of non-communicable diseases related to chronic wounds. If communities and organizations lead with their respective strength while standing united in this fight, it is possible to transform the trajectory of chronic wound management.

## **WELCOME MESSAGE**

MEMBER OF INDONESIAN PARLIAMENT COMMISSION IX





## Widasari Sri Gitarja, SKp, MARS, MM, WOC(ET)N

WOCARE Indonesia CEO  
Program Director InETNEP  
ASEAN Wound Council Indonesia Representative

Assalamu'alaikum Warahmatullahi Wabarakatuh  
Dear all,

Wound care is fast expanding in the ASEAN region. Every year, the number of non-communicable diseases or chronic illnesses that usually accompany wound incidents rises. Furthermore, specialists face new obstacles in treating wounds and other related issues daily.

For example, the Covid-19 epidemic taught us to think creatively to provide effective and innovative health care delivery because COVID-19 affects many aspects of our lives. We did, however, pass it thanks to our hard effort and eagerness to learn. It is a reminder that health practitioners must constantly enrich their knowledge and skills in delivering quality wound management relevant to current evidence to be prepared for any obstacles.

I hope that ASEAN wound summit 2022 will become a reservoir for many professionals to exchange ideas and improve their understanding of innovative wound management in the future. I would also like to encourage the participants to visit exhibitions to gain exposure to new technology and advanced wound products.

We want to give you our highest appreciation for your participation, On behalf of the ASEAN Wound Council and the organizing committee. I welcome the government, guest speaker and the participants to Jakarta for International ASEAN Wound Conference 2022. I want to thank all parties involved in this event. I hope all the participants can gain new knowledge, skills and new friends from all over ASEAN for more future collaboration opportunities.

## WELCOME MESSAGE

ASEAN WOUND COUNCIL INDONESIA REPRESENTATIVE



**Ir. Budi Gunadi Sadikin, CHFC, CLU**

Indonesia Ministry of Health

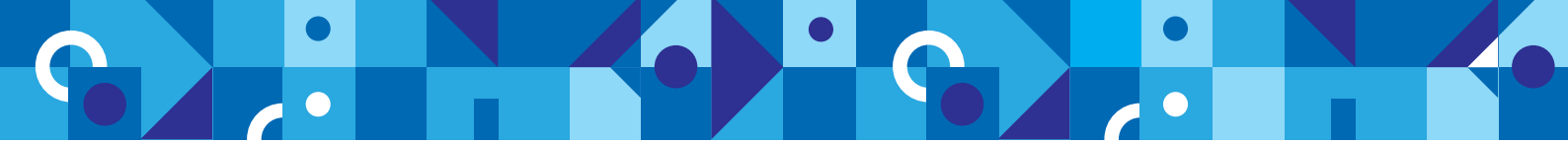
A comprehensive health study conducted in Indonesia in 2018 discovered that the country has a high prevalence of non-communicable diseases, according to Riskesdas (2018). In just five years, for instance, the prevalence of diabetes increased from 6.9% in 2013 to 8.5% in 2018. This is a significant advance. Diabetes type-1 patients have an increased risk of developing complications, such as cardiovascular disease, stroke, and chronic renal disease. According to the findings of a study that was carried out in 2014 with the use of a sample registry, diabetes, which has progressed to the point where complications have developed, is the main non-communicable cause of death in the older population of Indonesia.

Moreover, diabetic foot ulcer mortality is equivalent to cancer mortality, which is roughly 30%. (Armstrong et al., 2020). As previously said, non-communicable diseases not only damage the patient physiologically but also raise the burden of healthcare costs. According to JKN data, the economic cost of diabetes in Indonesia was roughly 1,877 trillion rupiahs in 2017. A survey in the United States revealed that DFU accounted for one-third of the overall direct cost of diabetes mellitus in 2017, which was around \$237 billion (Armstrong et al., 2017). Therefore, methods to reduce this impact and improve the outcome for individuals with diabetes must be considered. The Ministry of Health intends to reduce non-communicable disease deaths through the Non-communicable Disease Directorate's action plan for 2020-2024. Various actions are being taken to reach this goal, including active screening, preventative initiatives like the Germans, and strengthening multispectral collaboration. This is in line with the SDGs' goal of reducing non-communicable disease deaths.

As previously stated, strengthening wound care incorporates the ministry of health's goals in the prevention and management of non-communicable diseases, as wound care may contribute to the premature mortality of people with non-communicable diseases. Strengthening wound care also implies reducing non-communicable disease-related disability, which has a direct impact on the population's health-related quality of life. Improving wound care may also help healthcare by lowering the cost of wound care and diabetes care. The activity that may be performed to achieve this may include preventing wound incidence at all levels of healthcare by optimizing the present wound prevention and management program. Encourage self-care for persons at risk of acquiring

## **WELCOME MESSAGE**

INDONESIA MINISTRY OF HEALTH



wounds, such as people with immobility and people with diabetes, at the community level. Empowering the family to care for the skin integrity of their affected individual, as well as the use of "Pos-Bindu" for ulcer risk screening.

Education that is ongoing is given significant weight at the level of healthcare workers. Improving the knowledge and skills of those who work in the medical field is absolutely necessary in order to guarantee a high level of wound care. In the field of wound care, we absolutely must acquire the approach of working as an interdisciplinary team. By collaborating across different healthcare professions, we can improve the outcomes for patients and successfully raise healthcare performance. In addition, the implementation of multispectral work, which may involve the participation of the local community, government, local social workers, and enterprises, results in the production of innovative and technological solutions. A professional in the medical field might be required for this kind of work. The strengthening of multispectral work will boost the resilience of the healthcare system. This is in the spirit of recovering from Covid-19 in a stronger collective state. At this meeting, you will gain new insights into how wound care should be provided, with an emphasis on maximizing collaboration across different sectors.

The International ASEAN Wound Conference 2022, whose theme is "Together for Better Healthcare," coincides with the post-Covid recovery and highlights the jump in healthcare improvement as professionals, stakeholders, patients, and innovators in wound care technologies collaborate. The expected benefits of this event involve not only an increase in the knowledge and skills of professionals through research dissemination and expert sharing sessions but also the attempt to open collaborative acts in the ASEAN region, the advancement of multidisciplinary teamwork to address wounds, and the advancement of evidence-based practice implementation in wound care. The participation of wound care technology companies from within ASEAN would also expand participants' knowledge of the current wound care modalities available to accelerate wound healing and improve patient's quality of life.

**“Thank you and warm wishes for a collaborative approach at the congress”**

## **WELCOME MESSAGE**

INDONESIA MINISTRY OF HEALTH





**Ns. Edy Mulyadi, M.Kep., WOC(ET)N**

Presiden Indonesian Wound Care Clinician Association – InWCCA

Assalamu'alaikum Warahmatullahi Wabarakatuh

Dear all,

Alhamdulillah Rabbil 'Aalamiin, we are grateful to Allah SWT for his mercy and grace that we are given health and can get through the Covid-19 pandemic well. Although the Covid-19 pandemic has changed many aspects of human life, we can still work and do something useful for human life in the future.

It is our pleasure to be an important part of Asean and global wound, stoma, and continence care professionals and practitioners in order to improve knowledge and skills in the wound field. The appointment as the organiser of the International Asean Wound Conference 2022 which will be held in Jakarta is a momentum for the revival of healthcare, especially wound, stoma and continence during this pandemic. This biennial congress has captured the attention of the world, especially professionals in the field of wounds, stomas, and continence by producing important recommendations and new knowledge about the management and management of wounds, stomas, and continence.

I would also like to express my deep sadness for all of us in Indonesia and even wound, stoma and continence professionals in the world for the passing of Mr Devi Sahputra who was very excited when he received the mandate for the Indonesia Wound Care Clinician Association to host the 2022 International Asean Wound Conference. We need to appreciate his hard work because even though he can no longer be with us, his spirit is still a part that will always be remembered. Goodbye my friend, may Allah SWT give you a special and beautiful place for your long sleep.

Finally, we hope that the Asean Wound Summit 2022 congress can run as expected and all speakers and participants will enjoy following it. And will produce something useful for the development of wound, stoma, and continence services. We would also like to thank all the sponsors who have supported the organisation of this event.

# **WELCOME MESSAGE**

PRESIDEN InWCCA



**Prof. Dato Dr. Harikrishna K R Nair, S.I.S. KMN MD, FRCPI. FCWCS  
OSH (NIOSH), OHD (DOH), CMIA (MAL), CHM (USA) ESWT**

President MSWCP  
Chairman ASEAN Wound Council

Assalamu'alaikum Warahmatullahi Wabarakatuh  
Dear all,

I welcome you to Jakarta International Asean Wound Conference 2022, On behalf of the International Asean Wound Conference Wound care is a growing field and an essential part of healthcare management. The theme of “Together for a better health care ” encourages multidisciplinary collaboration and international collaborative work in wound management and prevention. Wound care involves time, human resources, finance, equipment, advanced dressings, and best practice principles with evidence-based protocols and algorithms.

We empathize with the patient and do everything in our power, despite limited resources, o help heal the wound, including both physiological and physical support. This event will become a platform to share knowledge and expertise amongst delegates across Asia, specifically the ASEAN region. I hope the delegates will acquire new knowledge and information regarding innovative wound care, dressing, protocols, technology, and wound care guidelines.

In the meantime, do take the time to explore and enjoy the culture of Indonesia and Jakarta. Please, take this opportunity to express my gratitude to the Organising Committee and the invited speakers for making this event a smashing success.

**WELCOME MESSAGE**  
CHAIRMAN OF ASEAN WOUND COUNCIL



**Ns. Jajang Rahmat S, M.Kep, Sp,Kep.Kom**

Ketua DPW PPNI DKI Jakarta

Assalamu'alaikum Warahmatullahi Wabarakatuh  
Dear all,

Sustainable Development Goals (SDGs) aspire to ensure health and wellbeing, including managing non communicable diseases such as diabetes, heart and vascular disease, and cancer. NCD (non-communicable diseases) is one of the conditions that cause high mortality, high economic burden, and low quality of life. The complications from this long-term condition are something that we should fight to achieve quality of life for Indonesians. One of the common complications of chronic illness is wounds, which consume billions of rupiah for its management. As professionals, we play an essential role in slashing the impacts of chronic diseases.

Therefore, it is crucial for Indonesian professionals working closely with people with chronic illnesses to upgrade their skills and knowledge. One of the directions of health services transformation is supporting the health system through efforts to accelerate the availability, quality and distribution of health workers, and the challenge is the lack of competency-based training/learning. I also encourage other professionals to establish collaboration and a spirit of working together. Because in the healthcare industry, we suppose to work as a team to help patients and people.

In reality, however, competition often gives rise to a market or industry structure comprising a relatively small number of large firms. According to Schumpeter, the competition is driven by innovation: introducing new products and processes, conquering new markets for inputs or outputs or reorganising existing productive arrangements. The Healthcare industry operates within a specific need, determined by particular supply and demand features and buying and consumption behaviour. Healthcare market sustainability is a concern of any society as it is a crucial part of wellbeing, and the changes in the development of this market will be influenced by political, economic, social, technological, legal and environmental factors and can have drastic outcomes in the short and long run.

Events like conferences provide opportunities to share knowledge and skills and build networks. Thus, I welcome all my fellow doctors, nurses, and other health professionals to come and join the events and develop your collaboration work. Mainly, I would like to invite industries working in healthcare to be involved in this event because we are team-building quality healthcare in Indonesia.

## **WELCOME MESSAGE**

Ketua DPW PPNI DKI Jakarta



**Ns. Ikram Bauk M.Kep., RN., WOC(ET)N**

Chairman ASEAN Wound Summit 2022

Assalamu'alaikum Warahmatullahi Wabarakatuh

Dear all,

Greetings, we welcome you to Indonesia to take this opportunity to extend a warm and cordial Indonesian welcome to the International ASEAN Wound Conference 2022 delegate to Jakarta-Indonesia. This congress will allow us to embrace the new idea to improve future innovation in wound management, empowering us to care for those who need special care professionally.

Scientific papers will be presented by a variety of keynote and invited speakers, all experts in their field, in the form of plenary sessions, symposia and posters. We would also like to welcome our sponsors and exhibitors. Finally, we invite all to take the opportunity to visit the company booths and extend their product knowledge.

The organising committee would also like to thank all abstract reviewers, keynote and invited speakers, and session chairs. A big thank you to our Industry Partners for their assistance and contribution in making this congress a success. I would like to wish the organising committee, speakers and delegates everything of the best for a prosperous International ASEAN Wound Conference 2022.

We trust that you enjoy the congress in our beautiful country!

# **WELCOME MESSAGE**

## **CHAIRMAN OF ASEAN WOUND SUMMIT 2022**



# PREFACE

The third SDG's goal is health and well-being, which contain slashing the number of premature death due to Non-communicable diseases through prevention and treatment. Chronic illnesses such as Diabetes, Cardiovascular disease, and Cancer are common causes of sudden death in the ASEAN region. Some countries in the South-East Asia Region (SEA), such as Indonesia, host a considerable Diabetes population, mentioned as the seventh-largest in the world. However, the SEA region is also one of the lowest regions with premature death due to chronic illnesses such as diabetes (IDF, 2021).

A Wound is the most common complication of chronic illness that rise mortality among people with chronic illness. Therefore it is important for healthcare workers specialising in wound care in the SEA region to meet and exchange ideas to help each other provide quality health delivery. So that all countries in the region will be able to share a similar rate of quality of health care to achieve the SDG's goals together.

In addition, the post COVID19 recovery goals require health practitioners to advance their knowledge and skills to stay relevant to overcome new challenges in health care now and in the future. Disruption era after pandemic become reasons for all of us to greet each other and open up new opportunities to collaborate for tremendous success in health care. International Asean Wound Conference, 2022 will become the perfect event for all of us to unite, improve our knowledge and skills in wound care, and bring a new perspective from experience in wound care and prevention.

**“Together, we can achieve better healthcare.”**

JAKARTA, November 2022

Head of Organizer International Asean Wound Conference 2022

Ns. Ikram Bauk, M.Kep., RN., WOC(ET)N



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# THE IMPACT OF COMMUNICATION IN INTERPERSONAL COLLABORATION

Prof. Dr. Budi Anna Keliat, SKp, MAppSc

## ABSTRACT

Ineffective communication between team members who care for clients will have a risk to client safety, it was found that 70% of problems were caused by ineffective communication. Several kinds of collaboration in caring for clients are interdisciplinary, multidisciplinary, interprofessionals, who have the ability of collaboration, namely assertiveness, responsibility, communication, autonomy, and coordination. Collaboration should have started since education so that at the time of practice it is possible to implement. By running effective communication in collaborating on caring for clients, a positive impact will be obtained, that are effectiveness in practice providing care, reducing health care costs, developing innovative models of care. This will happens because all team members contribute their competence together to client care so that patient central care is achieved.

**Keywords:** communication, collaboration

## DIABETIC FOOT

Prof. Dr. dr. Pradana Soewondo, SpPD-KEMD

### ABSTRACT

Kaki diabetic didefinisikan sebagai infeksi, luka atau kerusakan jaringan pada kaki neuropati dan atau penyakit perifer pada pasien diabetes. Komplikasi kaki diabetic sendiri sekitar 10 – 25% kaki diabetic terjadi komplikasi. RSCM (2010 – 2011) kematian akibat kaki diabetic 16%; amputasi 25%; dan re-amputasi 58.7%. Oleh karenanya diperlukan pencegahan dengan pendekatan multidisiplin untuk menurunkan angka amputasi hingga 48 – 85%.

Diabetic foot and diabetic foot ulcers are significant health issues in Indonesia, particularly as the prevalence of diabetes is increasing in the country. According to the International Diabetes Federation, Indonesia has the sixth-highest number of people with diabetes in the world, with an estimated 10.3 million adults aged 20-79 living with the condition in 2019. Diabetic foot ulcers are a common complication of diabetes that can lead to serious complications such as infection and amputation. The risk of developing a diabetic foot ulcer increases with the duration of diabetes and poor blood sugar control.

In Indonesia, several factors contribute to the high prevalence of diabetic foot ulcers. These include limited access to diabetes education and healthcare services, as well as poor foot care practices. Many people with diabetes in Indonesia may not be aware of the importance of regular foot exams, and foot care may be overlooked in favor of other diabetes management strategies. There are also challenges related to the availability of appropriate wound care products and services in Indonesia. While some hospitals and clinics offer specialized wound care services, these may be limited in availability or not accessible to all patients due to economic or geographic barriers. To address the issue of diabetic foot and diabetic foot ulcers in Indonesia, a comprehensive approach is needed that includes diabetes education and prevention programs, improved access to healthcare services, and better wound care practices. There is a need for increased awareness and education on the importance of foot care and regular foot exams for people with diabetes in Indonesia. Additionally, greater investment in wound care infrastructure and services is necessary to improve outcomes for people with diabetic foot ulcers.

**Keywords:** Kaki diabetic; komplikasi ulkus kaki; multidisiplin

## OPPORTUNITIES FOR USING TELENURSING IN WOUND CARE SERVICES

**Prof. Dr. Rr. Tutik Sri Hariyati, S.Kp., MARS, Hanny Handiyani**

Faculty of Nursing, Universitas Indonesia

[tutik@ui.ac.id](mailto:tutik@ui.ac.id)

### ABSTRACT

Telenursing is a part of telehealth that concentrates on the delivery, administration, and coordination of care and services by utilizing information transfer innovations in the field of nursing. Telenursing allows nurses to advise each other about the patient's forward-thinking without the need to go to see the patient, saving time and money for both human providers and patients. Wound care services are one area that would benefit from telenursing. Injuries may be remotely visible on camera, allowing inaccessible experts to provide advice on treatment. Pursuing is possible on a predictable premise, given the faster repair of unrelenting wounds and the broader nature of thinking.

One significant barrier to using telenursing is patient confidentiality. Privacy and security of personal data must be maintained, not paying too much attention to the collection system used to centralize the data. Security and safety are paramount in telenursing, and patients and professionals must feel confident that data is collected and stored securely. In Indonesia, there is already a policy related to telemedicine, namely "PMK No 20 of 2019" but has not specifically set standards in the implementation of telenursing. The standards of authorized staff in telenursing, security and privacy, awards and medical records have not been explicitly regulated in the regulations. This study provides a policy brief on the implementation of telenursing in Indonesia. We review and synthesize existing policies related to telemedicine, and then provide advice and recommendations. The recommendation in telenursing is that the nursing profession must at least have registration and, in the future, be delivered by a professional nurse. Each telenursing provider is obligated to guarantee the security and confidentiality of patient data, as well as the need for standardization in the financing of services with telenursing.

**Keywords:** Telenursing, Policy Brief, Wound Care Services

## CHALLENGES IN TREATING A CHRONIC WOUND : ISSUES OF TREATING A LONG-TERM WOUND

Widasari Sri Gitarja, SKp.,MARS., MM., WOC(ET)N

### ABSTRACT

Today, change in population demographics, an increasing number of individuals with multiple comorbidities and lack of human capital within the health care setting; represent new challenges for health care system. These call for services that provide less expensive and more efficient ways of delivering health interventions. Health systems are fundamental to achieving and maintaining societal health and welfare, and are key factors for development and economic growth. In light of the challenges facing health care system, coupled with the rapid development of new technologies presented as solution and the limited amount of high quality evidence for the use of telemedicine and telehealth in chronic wound management.

Telemedicine define as remote exchange of data between patient and health care professionals to assist in the diagnosis and management of health care conditions such as patient with a long term wound. In addition to reducing damage or harm, environmental sustainability implies achieving simultaneous improvements in human and environmental well-being. Fostering environmental sustainability in health systems is both a responsibility and an opportunity. Therefore, urged to consider a vision whereby health systems can improve, maintain or restore health, while minimizing negative impacts on the environment and leveraging opportunities to restore and improve the environment to the benefit of the health and well-being of current and future generations.

Treating a chronic wound can be challenging due to several issues that arise from the long-term nature of the wound. Some of the challenges include:

1. Infection: Chronic wounds are more susceptible to infection than acute wounds. This is because chronic wounds often have a weakened immune response, and the presence of bacteria and other microorganisms can slow down the healing process.
2. Inflammation: Chronic wounds can become trapped in a state of inflammation, which can impede the healing process. The inflammation can be caused by the presence of dead tissue, foreign bodies, or other irritants.
3. Poor circulation: Chronic wounds can be associated with poor circulation, which can result in reduced blood flow to the wound site. This can slow down the healing process and make it more difficult for the body to deliver the necessary nutrients and oxygen to the wound.
4. Persistent pain: Chronic wounds can be painful, which can have a negative impact on a patient's quality of life. Pain management strategies may be needed to help patients manage their symptoms.
5. Cost: Treating a chronic wound can be expensive due to the need for ongoing care, dressings, and other medical supplies.

6. Patient compliance: Patients may need to be actively involved in their wound care, which can be challenging if they have mobility issues or cognitive impairment. This can impact the effectiveness of treatment and the healing process.

Overall, treating a chronic wound requires a multidisciplinary approach that addresses the underlying causes of the wound, such as poor circulation or infection, and considers the patient's individual needs and circumstances. Regular monitoring, patient education, and ongoing support are also critical to promoting healing and preventing further complications.

**Keywords:** challenges; wellbeing; telemedicine

## OPTIMIZING PROFESSIONAL NETWORK FOR FUTURE WOUND CARE

Widasari Sri Gitarja, SKp.,MARS., MM., WOC(ET)N

### ABSTRACT

Fostering environmental sustainability in health systems is both a responsibility and an opportunity, and is consistent. In the other word, health systems can improve, maintain or restore health, while minimizing negative impacts on the environment and leveraging opportunities to restore and improve the environment to the benefit of the health and well-being of current and future generations. These studies present largely positive reports on the practitioner's satisfaction with the eHealth application as well as increased efficiency. A primary expectation for the organizational effects of eHealth implementation is that this would liberate staff resources or shift tasks between different groups of health-care staff. In the case of teleconsultations, a primary objective may be to shift tasks from hospital nurses and doctors to nurses in the community care sector, liberating wound care expert resources in the hospitals, and increasing interdisciplinary collaboration and educating non-specialized groups of staff.

Optimizing your professional network for future wound care involves building and maintaining relationships with key individuals and organizations in the field. Here are some steps you can take to optimize your professional network:

1. Attend wound care conferences and events: Attending conferences and events is an excellent way to meet other professionals in the field, learn about the latest research and techniques, and build relationships with potential collaborators.
2. Join professional organizations: Joining professional organizations, such as the Wound Healing Society or the Association for the Advancement of Wound Care, can connect you with other professionals in the field and provide opportunities for continuing education and professional development.
3. Network with colleagues: Networking with colleagues within your organization or institution can lead to new opportunities for collaboration and knowledge sharing.
4. Utilize social media: Social media platforms such as LinkedIn can be useful for connecting with other professionals in the field and staying up to date on the latest developments in wound care.
5. Collaborate on research projects: Collaborating with other professionals on research projects can not only lead to new insights and discoveries but also help build relationships with other professionals in the field.
6. Volunteer for professional organizations: Volunteering for professional organizations can provide opportunities to meet other professionals in the field, gain experience in leadership positions, and contribute to the advancement of wound care.

By optimizing your professional network, you can stay up to date on the latest developments in wound care, build relationships with other professionals, and create new opportunities for collaboration and professional growth.

**Keywords:** responsibility; collaborating; education

## INDONESIAN WOUND CARE MANAGEMENT NOW AND LATER

Widasari Sri Gitarja, SKp.,MARS., MM., WOC(ET)N

### ABSTRACT

During the Covid-19 Pandemic, our healthcare system was vulnerable, particularly in regards to care for persons with chronic diseases such as diabetes, as the healthcare burden was enormous and the primary focus was on treating COVID-19 patients. However, the Pandemic also reminded us that teamwork is the most effective method to ensure healthcare resilience. When it came to seeking answers to the challenges presented by COVID-19, the entire global community worked in harmony. The healthcare professional strives to provide and locate the best available treatment for the patient, while the scientist, government, and industry contribute to the advancement of the COVID-19 vaccine, and the general public minimizes covid-19 transmission. The healthcare professional strives to provide and locate the best available treatment for the patient, while the scientist, government, and industry contribute to the advancement of the COVID-19 vaccine, and the general public minimizes covid-19 transmission.

Bridging the gap between science and practice for the greater good. Corresponding with the spirit of recover together, recover stronger, the theme of the G20 that now is held in Bali, Indonesia, the Indonesian House of Representatives, particularly Commission IXs, is supporting this spirit of multidisciplinary work to fight health issues in wounds. We are committing to give a supportive environment for healthcare professionals and people working in healthcare, creating room for professional education and room for collaborative action. Our programs always incorporate the issues that the public is now facing. We believe that Indonesia holds a special role in wound care research and development that can benefit the whole world. By working together, we can accelerate the convergence of previously disparate data and previously discrete tools to generate new scientific insight, identify risk factors and define interventions that can make a difference in relieving the burden of non-communicable diseases related to chronic wounds. If communities and organizations lead with their respective strength while standing united in this fight, it is possible to transform the trajectory of chronic wound management. The best point for Indonesian wound care management now and later is to prioritize the development and implementation of evidence-based wound care practices. This can include:

1. Education and training: There is a need to train healthcare professionals on the latest wound care techniques, including the use of advanced wound care products and devices.
2. Standardization of wound care protocols: Standardizing wound care protocols can ensure that patients receive consistent and appropriate care regardless of their location or the healthcare facility they visit.

3. **Prevention of wound infections:** Preventing wound infections are crucial in wound care management. This can be achieved by maintaining good hygiene, avoiding cross-contamination, and using appropriate wound dressings.
4. **Collaboration between healthcare providers:** Wound care management requires a multidisciplinary approach, involving physicians, nurses, and other healthcare providers. Collaboration and communication between these providers can improve patient outcomes.
5. **Utilization of technology:** The use of technology, such as telemedicine, can facilitate remote consultations; wound assessment, and management, especially in rural or remote areas.

By focusing on these key areas, Indonesian wound care management can improve patient outcomes, reduce healthcare costs, and ultimately enhance the quality of life for those affected by wounds.

**Keywords:** global community; healthcare professionals; working together



## MANAGEMENT OF DIABETES COMPLICATION RELATED TO WOUND

Em Yunir, Dr., dr., SpPD., KEMD

### ABSTRACT

Insiden kejadian luka kaki Diabetik (DFU) di Indonesia perkiraan berkisar 15% – 30 % dengan angka mortality rate 17% – 32% dan angka rata – rata amputasi di 36.3%. Di RSCM, lebih dari setengah (58.7%) post amputation bahkan dilakukan re-amputation, terutama pada pasien – pasien dengan usia kisaran 40 – 60 tahun. Data di atas tentu saja merupakan data yang cukup mencengangkan dan memprihatinkan karena pasien datang pada keadaan lanjut dengan infeksi. Diperlukan penanganan yang komprehensif secara multidiciplin agar angka kejadian amputasi pada luka kaki diabetik (DFU) dapat menurun. Edukasi dan kampanye tentang pola hidup sehat dan kontrol gula darah secara masive di masyarakat, juga dapat menjadi kunci pada penanganan kejadian luka kaki diabetik (DFU).

**Keywords:** Luka kaki Diabetik, infeksi, amputasi kaki

## STRATEGIC LEADERSHIP IN WOUND MANAGEMENT

**Adityawati Ganggaiswari, MD, M.Biomed., MARS<sup>1</sup>**

CEO MRCCC Hospital Jakarta, General Practitioners

### ABSTRACT

Strategic leadership in wound care management involves developing and implementing a comprehensive plan to ensure effective and efficient wound care delivery. This includes identifying and prioritizing wound care needs, developing policies and procedures, training and educating staff, and establishing systems to monitor and evaluate outcomes. Effective strategic leadership in wound care management requires a thorough understanding of the wound care process, including wound assessment, treatment, and prevention. The leader must also be knowledgeable about the latest evidence-based practices and technologies in wound care, and are able to identify and address barriers to effective wound care delivery. The strategic leader in wound care management must also be able to collaborate with interdisciplinary teams, including physicians, nurses, therapists, and other healthcare professionals. This involves establishing open communication channels, promoting teamwork, and ensuring that everyone is working toward a common goal. In addition, the strategic leader in wound care management must be able to effectively manage resources, including staff, equipment, and supplies, to ensure that they are used efficiently and effectively. This involves developing and monitoring budgets, as well as implementing quality improvement initiatives to continuously improve wound care delivery. Overall, strategic leadership in wound care management is essential to ensuring that patients receive high-quality wound care that is effective, efficient, and patient-centered.

**Keywords:** strategic leadership; wound care and patient centered



## ETHIC LEGAL NURSING IN WOUND CASES

**Ns. Jajang Rahmat S, M.Kep, Sp,Kep.Kom**

Chairman of PPNI DKI Jakarta

### ABSTRACT

Indonesian WOCN services have been set up for more than 25 years already, since 1993. There is collaboration between surgeons, Enterostomal therapy nurses, wound care clinicians and clients to promote quality of life. In 2007, WOCARE Indonesia started to develop the project of independent nursing practice services to lead the nursing services in this specialty. By working together, we can accelerate the convergence of previously disparate data and previously discrete tools to generate new scientific insight, identify risk factors and define interventions that can make a difference in relieving the burden of non-communicable diseases related to chronic wounds. If communities and organizations lead with their respective strength while standing united in this fight, it is possible to transform the trajectory of chronic wound management. Ethical and legal nursing in wound cases involves ensuring that wound care is delivered in a manner that is consistent with ethical principles and legal requirements. This includes respecting patient autonomy, maintaining patient confidentiality, and providing care that is consistent with professional standards. In wound care, ethical considerations may include issues related to informed consent, patient privacy, and end-of-life care. For example, a nurse may need to obtain informed consent from a patient or their family members before performing a wound care procedure, and ensure that the patient's privacy is maintained during the procedure. Legal considerations in wound care may include issues related to documentation, liability, and scope of practice. Nurses must ensure that their wound care documentation is accurate and complete, and that they are following established protocols and guidelines. They must also be aware of their own scope of practice and work within its limits. Ethical and legal nursing in wound cases also involves collaborating with interdisciplinary teams, including physicians, other nurses, and wound care specialists. This includes communicating effectively and advocating for the patient's needs. Overall, ethical and legal nursing in wound cases involves balancing the needs of the patient with professional and legal requirements, and ensuring that wound care is delivered in a manner that is respectful, compassionate, and evidence-based.

**Keywords:** wound care; non-communicable disease; services

## CHALLENGES IN CARING FOR PALLIATIVE WOUND IN INDONESIA

Dr. Christantie Effendy, SKp., MKes

### ABSTRACT

Caring for palliative wounds in Indonesia presents several challenges, including:

1. Limited access to wound care services: Many areas in Indonesia, particularly in remote and rural areas, have limited access to wound care services. This can make it difficult for patients with palliative wounds to receive the care they need.
2. Limited knowledge and training: Many healthcare providers in Indonesia may have limited knowledge and training in wound care, particularly in palliative care. This can lead to inadequate or inappropriate wound care, which can result in prolonged suffering for the patient.
3. Limited resources: Many healthcare facilities in Indonesia have limited resources, including wound care supplies and equipment. This can make it difficult to provide the necessary care for patients with palliative wounds.
4. Cultural and religious beliefs: Cultural and religious beliefs may influence the way that patients and their families perceive palliative care, including wound care. This can make it difficult to provide appropriate care that is consistent with the patient's wishes and beliefs.
5. Communication barriers: Language and communication barriers may exist between healthcare providers and patients and their families, particularly in areas where there are multiple ethnic and linguistic groups. This can make it difficult to provide effective wound care and communicate important information about the patient's condition and care plan.
6. Stigma and discrimination: Patients with palliative wounds may experience stigma and discrimination due to cultural beliefs about death and dying, and may not receive the care and support they need.

Overall, addressing these challenges in caring for palliative wounds in Indonesia requires a multifaceted approach that includes improving access to wound care services, providing education and training for healthcare providers, increasing resources for wound care, and addressing cultural and communication barriers.

Keywords: Palliative; wound care; challenges

## WHAT IF THE WOUND IS INCUREABLE : HOW TO COMMUNICATE?

Dr. Christantie Effendy, SKp., MKes

### ABSTRACT

If a wound is incurable, it is important to communicate with compassion, empathy, and honesty. Here are some tips on how to communicate effectively in this situation:

1. **Be honest:** It is important to be honest with the person about the severity of their condition and the fact that their wound may not be curable. It can be difficult to deliver this news, but it is important to do so in a compassionate and empathetic manner.
2. **Listen actively:** Allow the person to express their feelings and concerns. Listen actively and attentively without interrupting or judging. This can help the person feel heard and understood.
3. **Empathize:** Try to put yourself in the person's shoes and understand what they are going through. Use statements like "I can only imagine how difficult this must be for you" to convey your empathy and support.
4. **Provide emotional support:** Offer emotional support by being present and available to the person. Let them know that you are there for them and that you care about their well-being.
5. **Provide practical support:** Provide practical support by offering to assist with tasks or arrange for additional resources such as counseling, support groups, or other medical professionals who may be able to help manage the person's symptoms and pain.

Remember that everyone processes and copes with difficult news differently. Be patient and supportive, as the person may need time to process and come to terms with their condition.

**Keywords:** incurable; communicate; supportive

# EXPLORING THE PSYCHOSOCIAL ISSUE AND MANAGEMENT PSYCHOSOCIAL IN WOUND CARE: A QUALITATIVE STUDY

**Dr. Ariyanti Saleh, S.Kp. M.Si<sup>1\*</sup>, Nurlaila Fitriani<sup>2</sup>, Saldy Yusuf<sup>3</sup>**

<sup>1,2</sup>Mental Health Department, Faculty of Nursing, Universitas Hasanuddin Makassar, South Sulawesi, Indonesia

<sup>3</sup>Medical and Surgical Nursing Department, Faculty of Nursing, Universitas Hasanuddin Makassar, South Sulawesi, Indonesia

## ABSTRACT

Diabetes tipe 2 adalah salah satu penyakit tidak menular yang sangat serius. Sifat kronis diabetes tipe 2 dan komplikasi terkait menimbulkan dampak pada kondisi fisik yaitu munculnya luka diabetes. Namun, dampak lain seperti masalah psikososial pada pasien tidak banyak dibahas. Sehingga tujuan dari penelitian ini adalah untuk mengeksplorasi masalah psikososial yang muncul beserta penanganan yang pasien lakukan. Penelitian ini menggunakan desain kualitatif deskriptif dengan menggunakan teknik purposive sampling. Penelitian dilakukan di dua rumah rawat luka diabetes ternama di Kota Makassar. Data penelitian dianalisis menggunakan analisis tematik. Penelitian ini menghasilkan tiga tema utama yaitu peran perawat luka diabetes dalam meningkatkan coping pasien, ketersediaan informasi perawatan luka, dan respon psikologis pada tahap luka diabetes. Peran perawat luka diabetes menjadi kunci dalam suksesnya perawatan luka pasien dan peningkatan mekanisme coping yang dimiliki. Ketersediaan informasi yang memadai tentang perawatan luka diabetes diberbagai lini pelayanan Kesehatan membantu pasien untuk menemukan tempat perawatan yang tepat .

## DEVELOPMENT OF HOME CARE MODEL FOR A CARING-BASED MOIST WOUND HEALING

Ns. Edy Mulyadi, M.Kep, RN, WOC(ET)N

### ABSTRACT

Epidemiological transition, globally varied and fluctuating, has caused a distribution pattern change between contagious and non-contagious diseases. Since the occurrence of Covid-19 at the end of 2019, there have been a wide range of consequences and global humanity crisis towards all human life sectors. Like all divisions of health care, home care visitations have been suffering from the ebbs caused by the pandemic. Nevertheless, along with better management of Covid-19 when the case number goes on a significant hike, the society has become more accepting of home care, including wound management.

Moist wound care concept may currently be managed by certified wound care professionals at all levels of health care, with emphasis on home care. The fulfillment of nursing service must include care at the core. The purpose of research is to yield and test the efficacy of moist wound healing in care-based home wound management model independently applied by certified wound care nurses. The study methodology is mixed: quantitatively cross-sectional, qualitatively phenomenal design, with pre-/ post-control randomized controlled trial. This study will form the guidelines for moist wound healing concept in home wound management. This study will form the guidelines for care-based moist wound healing concept in home wound management.

**Keywords :** *home care, moist wound healing, Randomized Controlled Trial*

## DISASTER WOUND MANAGEMENT 7 STEPS

Ns. Edy Mulyadi, M.Kep, RN, WOC(ET)N

### ABSTRACT

Natural disasters, such as earthquakes, tornadoes, severe storms and floods affect thousands of people each year in Indonesia. They are often unexpected and can leave whole community injured and in shock. Depending on the nature of the disaster, e.g. an earthquake or flood, wounds may be contaminated with dirt, mud, seawater and debris. In addition, people who live through a disaster will experience emotional distress, such as anxiety and fear, trouble sleeping and other psychological symptoms. Adminstrating first aid promptly can help heal small wounds, thus preventing infection; in persons with open large wounds, it can help prevent infections and other serious complications, such as tetanus, as well as save limbs and lives. The latest disasters gave us the insights and experiences that led to the development of a strategic protocol for handling disasters, based on data and cases studies we were able to collect. The following steps provide wound clinicians with a framework based on 7<sup>th</sup> steps of care planning. Remember that disaster situations are not easy to handle and that sudden events can disrupt everything. Each step contains basic instructions and recommended actions on what to do.

**Keywords:** Disaster; 7<sup>th</sup> steps; wound management



## THE EFFECTIVENESS OF CARE BUNDLE THERAPY TO SUPPORT THE PREVENTION PRESSURE INJURIES IN IMMOBILIZED PATIENTS

Ns Asrizal, S.Kep.,M.Kep.,RN WOC(ET)N.,ChHt.N<sup>1</sup>, Afrinayanti<sup>2</sup>, Margareta<sup>2</sup>

<sup>1</sup>Asri WOC Center Medan, <sup>2</sup>RS Pendidikan USU

### ABSTRACT

**Background:** Pressure Injury are localized injuries of the skin or underlying tissue caused by prolonged pressure, exposure to shear forces or friction. Pressure injury representative a major concern for hospitalized patients and the health professionals responsible for their wellbeing intensive care unit (ICU) patients are at high risk of pressure injury development, and the development of pressure injury can significantly extend the length of time a patient must remain in the ICU. Thus, bundle care therapy is a quality care management technique that can be implemented in the ICU with the aim of promoting pressure injury prevention.

**Aim:** To identify the effectiveness of bundle care therapy on prevention pressure injury for immobilized patient in ICU.

**Methods:** The pilot study was performed on 10 immobilized patients in the ICU. In the case of stroke patients with decreased consciousness, the action was taken by applying a care bundle in several areas at risk of stress with very disciplined supervision by ICU nurses. This was done while the patient was in the ICU for an average of 2 weeks of treatment. Every 2 hours, mobilization is carried out while maintaining the care bundle regularly. The average age of the patients is 50 - 65 years. This therapy is used to support limbs on protruding bones such as heels, back, neck, sacrum, shoulders.

**Results:** The results of 10 patients in the pilot study found that care bundle therapy was very effective in preventing pressure sores. Significant numbers that are not at risk of pressure injury indicate that bundle care therapy is very well used to reduce the risk of pressure ulcers.

**Conclusion:** Care bundle therapy is very effective in preventing pressure injury due to limited mobility.

**Keywords:** Care bundle therapy, pressure injury, immobilized.

## ANTIMICROBIALS AND NON HEALING WOUNDS: AN UPDATE

**Ns. Ikram Bauk, M.Kep, WOC(ET)N**

Majene, West Sulawesi, Indonesia

### ABSTRACT

Every wound type has the potential to develop serious infection, which in some cases can lead to chronicity, bone infections, long-term disabilities or even death. Bacteria within a wound will exist in either planktonic or biofilm forms, with treatment mostly by use of topical antimicrobials or antibiotics. Alarmingly, there is growing concern regarding the treatment of infection, caused by the rise of antimicrobial resistance in many common bacterial pathogens and the misuse of antimicrobial agents. Wounds are often managed inappropriately because clinicians lack the knowledge required to accurately assess and diagnose wounds. Wounds that are not managed appropriately may result in delayed healing, complications, decreased quality of life, and increased healthcare costs. Wound infections are common in clinical practice and, while the most common etiologic agents are bacteria, fungi and occasionally other microorganisms cause some wound infections. Because infection is one of the most frequent factors associated with stalled wound healing, prevention of infection and the proper use of antimicrobial agents is key in wound management. Effective antimicrobial agents (including antiseptics and antibiotics) are essential for protecting patients against infection in many settings and situations, including post-operative wound infection and the management of various types of non-healing wounds.

**Keywords :** Infection, biofilm, effective antimicrobial agent.

## THE ISLAMIC SPIRITUAL APPROACH TO WOUND HEALING PROCESS

**Lelik Adiyanto, SST. S.Kep, MNNLP**

Universal Enterprise Indonesia, Semarang, Central Java, Indonesia

### ABSTRACT

The majority of the population in Indonesia, around 90%, is Muslim that a highly religious community. Islamic principles involve all aspects of human life, including health issues. Therefore, holistic wound care management needs to integrate the concept of Islam, especially for Indonesian Muslim. The pillars of Islam inspire the management of wound care based on the Quran, surah At-tin. The shahadat, salat, zakat, fasting, and hajj as the pillars of Islam can be interpreted as vision, contemplation, giving, patience, and letting go. Comprehending in those aspects that contains the concept needed for the wound healing process, obviously benefits the nurse in treating the wound, especially if they do it holistically. Vision and contemplation are considered to restore the client's awareness about their life and problems, as well as remind an individual of their God. Contemplation reflects the unity of body and mind as a framework for mind and body connection. Focusing on giving, it implies making for an active contribution to health initiatives and letting go of an unhealthy or unnecessary lifestyle. Moreover, patience is defined as managing emotions and self-restraint. Also, letting go is supposed to return all of life's destiny to God and fully endeavoring with accurate knowledge. The application of the Islamic approach to its population will satisfy the client as a whole. In summing up, the most important thing for Muslims is that health problems are not only a matter of being cured or not. It is essentially bridging an awareness as a whole human being, as a servant of Allah, and making them closer to the Owner of Life. Therefore, they live wiser and better in life.

## DIALKYL CARBAMOYL CHLORIDE (DACC) AS PART OF AN ANTIMICROBIAL STEWARDSHIP STRATEGY FOR WOUND

Ns. Marina Ruran, M.Kep, RN., WOC(ET)N; Widasari Sri Gitarja, SKp., MARS., MM., WOC(ET)N

### ABSTRACT

Dialkylcarbamoyl chloride (DACC) is a chemical compound that is used in wound care products as part of an antimicrobial stewardship strategy. Here are some reasons why DACC can be beneficial in wound care:

1. DACC is effective against a wide range of bacteria: DACC has been shown to be effective against a broad range of bacteria that can cause wound infections, including methicillin-resistant *Staphylococcus aureus* (MRSA), *Pseudomonas aeruginosa*, and *Escherichia coli*.
2. DACC does not promote antibiotic resistance: Unlike traditional antibiotics, DACC does not promote antibiotic resistance in bacteria. This is because DACC works by physically binding to bacteria and preventing them from multiplying, rather than killing them with chemicals.
3. DACC is safe for human use: DACC has been shown to be safe for use on human skin, and does not cause any significant adverse reactions or toxicities.
4. DACC can help reduce the need for systemic antibiotics: By reducing the bacterial load in wounds, DACC can help prevent the development of wound infections and reduce the need for systemic antibiotics. This can help to preserve the effectiveness of antibiotics by reducing the selective pressure on bacteria to develop resistance.

Overall, the use of DACC as part of an antimicrobial stewardship strategy in wound care can help to prevent the development of wound infections and reduce the need for systemic antibiotics, which can have important implications for reducing the emergence and spread of antibiotic-resistant bacteria.

Keywords: DACC; bacteria; wound infections

## WOUND MANAGEMENT OF DIABETIC FOOT OSTEOMYELITIS (DFOS)

**Ns. Vonny Nurmalya Megawati, M.Kep., WOC(ET)N**

Wound Ostomy Continence Enterostomal Therapy Nurse, Lecturer of InETNEP Wocare -  
Corporate University of Wocare Indonesia, CEO of DM Wound Care Private Practice

### ABSTRACT

Diabetic foot osteomyelitis (DFOs) is one of the most common complication related to infection of Diabetic foot ulcers (DFUs), being present 10 – 15% of moderate and 50% of severe infections. Undiagnosed and untreated properly of DFOs often leads to a high risk of amputation, morbidity and mortality. The aim of this study is to discuss about wound management of DFOs. Definition, epidemiology, pathogenesis, diagnosis, and treatment of DFOs will also be added to the discussion.

The specific wound management of DFOs is rarely discussed specifically, mostly from a medical and surgical perspective. Over the years the most debated theories were surgical or medical therapy as first approach. Nowadays the guidelines of DFOs broadly recommend the specific conditions for surgical or medical approach.

The diagnosis should be first based on clinical signs of infection, especially if ulcer is deep, fails to heal or is located over a body prominence. It can be supported by laboratory, microbiological and radiology evaluation.

The "TIME" framework in wound bed preparation consist of tissue management, inflammation and infection control, moisture balance, and epithelial (edge) advancement are systematic approach for wound management to ensure effective healing. Wound dressing has remained challenge for DFOs. Biopolymer dressings are used because of biocompatibility, biodegradability, involved in repair damaged tissue and stimulate healing process. Chitosan and collagen are types of biopolymer dressings that play a role in the bone healing process because these materials form complex ionic compounds that increase osteo conductivity to accelerate wound healing process of DFOs. Case reports will be presented according to scientific recommendation and our experience.

**Keywords :** diabetic foot osteomyelitis, wound management, biopolymer dressings

# MANAGEMENT OF PREVENTIVE AND TREATMENT OF MOISTURE-ASSOCIATED SKIN DAMAGE (MASD): SYSTEMATIC REVIEW

Ns. Idramsyah, M.Kep., Sp.Kep.M.B., WOC(ET)N<sup>1,2</sup>

<sup>1</sup>Department of Nursing, Poltekkes Kemenkes Bengkulu

<sup>2</sup>Alfacare Center Bengkulu

idrumsyah@poltekkesbengkulu.ac.id

## ABSTRACT

**Background:** Prolonged exposure to excessive fluids such as urine and liquid stools on the surface of one's skin can cause moisture-related skin damage (MASD). This condition occurs sometimes due to the inability of families and health workers to recognize the risks of Incontinence related dermatitis (IAD).

**Aim:** This systematic review aims to review the management of prevention and treatment of moisture-related skin damage

**Methods:** SCOPUS, PubMed, Medline, ProQuest, ScieneDirect, searched for articles published between January 2012 and October 2022. Only articles focusing on moisture-related skin damage (MASD).

**Results:** Five articles met the inclusion/exclusion criteria. Management of prevention and treatment of MASD is categorized as assessment, causal factors, prevention strategies, wound cleansing, dressing selection, changes in body position, and health education.

**Conclusions:** A systematic review extracted the preventive management and treatment of MASD. The preventive and care management of this systematic review should be applied in clinical practice. Nurses and other healthcare professionals should be educated and trained to understand the causes, management, preventive and treatment of MASD because this type of skin breakdown is different from pressure injury, tools for assessment and evaluation, and strategies for prevention and treatment require special attention.

**Keywords:** *moisture-associated skin damage; preventive; treatment; assessment*

# OVERVIEW OF BLOOD GLUCOSE LEVELS AND CONDITIONS OF DIABETIC ULCERS IN DIABETES MELLITUS PATIENTS

Ahmad J, S.Kep, Ns, M.Kep,Sp.Kep, MB, WOC(ET)N<sup>1,2</sup>, Hajra<sup>1</sup>, Ardian Adhiwijaya<sup>1</sup>

<sup>1</sup>Nursing Department, UIN Alauddin Makassar

<sup>2</sup>Gocare Indonesia

## ABSTRACT

**Background:** Diabetes Mellitus is a chronic metabolic disorder that occurs because the pancreas does not produce enough insulin or the body cannot use insulin effectively. Diabetic foot ulcers are infection, ulceration, and/or destruction of deep connective tissue associated with neuropathy and diseases associated with neuropathy and peripheral vascular disease of the lower limbs.

**Method:** This study aims to overview the blood glucose levels and the condition of diabetic ulcers in patients with diabetes mellitus. This research used a descriptive-analytic research design with a cross-sectional approach design. Sampling technique using a random sampling technique. The samples obtained were 15 people who met the inclusion criteria. Collecting data using a questionnaire of respondents' characteristics, measuring blood glucose levels using a glucometer, and measuring the condition of diabetic ulcers using an observation sheet and assessment of the BWAT Scale (Bates Jensen Wound Assessment Tool).

**Result:** The results showed that blood glucose levels in patients with diabetes mellitus experienced more high blood glucose levels with a percentage of 66.7% with a total of 10 respondents. Wound condition status in patients with diabetes mellitus is mostly in the category of regenerating wound conditions with a score of 13-59 with a percentage of 86.7% with a total of 13 respondents.

**Conclusion:** This study describes blood glucose levels and the condition of diabetic ulcers, it is hoped that people with diabetes mellitus can better control blood glucose levels so that blood glucose levels can be on target and the wound healing process is more optimal

**Keywords:** Blood Glucose Level, Wound Condition, Diabetic Foot Ulcers

## BIENNIAL REPORT: PATIENT CLINICAL OUTCOME AND FINANCIAL ANALYSIS OF A PRIVATE NURSE-LED WOUND CENTER IN MALANG, EAST JAVA, INDONESIA

Ns. Ahmad Hasyim W, M.Kep, MNg, CWCC<sup>1,3</sup>, Zaqqi Ubaidillah<sup>2,3</sup>, Ayu Nanda Lestari<sup>3</sup>,

1. School of Nursing Faculty of Medicine Brawijaya University

2. School of Nursing Faculty of Health Sciences Muhammadiyah University Malang

3. Pedis Care Center Malang

### ABSTRACT

**Introduction:** In the last ten years, the number of certified wound care clinician (CWCC) nurses and its associates (CWCCA) in Indonesia has risen dramatically through WCET's program in Indonesia, namely Indonesian ETNEP (InETNEP). This credential is conducted based on WCET's standard of training and education. The core mission of InETNEP is to create of expert nurses in wound, ostomy, and continence (WOC) management, as well as to become an integral part of a multidisciplinary WOC management team. A huge proportion of CWCC and CWCCA has establish their private practice across different provinces in Indonesia. However, the outcomes of the private nursing practices have never been evaluated, yet it is not well appreciated.

**Aim:** To provide a description and analysis of a private nurse-led wound center in Malang, East Java, Indonesia from chronic wounds perspective and financial perspective.

**Methods:** A combination of Quantitative study with descriptive statistical approach and qualitative-case report

**Results** : From January 2015 to December 2016 a total number 140 patients were treated through outpatient setting. The top three proportion of the wounds is as follows: diabetic foot ulcer (63,57%), pressure injury (7,85%) and cutaneous infection (7,14%). Patients came up with different characteristics, as well as varied comorbid conditions and inhibiting factors. From an overall perspective, the successfully healed case was 84,28%. The remaining un-healed wounds were mostly related to patient passed away, and loss of contact. In addition, the average length of treatment was 11 weeks (equivalent to 11 times of treatment). The short treatment length and reduced treatment frequency have led to reduced cost of wound care. Key components of a successful chronic wounds management include: (1) Multi-disciplinary collaboration with other healthcare profession (2) Appropriate implementation of TIME<sup>1</sup> framework in wound management, and (3) patient-centered diabetes education which include patient empowerment and self-efficacy enhancement.

**Conclusions:** (1) Diabetic ulcer remains the most prevalent case; (2) Inter-professional collaboration is an essential part in wound management; (3) Wound management performed by CWCC and CWCCA is both clinically and financially effective

**Recommendations:** (1) The roles of CWCC and CWCCA should be optimized to ensure clinical and cost effectiveness of wound management; (2) National health insurance should consider the coverage for CWCC practices in healthcare facilities

**Keywords:** nurse-led wound center, certified wound clinician, patient outcome

## THE EFFECT OF CADEXOMER IODINE AND ZINC CREAM ON WOUND HEALING IN PATIENT WITH DIABETIK FOOT ULCER AT WOCARE CENTER CLINIC BOGOR

Ns. Rizki Hidayat, M.Kep.,WOC(ET)N<sup>1</sup>, Naziyah<sup>2</sup>, Adinda Zahra Alifa<sup>3</sup>

<sup>1</sup>Dosen Program Studi Keperawatan Universitas Nasional. Email: [rizkibus@gmail.com](mailto:rizkibus@gmail.com)

<sup>2</sup>Dosen Program Studi Keperawatan Universitas Nasional. Email: [naziyahtaufik@gmail.com](mailto:naziyahtaufik@gmail.com)

<sup>3</sup>Mahasiswa Program Studi Keperawatan Universitas Nasional. Email: [adindazahra84@gmail.com](mailto:adindazahra84@gmail.com)

### ABSTRACT

**Background:** Nurses have an important role in treating foot wounds by performing foot care, checking feet every day, maintaining humidity, using appropriate footwear for diabetik foot ulcer patients. How is the effectiveness of cadexomer iodine and zinc cream on the healing of diabetik foot wounds at the Wocare Center Bogor clinic.

**Aim:** to examine the effect of cadexomer iodine and zinc cream on wound healing in patient with diabetik foot ulcer.

**Methods:** The research is in the form of a quasi-experimental approach with a pre- post test design, namely in this design, initial observations were made through a pretest, then an intervention is given, followed by a posttest. The technique for conducting the sample in this study was a total sampling technique with a total of 20 respondents. The research instrument used the BWAT observation sheet. The statistical test used in this study used a paired t-test

**Result:** the results showed that the mean of BWAT observation score for the pretest was 37.80 and the posttest was 28.80. The results of the study show that there is a difference in the BWAT pretest and posttest observation scores with a p-value of 0.000

**Conclusion and suggestion:** decreasing in the score of the BWAT observation sheet in all patients after using cadexomer iodine and zinc cream. Cadexomer iodine and zinc cream are effective for treating diabetik foot wounds at the Wocare Center Clinic, Bogor. Patients with diabetik foot wounds are expected to use this dressing as an effort in the treatment process, especially the healing of diabetik foot wounds.

**Keywords:** cadexomer iodine, zinc cream, BWAT, diabetic foot wound.

## **A GUIDE TO WOUND DEBRIDEMENT IN CHRONIC WOUND (IMPACT OF WOUND HEALING AND CURRENT ISSUE ON PRIVATE PRACTICE)**

**Muhammad Basri, S.Kep., Ns., M.Kep. RN.,WOC(ET)N, Irawati**

### **ABSTRACT**

General management of chronic wounds consists of wound bed preparation and wound closure. Wound bed preparation aims to remove the barrier in the wound through debridement, bacterial control, and exudate management. The debridement process is the treatment of dead tissue or nonviable tissue. Necrotic tissue in chronic wounds can interfere with wound healing and inhibit the migration of keratinocytes over the wound bed, because necrotic tissue causes poor blood supply to the wound or increased interstitial pressure. Debridement will remove necrotic or nonvital tissue and highly contaminated tissue, thus facilitating the wound healing process and preventing infection. Improvement of circulation and oxygen transport will be optimal after debridement, in addition debridement will change the cellular and molecular conditions of the chronic wound bed which is characterized by increased levels of proteases and proinflammatory cytokines as well as decreased growth factors, become more favorable conditions for wound healing due to new perfusion of the wound bed, migration of neutrophils and macrophages to the wound bed, and production of new growth factors. Debridement can be done by various methods.

**Keywords:** chronic wounds, debridement



## EFFECTIVENESS OF MODERN DRESSINGS IN BREAST CANCER WOUNDS AT KRAMAT 128 HOSPITAL

**Autor : Tioma Naibaho,M.Kep,Ns.WOC(ET)N (Pelni Nurse Academy)**

**Co-Authors :Hamka (Batari Toja Watampone Nurse Academy)**

### ABSTRACT

Kramat 128 Hospital has a role in cancer case management in Indonesia, where the highest percentage lies on breast cancer -- 53%. Wound management activity in such cases includes assessing for needs of moisture-balanced dressing type to solve cancer wound problems such as bleeding, pain, exudate, malodor, and maceration, which consequently cause discomfort during the practice of trauma-prevention wound care collaboration between physicians and nurses. The major challenge incurred by the use of modern dressing is that it is rather expensive in the case of large or complicated wound condition. The cost of wound care is then high. The purpose of study is to comprehend the effectiveness of modern dressing for cancer wound in breast cancer cases at Kramat 128. The study method design is case study and intervention in the unique characteristics of 12 wound respondents. Data collection was done at Kramat 128 Hospital from January to August 2022. Respondents' age range was 35-56. Collaboration with the attending physicians yields raised QoL, comfort, and better problem-solving results. In conclusion, the use of moisture-balanced modern dressing in cancer wound management may produce comfort and the pricing problem may be solved through the process of care.

**Keywords:** *cancer wound, modern dressing, wound care.*

## MANAGEMENT OF EXUDATE IN A PATIENT WITH MALIGNANT WOUND

**Ns. Endang Murwaningsih, M.Kep. WOC(ET)N**

Rumah Sakit Kanker Dharmais, Jl.Let. Jend. S. Parman Kav 84-86, Slipi, Jakarta Barat -

11420. E-mail: [emurwaningsih@gmail.com](mailto:emurwaningsih@gmail.com)

### ABSTRACT

Malignant wound are strongly associated with excessive exudate, which can adversely affect the patient's physical, psychological, and functional health at the end of life. Management of exudate is usually limited to the use of more absorbent dressings with more frequent dressing changes. However, this method requires a lot of time in wound care and sometimes does not solve the problem of excessive exudate. Several strategies in modifying the choice of dressing have an important role, so that they can be a solution in the management of excessive exudate in cancerous wounds. Strategies The choice of dressing that fits the needs of cancer wound care can result in improved quality of life for patients and families.

**Keywords:** Dressing, Quality of life, malignant wound, management of exudate

# MANAGEMENT URINARY INCONTINENCE TYPE MIX AND DIASTASIS RECTUS ABDOMINUS OF MUSCLE (DRAMs) : LITERATURE REVIEW AND CLINICAL TRIAL

**<sup>1</sup>Ns. Indah Nursanti, M.Kep, WOC(ET)N**

CEO SerLOK.com by Altara Care

Co.Director Binetwork Media Digital Utama Indonesia

Co.Director ETNEP Wocare, Indonesia

Doctoral Student at Faculty of Nursing, Airlangga University

Email: indah,nursanti-2020@fkip.unair.ac.id

## ABSTRACT

Background: Urinary incontinence (UI) is defined as any uncontrolled leakage of urine. Involuntary leakage of urine in cases of increased intra abdominal pressure without bladder contraction such as coughing, sneezing and laughing is called stress urinary incontinence (SUI). Involuntary leakage of urine with a sudden sense of micturition is define as urgency UI. When both types occur together, one usually more dominant, then this type is called mixed incontinence. Mixed incontinence is more at risk in women who go through pregnancy and childbirth because of changes in wheight gain Following diastasis recti. Diastasis rectus abdominus of muscle (DRAMs) is an acquired condition in which the rectus muscle are separated by an abnormally long distance, but without fascial defects. The condition is characterized by a prominent midline as as result of increased intraabdominal pressure related to stress urinary incontinence. The problem result in failure to obtain a quality of life that contributes to social problems to economic burdens. 2018 global data, stress urinary incontinence is the most common subtype was 45,9% followed by urgency urinary incontinence 31,1% and mixed urinary incontinence 18,1%. In 2020 it was reported that the problem of urinary incontinence after childbirth is estimated to increased from 14%-45% with the consequence of an epidural, episiotomy, caesarean section, and spontaneous labor. In 2022 a review of population based studies revealed that the prevalence of 25%-45%. The needs attention to reduce this number with proper management of urinary incontinence problems and diastasis rectus abdomnius of muscle (DRAMs) which is carried out with proper prevention and management.

Purpose: Reviewing the literature on application of evidence based intervention in incontinence care to clinical practice and the important role of ET nurse in improving nursing care and quality of life in women with urinary incontinence.

Method: Literature review and clinical trial

Conclusion: The problem of urinary incontinence type mix and diastasis rectus abdominus of muscle (DRAMs) is done with proper management, including risk assessment and exercise. Surgery to treat urinary incontinence is effective but underreported due to economic reasons and acceptance of urinary incontinence as normal. Movement pilates, and pelvic floor muscle trainer (PFMT) have been shown to have an affect on urinary incontinence. Elderly women are only advise do yoga and pilates. The three exercise are good for increasing pelvic floor muscle strength but do not have much impact on the problem of urine leakage. Diastasis rectus

abdominus of muscle (DRAMs) problems are advised to do abdominal training, pelvic floor muscle training, or a combination of both in at least one trial arm. Effort to prevent urinary incontinence and diastasis rectus abdominus of muscle (DRAMs) are important by maintaining BMI, pelvis floor muscle strength, maintaining a healthy diet, good bowel patterns, also using support surface therapy during pregnancy and after childbirth, for example using aich is done by Indonesian women. It is still advised to discuss the problem of urinary incontinence with ET nurse in maintaining a good quality of life.

**Keywords:** Management Urinary incontinence, Diastasis recti, quality of life



## THE NPWT AND PARCEL DRESSING APPLICATION ON ABDOMINAL WOUND WITH FISTULA

Ns. Kana Fajar, S.Kep, WOC(ET)N<sup>1</sup>, Ns. Muhammad Fadli., S.Kep., CWCCA., CST<sup>2</sup>, Khairul Bahri,  
SKep., WOC(ET)N<sup>2</sup>, Hardeza Anggara, Amd.Kep., CWCCA  
<sup>2</sup>, Tommi abbas<sup>3</sup>

<sup>1</sup>Coordinator Wocare Center bogor , <sup>2</sup>Cocoordinator Wocare Berjalan Bogor, Indonesia.

<sup>2</sup>Manager Wocare Center Bogor, Indonesia. <sup>2</sup> Wocare Berjalan Bogor, Indonesia. <sup>3</sup> Wocare Berjalan Bogor, Indonesia.

### ABSTRACT

**Background:** The management of entrocotaneuse fistula (ECF) in open abdomen (OA) therapy is challenging and associated with a high mortality rate. The introduction of negative pressure wound therapy (NPWT) in open abdomen management significantly improved the healing process and increased spontaneous fistula closure and effective in improving garnulasi, removing exudate, reduce bacterial, and accelerate the wound healing process.

**Methods:** This research uses a case study Mr N with entrocotaneouse fistula and abdominal open in homecare setting. The treatment Use of negatife pressure wound therapy and parcel dressing was conducted for healing of treatment with the use in patients with a history of compartemen sindrom abdomen open wound, blood sugar > 150 mq / dl, the amount of exudate > 200 cc / 24 hours, exudate purulent, strong odor, stadium IV.

**Results:** Results in getting granulation processes can be increased, wound odorless, reduced exudate and infection decreases and 2.5-3 months term care for the wound shut.

**Conclusion:** management NPWT and parcel dressing for fistula with abdominal open effective in improving garnulasi, removing exudate, reduce bacterial, and accelerate the wound healing process.

**Keywords:** ECF, NPWT, wound bag drainase and wound healing

## DISASTER DRESSING WOUND PACKAGE : WOUND KIT

Ns. Kana Fajar, S.Kep, WOC(ET)N

### ABSTRACT

Disaster situations are not easy to understand and manage but the objective to help the injured as early as possible must be paramount. The management of wounds during a disaster presents a significant challenge, especially if number of victims is large, i.e. earthquake in Aceh, Lombok and Palu. The most critical steps are to clean, debride and dress the wound, then review the wound at least every 48 hours to prevent or manage infections that can pose a risk to the life and limbs of the injured person. Close partnership working between different healthcare professionals and institutions are essential. We believe that the provision of effective, safe and evidence-based wound care dressing has to be a priority and that all clinicians need to understand that early and prompt treatment of patients with wounds can lead to a reduction in infections, morbidity and mortality. Our team has prepared a strategic plan and a number of tools on how to respond in an emergency.

**Keywords:** Disaster; wound dressing; priority

## INCONTINENCE AND THE INDIVIDUAL WHO IS OBESE

**Khairul Bahri, SKep., WOC(ET)N**

Wocare Center, Bogor Indonesia

### ABSTRACT

**Background:** More than 90% of women who are morbidly obese experience some degree of pelvic floor disorder, and 50% of women indicated that symptoms were so severe that they interfered with activities of daily living (ADL) and quality of life. Obesity and overweight are directly associated with urinary incontinence (UI).

**Aim :** The aim of this study was to determine incontinence and an individual who is obese.

**Methods:** This study was done by literature review, though systematic researches on two database namely SCOPUS, PubMed and textbooks. There were five textbooks and seven international journals related to incontinence and Obesity.

**Result:** Each 1 kg/m<sup>2</sup> unit increase in BMI increased the likelihood of frequent urinary incontinence. Management in Incontinence and obesity are diet programs, maintaining skin health, body worn absorbent products, exercise, toilet techniques, fluid and nutrition, turning and repositioning and surgical treatment. The preponderance of clinical evidence suggests a relationship between weight and incontinence irrespective of age, gender, and several comorbid

**Conclusion:** Incontinence concerns individuals with ABCD have receive attention in much on the health care community. Professionals are fully aware of the challenges associated with access, assessment, intervention and follow-up to the individual who is obese.

**Keywords:** Urinary incontinence, Obesity, Urinary Incontinence Management, Obesity Management

# MANAJEMEN PERAWATAN LUKA BAKAR BERDASARKAN ; EVIDENCE BASED PRACTICE, INVESTIGATION, GUIDELINES AND PRACTICE

**Ns.Fatchulloh, S.Kep.,M.Kes.,WOC(ET)N**

Owner Fatchull Wound Care Center Dangi Godong Grobogan Jawa Tengah

Email : [purwodadigrobogan91@gmail.com](mailto:purwodadigrobogan91@gmail.com)

## ABSTRACT

Latar Belakang : Luka bakar dapat diakibatkan oleh trauma terkena api, air panas atau kimia. Namun sebagian besar diakibatkan karena penanganan yang salah terhadap luka bakar, kecerobohan dan kelalaian manusia. 70% dari 10 orang menggunakan penanganan yang salah pada luka bakar, seperti memberikan pasta gigi atau minyak..

Luka bakar merupakan kerusakan atau kehilangan jaringan yang disebabkan kontak dengan sumber panas seperti api, air panas, bahan kimia, listrik, maupun radiasi. Luka bakar merupakan kasus trauma yang sangat signifikan berdampak pada fisik maupun psikologis. Luka bakar berada di peringkat keempat sebagai trauma utama yang paling umum menyebabkan kecacatan dan kematian di seluruh dunia, sekaligus peringkat ketiga penyebab kematian akibat kecelakaan pada semua kelompok umur dengan jenis kelamin laki-laki cenderung lebih sering mengalami luka bakar dibandingkan perempuan.

Tujuan : untuk mendapatkan perawatan optimum dengan wound moisture balance concept, mencegah kontraktur dan deformity serta peningkatan quality of life pasien dengan Luka Bakar, dapat mengaplikasikan konsep TIME dalam manajemen luka bakar.

Metode : True experiment yang dilakukan di Pusat perawatan Luka Fatchull wound care center pada beberapa Pasien Luka Bakar derajat II B, III dan IV. Perlakuan yang diberikan secara langsung menggunakan perawatan dengan balutan yang menciptakan moisture balance.

Hasil : Luka bakar ( *Combustio* ) derajat IIB, III dan IV dengan luas area permukaan tubuh yang terlibat sebesar 38% - 75 % hasil investigasi / anmnesis, pemeriksaan fisik, dan pemeriksaan penunjang. Luas luka bakar ditentukan berdasarkan *rule of nine*. perawatan luka yang dilanjutkan dengan Prinsip T.I.M.E manajemen dan 3 M yaitu Mencuci Luka, Membuang jaringan mati ( *debridement* ) dan memilih topical atau dressing dengan tepat. Tatalaksana lanjutan berupa observasi pasca *debridement* berupa pemantauan klinis dan *balance* cairan.

Simpulan : Aplikasi yang di lakukan di Pusat Perawatan Luka fatchull Wound Care center terhadap pasien Luka Bakar proses Penyembuhan Luka terjadi Fast healing dan meminimalkan komplikasi terjadinya Scar, keloid.

**Keywords :** luka bakar, *combustio* , TIME management, *Dressing Primer dan Skunder tepat*, *Quality Of Life Patient*

Nursing investigation involves the assessment and evaluation of a patient's health status, particularly in the context of burn injuries. This includes monitoring vital signs, assessing the extent and severity of the burn injury, assessing for any associated injuries or conditions, evaluating the effectiveness of treatments, and providing ongoing support and education to the patient and their family. Nurses play a crucial role in burn management, working collaboratively with other healthcare professionals to ensure optimal care for patients with burn injuries. They are responsible for ensuring that the patient's physical, emotional, and psychological needs are met, and that they receive appropriate care throughout their recovery.

## THE URGENCY OF DEVELOPING CURICULLUM IN WOUND CARE FOR NURSES

Hana Rizmadewi Agustina, BSN, MN, PhD

### ABSTRACT

In a vast country like Indonesia, multidisciplinary teams could play an important role to address the existing disparities of health professional across the archipelago and the need to improve services quality and patients satisfaction. During this pandemic COVID-19, the pressure of vulnerable disease adding with non communicable disease need for the better health outcomes and quality of healthcare system including for wound clinicians for those working in primary care – private practice. The collaboration are always challenges in many ways that showing better leadership leads for better patient care especially in wound and stoma management. This is particularly common for elderly with non-communicable disease such as Diabetes Mellitus (DM) with Diabetic Foot Ulcer (DFU) rejected from hospital during this pandemic. Hospital focusing to tread COVID-19 and used protocol of risk prevention for elderly do not recommend allowed visiting hospital to anticipate. To achieve the new era situation in healthcare services, the real of clinical leadership in public health need vision, courage and purpose to implement their quality of services without patients neglected by developing curicullum in wound care nurses.

**Keywords:** role; non communicable desease; curicullum

## TRUE STORY FROM WONDERFULL INDONESIA : LOMBOK ISLAND

Taufik Isnanto, S.Kep.,Ners.,WOC(ET)N

### ABSTRACT

Wound care is an important aspect of healthcare, especially in areas where access to medical care may be limited. In Lombok Island, which is part of Indonesia, wound care may be particularly important due to the high prevalence of injuries related to farming, fishing, and other outdoor activities. Effective wound care can help prevent infections, promote healing, and improve overall health outcomes for individuals who may not have access to advanced medical care.



## CAMPUS-BASED WOUND CARE UNIT: LESSON LEARNT FROM WOUND CARE PRACTICE IN HEALTHCARE PROFESSIONAL EDUCATION

**Ns. Niken Safitri Dyan Kusumaningrum, M.Si.Med**

*Department of Nursing, Faculty of Medicine, Universitas Diponegoro, Jl. Prof. Mr. Sunario Kampus  
Universitas Diponegoro, Tembalang, Semarang, Indonesia 50275*

e-mail: [niken.safitridk@fk.undip.ac.id](mailto:niken.safitridk@fk.undip.ac.id)

### ABSTRACT

Wound care practice involves nurse as the first caregiver who assess changes in patient's skin and initiate the treatment to support wound healing. Its essential application combines theoretical framework and practical application that focuses on the foundation knowledge of wound types and wound healing, holistic wound assessment, and develop the appropriate management planning to optimize healing. Although wound care is delivered by a multidisciplinary team, it is predominantly led by nurse. Therefore, it is required important attention in facilitating systematic and strategic consideration to support the availability of facilities for teaching and learning process in healthcare professional education. Campus-Based Wound Care Unit is the implementation of wound care practice in educational setting which is focusing on the service of Higher Education Tri Dharma including learning and education, researches, and community services. Consequently, users of this unit vary, could be students, academic community, and public community. This article reports the application of integrated wound care practice at the campus-based wound care unit. The main activity of this program is wound care service for acute and chronic wounds in which the patient can be treated on clinic or home visit by responsible nurse. Several teaching and learning activities for nursing student have been carried out, either profession or academic students, such as in the subject of Diabetes Nurse Educator and Entrepreneurship. Moreover, in order to support research activities, researchers also possible to conduct a pilot study. Based on the analysis of program implementation, it is revealed that the communication between central decision maker and person in charge in this program need to be approved initially. Material and financial support also need to be considerate to guarantee the quality of service. Furthermore, selected person who manage and lead the program should evaluated the targets based on the purpose and goals that have been determined. In term of considering all these aspects, this unit give an access to establish standardized wound care practice that also support the training facilitation for professional practice. In conclusion, it was clearly reported that campus-based wound care unit is useful and effective to support wound care practice in healthcare professional education.

**Keywords:** education setting, healthcare education, wound care practice, wound care unit

## TECHNOLOGY WOUND DRESSING TO PREVENT MASD (MOISTURE ASSOCIATE SKIN DAMAGE)

Ns. Agung Ginanjar, S.Kep., WOC(ET)N

### ABSTRACT

Moisture-Associated Skin Damage (MASD) is a common problem in wound care, where prolonged exposure to moisture can cause skin irritation, maceration, and breakdown. To prevent MASD, several technology wound dressings are available that can help manage moisture and protect the skin. Here are some examples:

1. Hydrocolloid dressings: These are a type of dressing that forms a gel-like layer when in contact with moisture. Hydrocolloid dressings can help absorb excess moisture from the wound bed while creating a barrier to protect the surrounding skin.
2. Foam dressings: These dressings have a multi-layered construction that can absorb and wick away excess moisture. Foam dressings can be used for wounds with moderate to heavy exudate.
3. Silicone dressings: These are a type of wound dressing that can help manage moisture by creating a waterproof barrier between the wound and the surrounding skin. Silicone dressings can also help reduce pain and irritation by reducing friction on the wound bed.
4. Alginate dressings: These dressings are made from natural fibers derived from seaweed and can absorb large amounts of exudate. Alginate dressings can help keep the wound bed moist and promote healing while preventing MASD.
5. Antimicrobial dressings: These are a type of dressing that incorporates an antimicrobial agent to help prevent infection and manage moisture. Antimicrobial dressings can be particularly useful for wounds that are at high risk for infection, such as burns or surgical wounds.

Overall, technology wound dressings can play an important role in preventing MASD by managing moisture, protecting the skin, and promoting healing in the wound bed.

Keywords: MASD; Dressing; Moisture

## THE IMPLEMENTATION OF THE NATIONAL HEALTH SOCIAL INSURANCE PROGRAMME (JKN)

**DR. H. Edy Wuryanto., S.Kp.,M.Kep**

Member of Komisi IX DPR RI, Fraksi PDI Perjuangan

### ABSTRACT

Wound management in the ASEAN region is rapidly growing due to the many patients who develop wounds mainly due to the epidemic of Diabetes. These require health professionals dealing with wounds to be up-to-date with the knowledge and skills to provide quality wound management. In addition, they need to be innovative to rise to the challenges ahead of them. It shows that the multidisciplinary work that not only consists of health professionals but the government, the public, social workers, and the industry are working together to survive one of the most unimaginable health crises in the 20th century.

The National Health Social Insurance Programme in Indonesia is called "Jaminan Kesehatan Nasional" (JKN), which was launched in 2014. JKN aims to provide access to health care services to all Indonesian citizens and legal residents, regardless of their socio-economic status. The program is implemented by the Social Security Administering Body for Health (Badan Penyelenggara Jaminan Sosial Kesehatan, or BPJS Kesehatan) and is funded through contributions from the government, employers, and individuals.

Here are some key features of JKN:

1. Coverage: JKN covers a range of health care services, including primary care, hospital care, and specialized care. The program also covers some prescription drugs, medical devices, and laboratory tests.
2. Cost-sharing: JKN involves cost-sharing between the government, employers, and individuals. The government and employers contribute a set amount per person per month, while individuals are required to pay a small monthly premium based on their income.
3. Provider network: JKN has a network of health care providers, including public and private hospitals, clinics, and health centers. Patients can choose their preferred provider, but may have to pay additional costs if they choose a provider outside the JKN network.
4. Health promotion: JKN also includes health promotion and disease prevention programs, such as immunization and maternal and child health services.
5. Enrollment: All Indonesian citizens and legal residents are required to enroll in JKN. Those who cannot afford to pay the premium can apply for government subsidies.

Overall, JKN aims to improve access to health care services and promote universal health coverage in Indonesia. While there have been some challenges in implementing the program, such as funding constraints and provider shortages in some areas, JKN has made significant progress in expanding access to health care services to millions of Indonesians.

## NEGATIVE PRESSURE WOUND THERAPY

Ns. Ludi Maulana SKp., WOC(ET)N

### ABSTRACT

Negative Pressure Wound Therapy (NPWT) is a medical treatment that involves the application of sub-atmospheric pressure (negative pressure) to a wound to promote healing. The therapy involves placing a special dressing over the wound and connecting it to a vacuum pump that creates negative pressure within the wound area.

While NPWT can be effective in promoting wound healing, there are also some potential drawbacks and risks associated with the therapy.

Overall, while NPWT can be an effective treatment option for some patients with certain types of wounds, it is important to carefully consider the potential risks and drawbacks before pursuing the therapy. Patients should work closely with their healthcare providers to determine if NPWT is the best course of treatment for their specific wound and medical situation.

**Keywords:** NPWT; promoting healing

## WOUND CARE FROM THE PRESPECTIVE OF INDONESIA PHYSICIAN

dr. Rohmatullah MMR, MBA

### ABSTRACT

Wound care from the perspective of Indonesian physicians involves a multidisciplinary approach that focuses on providing appropriate and effective care for patients with various types of wounds. Here are some key aspects of wound care in Indonesia:

1. **Education and training:** Physicians in Indonesia typically receive training in wound care as part of their medical education. Continuing education and training programs are also available to help physicians stay up-to-date on the latest wound care techniques and technologies.
2. **Assessment and diagnosis:** Physicians in Indonesia typically begin wound care by assessing and diagnosing the wound. This may involve a physical examination, review of medical history, and diagnostic tests as needed.
3. **Treatment:** Treatment for wounds in Indonesia may involve a variety of approaches, including debridement (removal of dead or damaged tissue), use of topical or systemic antibiotics, wound dressings, and other advanced wound care technologies.
4. **Multidisciplinary care:** In many cases, wound care in Indonesia involves a multidisciplinary team of healthcare professionals, including physicians, nurses, wound care specialists, and other healthcare providers. This team-based approach can help ensure that patients receive comprehensive and coordinated care.
5. **Prevention:** In addition to providing treatment for existing wounds, physicians in Indonesia also focus on preventing wounds from occurring in the first place. This may involve patient education on wound prevention, as well as measures to reduce risk factors such as poor nutrition, poor hygiene, and poor circulation.

Overall, wound care in Indonesia emphasizes a patient-centered, multidisciplinary approach that focuses on providing effective and appropriate care for patients with various types of wounds.

**Keywords:** Education; treatment and Multidicipline

## THE HOPE FOR CHRONIC WOUND IN INDONESIA

Irena Sakura Rini, MD, PhD. Plastic Surgeon

### ABSTRACT

The hope for chronic wound in Indonesia lies in the development and implementation of effective wound care strategies and technologies, as well as increased awareness and education about wound prevention and management. Here are some key factors that offer hope for the future of chronic wound care in Indonesia:

1. **Advanced wound care technologies:** There has been significant progress in the development and implementation of advanced wound care technologies in Indonesia, such as negative pressure wound therapy, hyperbaric oxygen therapy, and various types of wound dressings. These technologies offer new options for treating chronic wounds and can improve healing outcomes.
2. **Wound care training and education:** There is a growing recognition of the importance of wound care training and education in Indonesia, and efforts are being made to provide more opportunities for healthcare providers to learn about wound care techniques and technologies. This can help ensure that patients receive the best possible care for their wounds.
3. **Multidisciplinary care:** The use of multidisciplinary care teams that include physicians, nurses, wound care specialists, and other healthcare providers is becoming more common in Indonesia. This team-based approach can help ensure that patients receive coordinated and comprehensive care.
4. **Public awareness and prevention:** There is a growing awareness of the importance of wound prevention and management among the general public in Indonesia. This includes education about wound prevention strategies, such as maintaining good hygiene and nutrition, as well as early intervention and treatment for wounds to prevent them from becoming chronic.

Overall, while chronic wounds remain a significant challenge in Indonesia, there is reason for hope as new technologies, education and training programs, and public awareness efforts continue to advance the field of wound care.

**Keywords:** technology; education; multidicipline team

## PRINCIPLE OF NPWT

Irena Sakura Rini, MD, PhD. Plastic Surgeon

### ABSTRACT

Negative Pressure Wound Therapy (NPWT) also known as a vacuum assisted closure (VAC) is therapeutic technique using a suction pump, tubing and dressing to remove excess exudate and promote healing in acute and chronic wounds and second and third degree of burns. NPWT is generally considered safe and effective for a diverse range of wounds.

**Keywords:** NPWT; safe; cost effective

## FUTURE OF WOUND CARE IN MALAYSIA

**Prof. Harikrishna K.R. Nair DMIJ S.I.S KMN**

Head and Consultant, Wound Care Unit, Department of Medicine, Kuala Lumpur Hospital

### ABSTRACT

Wound care in Malaysia is an essential part of the healthcare system and is constantly evolving to meet the needs of the population. The increasing prevalence of chronic diseases, such as diabetes and obesity, has led to an increase in chronic wounds, which require specialized care. Moreover, the aging population in Malaysia is also expected to contribute to the increasing demand for wound care services in the coming years.

Currently, traditional wound care products such as dressings and bandages dominate the wound care market in Malaysia. However, there is a growing demand for advanced wound care products, which are more effective in treating chronic wounds. Advanced wound care products, such as antimicrobial dressings and negative pressure wound therapy, are becoming more widely available and are expected to gain popularity in the coming years.

In addition to products, technology is also playing an increasingly important role in wound care in Malaysia. Telemedicine and mobile health solutions are being used to improve patient outcomes and reduce the need for hospital visits. For example, remote wound monitoring devices and mobile apps are being developed to allow patients to track their wound healing progress and communicate with healthcare providers.

Overall, the future of wound care in Malaysia looks promising; with a growing focus on advanced wound care products and technology. As the demand for wound care services continues to increase, it is likely that we will see further advancements in this field to meet the needs of patients and healthcare providers.

**Keywords:** healthcare; technology



## UNITING WOUND MANAGEMENT IN SOUTH EAST ASIAN AND THE WORLD

**Prof. Harikrishna K.R. Nair DMIJ S.I.S KMN**

Head and Consultant, Wound Care Unit, Department of Medicine, Kuala Lumpur Hospital

### ABSTRACT

Uniting Southeast Asia and the world in wound care can bring several benefits, including sharing of Knowledge and Expertise: By uniting with the rest of the world, Southeast Asia can share its knowledge and expertise in wound care, particularly in traditional and herbal remedies, which have been used for generations. At the same time, Southeast Asia can learn from the latest research and advancements in wound care from other parts of the world, leading to better patient outcomes and more effective treatments.

Access to Advanced Wound Care Products: Advanced wound care products, such as negative pressure wound therapy and bioactive dressings, are often expensive and not widely available in Southeast Asia. By uniting with the rest of the world, Southeast Asia can gain access to these products, improving the quality of wound care and ultimately saving lives.

Collaboration on Wound Care Research: Uniting Southeast Asia and the world in wound care can facilitate collaboration and joint research efforts, leading to better understanding of wound care best practices and more effective treatments. This can also lead to the development of new wound care products and technologies that can benefit patients worldwide.

Improved Health Outcomes: Wounds, particularly chronic wounds, can be a significant burden on patients and healthcare systems. By uniting Southeast Asia and the world in wound care, there can be greater collaboration on prevention, early detection, and treatment of wounds, leading to improved health outcomes and reduced healthcare costs.

Overall, uniting Southeast Asia and the world in wound care can bring numerous benefits, including sharing knowledge and expertise, access to advanced wound care products, collaboration on wound care research, and improved health outcomes. This can lead to a brighter future for wound care patients in Southeast Asia and around the world.

**Keywords:** uniting; expertise; research in advance

## LEADERSHIP IN WOUNDCARE

**Mariam Mohd Nasir, A.M.N**

Founder, Owner, CEO & Nurse Consultant, M&T Network Consultancy Services Sdn. Bhd.

### ABSTRACT

Leadership is a process to influence others to achieve their optimum effort towards the agreed goals. Leadership emphasize the relationship between leader and follower, which therefore leadership is not a position and everyone can become a leader. Particularly in wound care provision, empowerment and recognition by leader might brought wound care team to achieve success in leading wound care provision in clinic or hospital. Wound care nurse must be lead by someone who has vision, ensure empowerment of nurses, enable the nurse to have ability and credibility to achieve quality wound care and patient's safety. Furthermore, as a leader, being role model that communicate vision not only by words but also through embodiment. In wound care, leader must also encourage research and development as wound care is always evolving throughout the years. The Wound care Leader/Coordinator manage the Wound Care and assist the nurses to elevate the level of care for wounds by making that their sole focus and also bring the patient to an optimum state to facilitate healing. In conclusion, leader in wound care must become someone that manage the nurses to provides evidence-based wound care, provide environment for nurses to thrive, and enable patient to achieve healing.

## CURRENT APPROACH IN DIABETIC WOUND INFECTION

**Dr. Nizam Bin Ali Husein**

Head of Wound Care Unit Hospital Umum Sarawak

### ABSTRACT

Diabetic Foot Infection (DFI) remain the most frequent diabetic complication requiring hospitalization and the most common precipitating event leading to **lower extremity amputation**. Managing DFIs requires careful attention to **properly diagnosing the condition**, obtaining appropriate specimens for culture, thoughtfully selecting antimicrobial therapy, quickly determining when surgical interventions are required and providing any needed additional wound and overall patient care. However, local wound care management such as proper cleansing and debridement must also being carefully considered. One of the most important consideration of the DFI management carryong it out according to the degree of infection. Common classification of DFI is based on International Working Group Diabetic Federation (IWGDF) classification, which classify infection into no infection, mild infection (level 2), moderate infection (level 3), and severe infection (4). In addition for bone involvement or osteomyelitis, clinician might add “O” after the number 3 or 4. Each levels have distinguish condition from each other and might require different management. IWGDF provides the management guideline of DFI, however this guideline might required certain adoption to each clinical site. Nevertheless, it is critical for clinician to understand the classification of DFI along with the management framework accordingly.

## **DIABETIC FOOT ULCER : ASSESSMENT AND CARE**

**Dr. Nizam Bin Ali Husein**

Head of Wound Care Unit Hospital Umum Sarawak

### **ABSTRACT**

Diabetic Foot Ulcer (DFU) Assessment is critical to support decision making in delivering appropriate care. Assessment of diabetic foot ulcer involve general assessment of the patient, assessment of affected foot, and the wound. General assessment is critical to assure the systemic condition of the patient which involve patient history of disease and medication, physical assessment, laboratory test such as wound culture, and radiological test to obtain information of bone involvement or osteomyelitis. Following the general assessment diabetic foot investigation should be performed to identify the ulcer risk factor and foot issue that might exarcebate the ulcer if not well taken care of. Mainly diabetic foot assessment includes neurophaty sensory test, deformity examination, vascular assessement using Ankle-Brachial Pressure Index. In term of obtaining data for ulcer, ulcer assessment shall be conducted by assessing the wound location, size, edge, wound bed color, depth of wound, exudate, and surrounding tissue. These assessment will assist clinician to tailor care in a way that accelerate wound healing. Furthermore, the data obtained from foot assessment in particular will help clinician to provide prevention strategy once the ulcer has healed.

Prevention of diabetic foot ulcer can be done by education of daily foot inspection, moisturizing skin, offloading, appropriate shoes wearing, exercise, and regular check up with podiatrist especially with existence of callus.

## DIABETIC FOOT PREVENTION, WHY ITS IMPORTANT ?

**Gulnaz Tariq, RN, RM, PG Dip, IIWCC, MSc**

Ex Assisstant Director of Nursing in Sheikh Khalifa Medical City (SKMC) and resides in Abu Dhabi.

### ABSTRACT

We describe our project to implement the 60-second screening tool for the high-risk diabetic foot in our hospital in the UAE. By educating our frontline staff and including routine assessment of persons with diabetes, along with proper footwear, the amputation rate in our hospital has been reduced.

Introduction And Background : The United Arab Emirates (UAE) is among the top 20 countries with the highest prevalence of diabetes, and among the top five countries in the Arab region. The population of people with diabetes has continued to increase dramatically for the past three decades. Several research studies predict that in 2020, about one-third of the UAE residents will be diabetic. The constant growth of diabetes tremendously affects the health of each individual, resulting in further complications. This wide array of diabetes complications led to the establishment of this foot initiative. Sheikh Khalifa Medical City (SKMC) is a premier health care provider in the region and created a program that will help the people of the UAE be aware of and be part of the complex management of diabetes and its complications. The 60-second foot exam tool adapted and modified by the hospital, is a cost-effective, valid tool that can be used in any health care setting. A good example of a facility that also adapted the tool is Georgetown Public Hospital Corporation in George Town, Guyana .

## PROFESSIONAL PRACTICE FOR WOUND OSTOMY & CONTINENCE WORLDWIDE

**Gulnaz Tariq, RN, RM, PG Dip, IIWCC, MSc**

Ex Assistant Director of Nursing in Sheikh Khalifa Medical City (SKMC) and resides in Abu Dhabi.

### ABSTRACT

The professional practice for wound, ostomy, and continence (WOC) care is a specialized nursing practice that focuses on the care of individuals with wounds, ostomies, or continence issues. The WOC nursing specialty was first developed in the United States in the mid-20th century to address the needs of veterans with ostomies and has since expanded to encompass a range of wound and continence-related conditions. Today, the professional practice of WOC nursing is recognized worldwide and is practiced by nurses in various healthcare settings, including acute care hospitals, long-term care facilities, home health agencies, and community-based clinics.

The WOC nursing scope of practice includes assessment, diagnosis, treatment, and management of individuals with wounds, ostomies, and continence issues. WOC nurses work collaboratively with other healthcare professionals to develop individualized care plans that address the physical, emotional, and psychosocial needs of patients. To become a WOC nurse, one must complete specialized education and training beyond basic nursing education, including a WOC nursing certification program. Certification programs are available in many countries worldwide, including the United States, Canada, the United Kingdom, Australia, and Singapore.

In addition to direct patient care, WOC nurses may also engage in research, education, and advocacy to promote best practices and improve the quality of care for individuals with wounds, ostomies, and continence issues. Overall, the professional practice of WOC nursing is an important specialty that addresses the unique needs of individuals with wounds, ostomies, and continence issues. Its recognition and implementation worldwide demonstrate the importance of specialized nursing care to improve the health and well-being of patients.

**Keywords :**

## DIABETIC FOOT CARE PREVENTION

**Associate Professor Aziz Nather MD, PHD**

Senior Consultant, Division of Foot and Ankle Surgery National University Hospital, Singapore

### ABSTRACT

Diabetic Foot is best managed by a 2-Prong Strategy. Strategy 1 is Prevention of an Ulcer from developing in a Diabetic. Strategy 2 is when this fails to treat the complication by a Team Approach. Prevention is the most important strategy. Education equals 90% of Prevention. Annual Foot Screening provides the remaining 10%. We need to educate patients and caregivers (80% of our efforts) but also healthcare professionals (20%). Patients need to be educated on 3 Subjects-Care of Diabetes, Care of Foot and Need for Shoe Wear. There is a need to develop Patient Education Pamphlets in the language the patients understand. We also need to use basic textbooks on Diabetic Foot to educate the Healthcare Workers providing foot care for Diabetics. Annual Foot Screening must be performed for all Newly Diagnosed Diabetics to detect early the “Foot At Risk” to facilitate early intervention. 4 key factors for risk of ulceration are loss of protective sensation, absence of one or both pulses, presence of foot deformity or callosity and inability to reach foot or visual impairment. We should manage people at risk of ulceration following the D Foot Risk Stratification Tool--Very Low Risk, Low Risk, Moderate Risk and High Risk Categories .

To achieve Prevention we need to launch Public Awareness Programmes. This is a massive responsibility and is best run on a National Level. Activities include:-

- Educational Talks in Primary and Secondary Schools, Colleges, Polytechnics, in Universities by face to face talks coupled with Foot Screening or by Online Talks/Modules
- Educational Talks on Radio & TV
- Features in Daily Newspapers
- Advertisements in Cinemas, in Shopping Malls, in MRTs and on Buses and Taxis.

To be successful we need Government Involvement- Ministries of Health, Education, Communication

& Information, Youth etc and also the support of Volunteer Doctors, Nurses and other Healthcare Workers from Primary Healthcare Services and from all Major Hospitals.

This is a massive undertaking and can only succeed with the full support and backing of our Government .

**Keywords :**

## THE FUTURE OF WOUND CARE IN ASEAN

**Associate Professor Aziz Nather MD, PHD**

Senior Consultant, Division of Foot and Ankle Surgery National University Hospital, Singapore

### ABSTRACT

ASEAN Wound Council was formed in 2018 in Kuala Lumpur with 10 participating Countries with Dr Harikrishna R Nair as Chairman. The member countries are Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam. Since its formation the Council met in Bangkok, Thailand (2019), Nha Trang, Vietnam (2020). Covid caused a delay in the progress of ASEAN. The ASEAN WOUND SUMMIT in November 2022 in Jakarta, Indonesia is the 4<sup>th</sup> ASEAN Council Meeting.

In this grouping are **countries with much experience** on diabetic foot wounds: **Group 1-Malaysia, Philippines, Thailand, Indonesia and Singapore**. There are on the other hand member **countries with much less experience: Group 2- Brunei, Cambodia, Laos and Vietnam**.

For ASEAN to progress to provide quality service for our patients with diabetic foot wounds I would propose we follow the following strategies:

1. First Group countries should help Second Group Countries.
2. We need to run basic workshops in Group 2 Countries by annual rotation to help these countries to progress faster.
3. **ASEAN WOUND SUMMITS** should be held yearly in **Group 1 Countries** by rotation  
With Plenary Lectures, Workshops, Symposia  
**5% of proceeds** from small meetings be donated from host country to **ASEAN FUND**
4. **NATIONAL WORKSHOPS** for Nurses, Doctors be held in **Group 2 Countries** by yearly rotation.
5. Could organise the following **Symposia** in National Workshop (1& ½ day over Weekend):
  - Examination of Diabetic Foot Wound
  - Team Approach /Prevention & Annual Foot Screening
  - Dressing of Wounds /Choice of Dressings
  - Offloading/Footwear

**Practical/Demonstration Workshops** (2 Parallel Workshops,1.5 hours each)  
(Participants Rotate after 1.5 hours)

- Examination of Foot/Foot screening
- Dressing a Wound / Offloading/Shoes

#### **Participants in National Workshop:**

100 from host country eg Laos

20 from neighbouring country eg Cambodia

#### **Faculty in National Workshop:**

2 Experts from Group 1 Countries

Economy Travel plus 2 nights accommodation (from ASEAN Fund)

Or from Volunteers till ASEAN fund available

## NPWT & NPWTi FOR DIABETIC FOOT WOUNDS

**Associate Professor Aziz Nather MD, PHD**

Senior Consultant, Division of Foot and Ankle Surgery National University Hospital, Singapore

### ABSTRACT

The basic science of NPWT will be discussed. Clinical requirements for NPWT will be elaborated. Careful and complete assessment of the wound must be performed. There must be no ischaemia, no neuropathy and no deep infection. Careful selection of cases is vital to ensure a good outcome. First perform a radical debridement. Once applied must monitor the wound regularly. Further debridement may be needed.

Choose the device available with good service provided by Vendor including providing a nurse clinician and a good economic package in ward and in outpatient care. Must pay attention to all technical considerations when applying the device. The clinical evidence of NPWT is also discussed.

Our pilot study of Vac Therapy 2008 (n=11) is presented. Average of 14 dressing changes, and taking 2 to 3 weeks, average 25% wound size reduction. We recommend using Vac for wound bed preparation only. Once wound bed preparation is completed and good granulation tissue produced, stop NPWT and perform SSG. This strategy saves time and costs.

Our second pilot study with Bridge Vac Dressings in 2010 (n= 5) is also presented. This device allows offloading with platform shoes to be performed whilst NPWT is in progress. It is useful for difficult wound sites-Web Spaces in foot and for Ray Amputation Wounds.

NPWTi- an evolution of NPWT with Veraflo Therapy allows intermittent instillation of normal saline or hypochlorous acid into wounds. It is useful for wounds which after debridement still has pus present. Our preliminary study in 2014 (n = 5) is also reported. Once no more pus is seen in wound, convert NPWTi to NPWT and once wound bed preparation achieved , perform SSG for wound closure.

In conclusion NPWT & NPWTi has an important role in the management of diabetic foot wounds. With careful selection criteria and with careful application of device, good results could be produced to improve the limb salvage rate .

## 17 YEARS OF INDONESIAN ETNEP

**Carol Stott, RN, STN**

Master of Adult Education Prince of Wales Hospital, Barker Street, Randwick, Australia

### **ABSTRACT**

It all began in 2005 at a pizza café in Jakarta when Widasari Sri Gitarja led a group of Indonesian Enterostomal Therapy Nurses (ETN's) and met with Julie McCaughan and Carmen George from the Australian Association of Stomal Therapy Nurses (AASN) and the World Council of Enterostomal Therapy (WCET) to discuss how to bring an Enterostomal Therapy Nursing Program (ETNEP) to Indonesia (ETNEP). The journey undertaken by Widasari Sri Gitarja and other nurses to improve the practice of Ostomy, Wound and Continence management for the Indonesian patients has been remarkable. The first ETNEP was run in Indonesia in 2006 and was recognised in 2007 as an ETNEP by WCET. Wocare was set up by Widasari Sri Gitarja and her team as a foundation to foster growth of ET Nursing in Indonesia. Registered nurses who complete the ETNEP program and other programs run by WOCARE has not only improved the care of patients but has encouraged personal and professional growth among the nurses. This has been a remarkable achievement for Indonesian nursing

## NPWT – OVERVIEW AND CASE STUDIES

**Carol Stott, RN, STN**

Master of Adult Education Prince of Wales Hospital, Barker Street, Randwick, Australia

### ABSTRACT

Negative Pressure Wound Therapy (NPWT) is a non-invasive wound therapy that uses controlled localised negative pressure to promote healing in acute and chronic wounds. Some systems are disposable and others are not. An overview of some of the many systems on the market will be given

It is used for :

- Fluid Control
- Vascular impact
- Granulation tissue formation
- Mechanical stretch/splinting
- Decreasing the bacterial load in wounds
- Wound irrigation
- Wound debridement

Case examples will be used to illustrate the clinical advantages, indications, contraindications, precautions and benefits of NPWT

## THE FUTURE OF WOUND CARE IN ASEAN, MYANMAR EXPERIENCE

**Professor Myint Thaung**

President of Myanmar Wound Care Society

### ABSTRACT

Future Wound Care needs four perspectives in strategic mission. First and the most important aspect is professional commitment for wound care development. Second perspective is education and training for care providers in every clinical setting as well as public particularly family members and volunteers. The third aspect is care support facilities in wound products industries. The last and fourth perspective is providing care delivery system with accessibility and availability for patient requirements. For successful and faster achievement of development strategy strongly demands both external and internal collaboration, integration as well as cross professional cooperation. The role of ASEAN wound care society in the region will be the role model and leading society for member countries to work together and support each other. According to consensus agreement on ASEAN wound council statement, each country will have responsibility for self-development, actively participate in inter country collaboration and integration in wound care speciality, education and training, wound care products facilities and scientific collaborative research especially attention for low income member countries.

Myanmar as one of the member country is currently having challenges in professional development with many limitations in strategic processing. But there is opportunities for cross society and cross professional collaboration with individual commitment. The future will be in our hand. The ASEAN Wound Care Society will be the bundle of fruitful member countries.



## THE FUTURE OF WOUND CARE IN THAILAND

**Clinical Professor Apirag Chuangsuwanich, MD**

*Division of Plastic Surgery, Department of Surgery*

*Faculty of Medicine Siriraj Hospital, Mahidol University, Bangkok, Thailand*

### ABSTRACT

At any given time, there are a large number of patients suffering from chronic non-healing wounds in Thailand. There are many different types of wounds including diabetic and pressure ulcers, radiation wounds, traumatic wounds, and ulcers caused by vascular problems. Estimates in 2015 indicate that 7% of the adult Thai population has diabetes. This is equivalent to 4 million people living with diabetes. The future of wound care in our country should focus on the cost-effectiveness to basic wound management and the advanced wound modalities which we believe to have the potential to remarkably decrease the overall costs of wound treatment. We will make a set of national databases of wound care for design an AI to give a better way of wound care in Thailand.

## VENOUS LEG ULCER

**Dr. Luinio S. Tongson, FPCS, CWSP**

General and Laparoscopic Surgeon, Director, Dr Jame G Dy Wound Healing & Diabetic Foot Center, Chinese General Hospital & Medical Center, Manila, Phillipines

### ABSTRACT

Venous leg ulcers are open sores that develop on the lower leg due to poor circulation in the veins, which causes fluid to leak into the surrounding tissues. They are typically characterized by red, swollen, and painful skin around the ulcer, which may ooze or weep fluid. Here are some steps to manage venous leg ulcers: (1). **Assessment:** It is important to seek medical attention from a healthcare provider who can properly assess the ulcer and underlying condition. A thorough assessment includes a medical history, physical examination, and testing to determine the cause and severity of the ulcer. (2). **Compression Therapy:** Compression therapy is a cornerstone of venous leg ulcer management. It involves using compression bandages or stockings to help improve circulation in the legs and reduce swelling. The pressure from the compression helps push fluid back into the veins and prevents it from leaking into the surrounding tissues. (3). **Wound Care:** Proper wound care is crucial for the healing of venous leg ulcers. This involves cleaning the wound with sterile saline solution, applying appropriate dressings to promote healing, and changing dressings regularly to prevent infection. (4). **Medications:** In some cases, medications may be prescribed to treat underlying conditions contributing to the ulcer, such as antibiotics for infection or diuretics for fluid retention. (5). **Lifestyle Changes:** Certain lifestyle changes can help improve circulation and reduce the risk of developing or worsening venous leg ulcers. These include regular exercise, weight management, and avoiding long periods of standing or sitting. (6). **Follow-up:** It is important to follow up with a healthcare provider regularly to monitor the healing of the ulcer and adjust the treatment plan as needed. In summary, venous leg ulcers can be managed through a combination of compression therapy, wound care, medications, lifestyle changes, and regular follow-up with a healthcare provider. With proper management, venous leg ulcers can heal and improve quality of life for individuals affected by this condition.

## WOUND CARE IN THE PHILIPPINES PWCS

**Dr. Luinio S. Tongson, FPCS, CWSP**

General and Laparoscopic Surgeon, Director, Dr Jame G Dy Wound Healing & Diabetic Foot Center, Chinese General Hospital & Medical Center, Manila, Philippines

### ABSTRACT

Wound care in the Philippines is an important aspect of healthcare, particularly for patients with wounds that are chronic, complex, or non-healing. Patients with wounds may have underlying conditions such as diabetes, hypertension, or obesity that can affect wound healing and require specialized care from healthcare professionals. In the Philippines, healthcare providers who specialize in wound care are referred to as wound care specialists or PWCS (Professional Wound Care Specialists). These professionals have advanced training in the assessment, diagnosis, and management of wounds, including the use of advanced wound care products and techniques.

Wound care in the Philippines is provided in various healthcare settings, including hospitals, clinics, and home health care services. Patients with wounds receive individualized care plans that address their specific wound type and underlying condition. The goal of wound care is to promote wound healing, prevent infection, and minimize pain and discomfort for patients. Wound care in the Philippines may include a range of interventions such as debridement, wound dressings, compression therapy; negative pressure wound therapy, and the use of topical medications and advanced wound care products. In addition, wound care specialists work closely with other healthcare professionals to address any underlying conditions that may be affecting wound healing.

Wound care in the Philippines is an important aspect of healthcare, particularly for patients with chronic or non-healing wounds. The PWCS are a vital part of the healthcare team, providing specialized wound care services to patients and promoting better health outcomes.

## EARLY RECOGNITION AND MANAGEMENT OF PEESURE INJURIES IN A NURSING PERSPECTIVE

**Rhyan A. Hitalia, R.N.**

Clinic Nurse Director Stoma & Complex Wound Center Business Operations Manager  
Endocrine, Diabetes, & Thyroid Center

### ABSTRACT

Pressure injuries, also known as pressure ulcers or bedsores, are a significant concern in the nursing field. They occur when pressure is applied to a specific area of the skin, causing damage to the underlying tissue. Here are some steps to recognize and manage pressure injuries from a nursing perspective: (1). Early recognition: Nurses should be vigilant in monitoring patients for signs of pressure injuries, such as redness or discoloration of the skin, blisters, or open wounds. Regular skin assessments should be conducted to identify any areas of skin breakdown. (2). Prevention: Prevention is the key to managing pressure injuries. Nurses should ensure that patients are repositioned regularly, especially those who are immobile or have limited mobility. Pressure-relieving devices, such as cushions and mattresses, can also be used to reduce the risk of pressure injuries. (3). Treatment: If a pressure injury is identified, it should be promptly treated to prevent further damage. The wound should be cleaned using sterile saline or wound cleanser, and a dressing should be applied to protect the area and promote healing. Patients may also benefit from the use of topical wound care products, such as antimicrobial dressings and growth factors. (4). Education: Nurses should educate patients and their families on the importance of preventing pressure injuries and how to recognize the early signs of skin breakdown. Patients should be encouraged to speak up if they experience discomfort or notice any changes in their skin. (5). Collaboration: Collaboration with other healthcare professionals, such as wound care specialists, is essential in managing pressure injuries. Nurses should work closely with these specialists to ensure that patients receive the best possible care. In summary, the early recognition and management of pressure injuries require a comprehensive approach that includes prevention, treatment, education, and collaboration. Nurses play a critical role in preventing and managing pressure injuries, and it is essential to prioritize this aspect of care to ensure positive patient outcomes.

**Keywords:** Pressure injury; Education; Collaboration

**WOUND CARE OF DM IN LAO PDR  
( SETHATHIRATH HOSPITAL FROM 2019-2022 )**

**Assoc. Prof. Bouathep Phoumindr, MD, PhD**

Chairperson of Rehabilitation Medicine Department and Lecturer at University of Health Sciences, Laos

**ABSTRACT**

Sethathirath Hospital is ¼ of central hospital in Vientiane capital for teaching medical students. This hospital created an endocrine department for DM patients with 30 beds served by 19 staffs. DM team included endocrine doctor, surgeon, cardiologist, nurse who practiced from 2019.

Number of patients was 1547 / year, OPD patients who circulated from January -July /2022 totaled 42,000 times, IPD 25,000 times, follow-up wounds 175 times. The most common complications are: nervous system, kidneys, heart, blood and eyes.

The DM team schedule / week:

1. Check and follow up IPD patients
2. Wound cleaning 2 times / day from Monday-Sunday
3. Check OPD patients every Wednesday and Friday
4. Nutritional Education for OPD patients on Wednesday morning and Friday, Thursday for IPD patients is health education, specifically knowledge of foot care and teach how to inject insulin
5. Teaching: Internal Medicine, resident year 2, MD student year 4,5 6 and nurses

Taking care of DM ulcer starts with wound evaluation, culture, cleaning.

The problems:

No specifically training in the care, prevention and rehabilitation of wound ulcer in DM patients

Future Planning:

1. Create a specific team for wound care and rehabilitation
2. Foot surgery and approach for thrombus upgrading

## DIABETIC FOOT ULCER AND REHABILITATING BELLOW KNEE AMPUTATION

**Assoc. Prof. Bouathep Phoumindr, MD, PhD**

Chairperson of Rehabilitation Medicine Department and Lecturer at University of Health Sciences, Laos

### ABSTRACT

Diabetic foot ulcers and below-knee amputations are common complications of diabetes that can have a significant impact on a person's quality of life. Here are some steps to manage these conditions: (1). Prevention: Prevention is the best approach to managing diabetic foot ulcers and below-knee amputations. This includes monitoring blood glucose levels, managing foot hygiene, and wearing appropriate footwear. (2). Early detection and treatment: Early detection and treatment of diabetic foot ulcers are crucial to prevent the development of serious complications such as infection or amputation. Treatment may include debridement, wound dressings, antibiotics, and offloading to reduce pressure on the affected area. (3). Rehabilitation: After a below-knee amputation, rehabilitation is essential to help the patient adapt to their new circumstances and maximize their function and mobility. This may include physical therapy, occupational therapy, and prosthetic fitting. (4). Ongoing care: Ongoing care is essential to prevent the development of further complications and maintain optimal health. This includes regular monitoring of blood glucose levels, foot care, and follow-up appointments with healthcare providers. (5). Lifestyle changes: Certain lifestyle changes may help manage diabetic foot ulcers and below-knee amputations. These include regular exercise, maintaining a healthy weight, and avoiding smoking. (6). Support: Support from family, friends, and healthcare professionals is essential for patients with diabetic foot ulcers and below-knee amputations. Support groups and counseling may also be beneficial for individuals who are struggling to cope with the emotional and physical challenges associated with these conditions. In summary, managing diabetic foot ulcers and below-knee amputations requires a multifaceted approach that includes prevention, early detection and treatment, rehabilitation, ongoing care, lifestyle changes, and support. With proper management, individuals with these conditions can lead healthy and fulfilling lives.



## FOOT RISK ASSESSMENT, PURPOSES AND MANAGEMENT EDUCATION (FRAME)

**Abdul Manan Bin Othman**

Assistant Medical Officer, Klinik Kesihatan Bandar Mas, Pejabat Kesihatan Daerah Kota Tinggi,  
Johor, MALAYSIA

### ABSTRACT

Diabetic foot can be defined as infection, ulceration or destruction of tissues of the foot associated with neuropathy and/or peripheral arterial disease of people with diabetes mellitus (DM) (IWGDF, 2016). Almost 80% of non-traumatic lower limb amputations in diabetic patients are preceded by a foot ulcer. Around 50% of people with diabetes die within five years of developing a foot ulcer, and up to 70% die within five years after an amputation (NICE, 2015). The situation also accounts for substantial health care resources. Thus, it is a major burden to the patient, carers and the healthcare system.

The high prevalence of diabetes in adults increases the risk of foot problems, mainly due to neuropathy and/or peripheral arterial disease (NICE, 2015) up to 50% of patients with diabetes are asymptomatic of diabetic peripheral neuropathy (ADA, 2017) and about one million amputations are performed on diabetic patients each year worldwide. IWGDF 2016 also mentioned that diabetic foot requires careful attention and coordinated management, preferably by a multidisciplinary foot care team.

Optimal management of diabetic foot can reduce the incidence of infection related morbidities, the need and duration for hospitalisation, and the incidence of major limb amputation. Lipsky BA et al., 2004 highlight the intensive efforts by all healthcare providers is required and guidelines are needed to ensure standardisation in diabetic foot care. All patients with DM should be assessed for diabetes foot at risk. They should be screened, diagnosed, classified and stratified to ensure optimal management.

## INDIAN AYURVEDA IN WOUND CARE: A HOLISTIC APPROACH

**Vijay Kumar, R.N. & R.M. , ET, CCPM, CWCCA, PGDMM**

Wound and Ostomy Care Unit,  
All India Institute of Medical Science,  
Jodhpur, India  
[vijay.jeengaro8@hotmail.com](mailto:vijay.jeengaro8@hotmail.com)

### ABSTRACT

The concept of *Vrana* was elaborated in 1000 BC by **Sushruta** the father of Indian surgery. *Sushruta* explained thoroughly sixty types of wound management procedures to achieve the goal of fast wound healing. He has suggested numerous herbal drugs that can be used as local application .He introduce to technique that broadly classified as *Vrana Ropana* (wound healing) and *Vrana Shodhana* (wound cleaning). Wound healing had always been challenging to the wound care experts in all era be it ancient or now. The wound healing process is really complex, by which normal anatomy and function have to be restored as before. This comprises mainly 4 phases as haemostasis, inflammation, proliferation and remodelling with respect of order of occurrence. By using herbal medication we can accelerate wound healing process.

**Keywords:** Neem, Honey, Sanitary Pad, Cooper, Home-Made Gauze Piece, Bandage.

## STANDARD OPERATING PROCEDURE FOR RELATED TO OSTOMY CARE IN VIEW TO IMPROVE SKILL OF ENTEROSTOMAL THERAPIST AND GASTRO SURGEON

**Vijay Kumar, R.N. & R.M. , ET, CCPM, CWCCA, PGDMM**

Wound and Ostomy Care Unit,  
All India Institute of Medical Science,  
Jodhpur, India  
[vijay.jeengaro8@hotmail.com](mailto:vijay.jeengaro8@hotmail.com)

### ABSTRACT

A Standard Operating Procedure (SOP) for Ostomy Care can be helpful in improving the skills of enterostomal therapists and gastro surgeons. Here are some steps that can be included in an SOP:

1. **Pre-operative Assessment:** The first step is to assess the patient's medical history, the type of ostomy that will be created, and the patient's expectations and concerns. This should be done by an enterostomal therapist and gastro surgeon in collaboration.
2. **Education:** The enterostomal therapist should educate the patient and their family about ostomy care, including how to clean and maintain the ostomy, proper diet, and signs of complications.
3. **Procedure:** The gastro surgeon should perform the ostomy creation procedure following the standard protocols and using the appropriate equipment and techniques.
4. **Post-operative Care:** The enterostomal therapist should provide post-operative care to the patient, including monitoring and managing the stoma and surrounding skin, and educating the patient on proper ostomy care. The patient should also be provided with a detailed written plan on how to care for their ostomy.
5. **Follow-up:** The enterostomal therapist should schedule regular follow-up appointments with the patient to assess the progress of healing and address any concerns or complications that may arise.
6. **Professional Development:** Both the enterostomal therapist and gastro surgeon should continually update their knowledge and skills by attending conferences, workshops, and training programs related to ostomy care.
7. **Quality Assurance:** An SOP should include a system of monitoring and quality assurance to ensure that the highest standard of care is provided to every patient.

In summary, an SOP for ostomy care should focus on pre-operative assessment, patient education, proper procedure, post-operative care, follow-up, professional development, and quality assurance. By following these steps, the skills of enterostomal therapists and gastro surgeons can be improved, leading to better outcomes for patients with ostomies.

## CYANOACRYLATE GLUE FOR VENOUS LEG ULCERS

**Dr. Sriram Narayanan**

Senior consultant vascular surgeon at The Harley Street Heart & Vascular Centre

### ABSTRACT

Cyanoacrylate glue, also known as medical-grade super glue, can be used to manage venous leg ulcers. Here are some steps on how to manage venous leg ulcers with cyanoacrylate glue:

1. Clean the wound: Before applying the cyanoacrylate glue, the wound must be thoroughly cleaned and debrided to remove any dead tissue, bacteria, or debris. This can be done using saline solution or wound cleanser.
2. Dry the wound: The wound should be dried using sterile gauze or a dry sterile swab. It is important to ensure that the wound is completely dry before applying the cyanoacrylate glue.
3. Apply the cyanoacrylate glue: The cyanoacrylate glue should be applied in thin layers over the wound, covering the entire ulcer. The glue should be allowed to dry completely before applying subsequent layers.
4. Dress the wound: Once the glue has dried, a non-adherent dressing or silicone dressing can be applied to the wound to protect it and promote healing. The dressing should be changed regularly, depending on the amount of exudate from the wound.
5. Follow-up: The patient should be monitored regularly to ensure that the wound is healing properly and to address any complications or concerns that may arise.

Cyanoacrylate glue works by creating a protective barrier over the wound that prevents bacteria from entering and promotes faster healing. It also helps to reduce pain and discomfort associated with venous leg ulcers. However, it should be noted that cyanoacrylate glue is not suitable for all types of wounds, and it should only be applied by a healthcare professional trained in wound care.

## WOUND DEBRIDEMENT IN PRIMARY CARE: SHARING MYANMAR EXPERIENCES

**Assistant Professor Dr Tin Myo Han**

Myanmar Wound Care Society

### ABSTRACT

Wound debridement is crucial wound care procedure to promote wound healing by removing biofilm, bioburden along with senescent cells. In primary care, autolytic debridement, mechanical debridement and chemical and enzymatic debridement are the more applicable than surgical and biological debridement. Although bedside surgical debridement is practiced in primary care, untrained surgical skill and poor assessment leads to potentially high-risk condition and unnecessary amputation. The patients with impaired wound healing cases should be referred timely to the secondary wound care specialist's center for proper wound debridement. In Myanmar, amputation rate of patients with diabetic foot ulcer has been increasing trends. Limited uses of advanced wound materials and unmet needs of wound care training and education among professionals and patients' care givers have been revealed in the need assessment survey on wound care services of Yangon General Hospital in 2019. Thus, Myanmar Wound Care Society has set up a plan to provide the wound care training and education to both professionals and patients' care givers via the Excellent Wound Care Centre in Yangon General Hospital. Unfortunately, covid-19 epidemic and current political situation of Myanmar are challenges to move forwards for wound care professional development in general and particularly for advanced wound care training including the hands-on surgical wound debridement method among primary wound care practitioners.

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## CONSERVATIVE SHARP DEBRIDEMENT

**Keryln Carville RN, PhD, STN(Cred)**

Professor Primary Health Care & Community Nursing Silver Chain Group and Curtin University

### ABSTRACT

Conservative sharp wound debridement (CSWD) refer to loose necrotic tissue removal without pain and bleeding. Therefore, clinician shall meet certain competency such as comprehensive assessment skills, Good knowledge of relevant anatomy, Capable of identifying viable and non-viable tissue, acknowledges when CSWD is not appropriate, Awareness of infection control procedures, Demonstrates clinical skills required, Knows what to do if complications arise (bleeding). CSWD should be performed by competent clinician using aseptic technique, sterile sharp scissor or 15' scalpel or curette , and Adson's toothed forcep, and relaxed consenting patient.. CSWD accelerate wound healing by removing necrotic tissue. Necrotic tissue prolong wound healing process by increase risk of infection and induce inflammation. Several consideration must be taken into account prior deciding debridement. Factors such as aetiology of the wound, aim of debridement, risk and benefits, speed of debridement, competency of the clinician and available resources should be considered. Therefore, holistic assessment approach is critical to be performed prior deciding. Contraindication of CSWD are dense necrotic tissue, risk of bleeding, poor perfusion, non-infected eschar on diabetic patient, non-sterile instrument, and incompetent clinician or nurse.

## INVOLVING THE PATIENT AND CAREGIVER IN THE CONTINUUM OF CARE

**Keryln Carville RN, PhD, STN(Cred)**

Professor Primary Health Care & Community Nursing Silver Chain Group and Curtin University

### ABSTRACT

Patient engagement referred to active involvement of patient and family in decision making, planning and carrying care which benefits quality and safety in care provision as well as patient's quality of life. Element of patient engagement involve physical, social, cognitive, and cultural. Patient engagement is critical as wound and wound care might influence patient's lifestyle choice, priorities, and behaviour. Therefore, enable patient to control their choice might improve outcomes because both health care professional and patient and family might make agreement and adjustment of the way care plan is carried out. The following are strategies to enhance patient engagement in care: assessment of willingness to engage and wellbeing outcome; encourage self-reporting; observe response and outcomes; identify barriers to engage; adjustment of care plan to optimise outcome according to patient's preferences and shared decision making. Collaboration with patient through patient engagement assists clinician to identify and address the patient's concern. Optimise patient engagement facilitate healing.

## WOUND HYGIENE & THERAPEUTIC CLEANSING

**Keryln Carville RN, PhD, STN(Cred)**

Professor Primary Health Care & Community Nursing Silver Chain Group and Curtin University

### ABSTRACT

Wound hygiene principle include cleansing, debridement, reshaping the epithelial edge, and biofilm prevention and management. In the implementation, surgical aseptic technique is used in complex wound management such as NPWT, involvement of sterile cavity, and in period of more than 20 minutes. Meanwhile standard aseptic technique is used in case where the wound cleansing was simple. Solution used for cleansing are varied, in an standard aseptic chronic wound cleansing tap water might be appropriate. However, in a condition of hard to heal wound or wound with high risk or susceptible to infection, therapeutic wound cleansing should be performed. Therapeutic wound cleansing is rigorous wound cleansing particularly prioritized hard to heal and suspected infection. This involve use of soap or surfactant and cleansing agent range from isotonic such as normal saline, hypotonic solution, and antiseptic cleanser. Furthermore, therapeutic cleansing is essential in wound bed preparation because therapeutic cleansing assure the wound clean from debris, excess of exudate as well as biofilm. Biofilm can be managed using antiseptic cleansing agent followed with debridement and topical antimicrobial therapy. Appropriate cleansing, debridement, and topical antimicrobial as well as evaluation of wound condition are essential in antimicrobial stewardship in prevention of microorganism resistance in wound care.



## STOMAL AND PERISTOMAL SKIN COMPLICATION CARE & MANAGEMENT

**Eisiah Abbas, RN, MSc**

Senior Wound & Ostomy And Diabetic Foot Specialist At King Khalid National Guard Hospital  
Jeddah Kingdom Of Saudi Arabia

### ABSTRACT

**Introduction :** Stoma is an Artificial opening in the Abdominal wall made through surgical procedures to help patients to eliminate Urine or Stool. Stoma creations affects patients quality of life and even his family or care givers. Assessment and managements of Stoma complications are often the responsibility of the Nurses and Ostomy care specialist and patients educators

**Aim :** This presentation aims at improving ostomy management through evidence based practice and identify barriers and propose solutions to improving nursing practice. It will also highlight appropriate treatment for each patient at risk of developing stoma or peristomal skin complications. and will update health care providers with the latest new in the care and managing of such cases.

**Method :** Stoma care Managements Educational program was identified as a need for our nurses as expressed by professionals and key managers in most of the Hospital/ national and international Knowledge improvement will be enhanced about stoma care and peristomal skin care. Theoretical lecture about Ostomy care and management and the correct use and application of different Stoma pouches. Proper stoma siting and sizing. How to educate Ostomy patient and their care giver and maintain ongoing relationship with them will be presented

**Conclusion :** Health care provides need a lot of education and training to be self-confident and skillful to provide the best evidence based care and support to the new ostomate and their care giver in order to help them to cope with the new body image and improve their quality of life

## WHAT ARE THE BARRIERS TO PRESSURE INJURY PREVENTION IN KSA

**Eisiah Abbas, RN, MSc**

Senior Wound & Ostomy And Diabetic Foot Specialist At King Khalid National Guard Hospital  
Jeddah Kingdom Of Saudi Arabia

### ABSTRACT

Pressure injury are a frequently occurring health problem throughout the world that in most cases are preventable. Prevention of Pressure injury is an indicator of quality of care, particularly in hospital setting. Nursing care has a major effect on pressure ulcer development and prevention. The health care system in Saudi Arabia started a few decades ago and has increased and improved significantly during recent years. This improvement was rapid due to financial support from the Government to cover the health needs of millions of pilgrims coming to perform Hajj at the Holy Places. This presentation aimed to assess factors affecting pressure injury preventing in a big country like K.S.A and finding better solutions which can reduce or solve this problem and implement it. Pressure injury prevention must carried out according to evidence-based practice. There are many evidence based guideline namely The US National Pressure Ulcer Advisory Panel (NPUAP), European Pressure Ulcer Advisory Panel (EPUAP), Pan Pacific Pressure Injury Alliance (PPPIA). Despite many available evidence-based guideline of PI prevention, adapting it to KSA setting might be influenced by the characteristic of KSA context. These might includes nurses factors, organizational factors, social factors such as availability of care-giver, supportive care at home, social service in home care. Implementation of evidence based pressure injury prevention needs multidisciplinary efforts and team work to contribute to success which involve not only nurses and healthcare professional but also patients and family, social worker, and organization.

## DIABETIC FOOT ULCERS : DIFFERENTIALS

**Dr Jazly Bin Johari MD (RUSSIA) CCWC(Mal )**

Head of Unit Wound Care Hospital Shah Alam Malaysian

### ABSTRACT

Diabetic foot ulcers can be caused by various factors, and it is essential to identify the underlying cause to manage the ulcers effectively. Here are some possible differentials and their management. Neuropathic ulcers: Neuropathic ulcers are caused by nerve damage and loss of sensation in the feet. The management of neuropathic ulcers includes relieving pressure on the affected area, proper foot care, and infection control. Patients may also benefit from the use of topical wound care products, such as antimicrobial dressings and growth factors.

Ischemic ulcers: Ischemic ulcers are caused by reduced blood flow to the feet. The management of ischemic ulcers includes improving blood flow to the affected area by controlling blood pressure, treating high cholesterol levels, and encouraging physical activity. In severe cases, surgical intervention may be necessary to restore blood flow.

Infectious ulcers: Infectious ulcers are caused by bacterial infections in the foot. The management of infectious ulcers includes proper wound care, antimicrobial therapy, and debridement of the affected tissue. Patients may also benefit from the use of topical agents, such as silver dressings, to promote healing and prevent further infection.

Traumatic ulcers: Traumatic ulcers are caused by physical trauma to the feet, such as cuts, bruises, or blisters. The management of traumatic ulcers includes proper wound care, including cleaning and dressing the wound, and relieving pressure on the affected area. Patients may also benefit from the use of topical wound care products, such as antimicrobial dressings, to promote healing and prevent infection.

In summary, the management of diabetic foot ulcers depends on the underlying cause of the ulcer. Treatment may include relieving pressure on the affected area, proper foot care, infection control, antimicrobial therapy, and surgical intervention. It is essential to seek prompt medical attention if you suspect you have a diabetic foot ulcer, as early treatment can help prevent further complications.

## DIABETIC FOOT ULCER : ASSESSMENT AND CARE

Dr. Nizam Bin Ali Husein

### ABSTRACT

Diabetic Foot Ulcer (DFU) Assessment is critical to support decision making in delivering appropriate care. Assessment of diabetic foot ulcer involve general assessment of the patient, assessment of affected foot, and the wound. General assessment is critical to assure the systemic condition of the patient which involve patient history of disease and medication, physical assessment, laboratory test such as wound culture, and radiological test to obtain information of bone involvement or osteomyelitis. Following the general assessment diabetic foot investigation should be performed to identify the ulcer risk factor and foot issue that might exarcebate the ulcer if not well taken care of. Mainly diabetic foot assessment includes neurophaty sensory test, deformity examination, vascular assessement using Ankle-Brachial Pressure Index. In term of obtaining data for ulcer, ulcer assessment shall be conducted by assessing the wound location, size, edge, wound bed color, depth of wound, exudate, and surrounding tissue. These assessment will assist clinician to tailor care in a way that accelerate wound healing. Furthermore, the data obtained from foot assessment in particular will help clinician to provide prevention strategy once the ulcer has healed.

Prevention of diabetic foot ulcer can be done by education of daily foot inspection, moisturizing skin, offloading, appropriate shoes wearing, exercise, and regular check up with podiatrist especially with existence of callus.

**Keywords :** DFU, Assessment, woundcare

## DIABETIC FOOT CARE PREVENTION

Associate Professor Aziz Nather MD, PHD

### ABSTRACT

Diabetic Foot is best managed by a 2-Prong Strategy. Strategy 1 is Prevention of an Ulcer from developing in a Diabetic. Strategy 2 is when this fails to treat the complication by a Team Approach. Prevention is the most important strategy. Education equals 90% of Prevention. Annual Foot Screening provides the remaining 10%. We need to educate patients and caregivers (80% of our efforts) but also healthcare professionals (20%). Patients need to be educated on 3 Subjects-Care of Diabetes, Care of Foot and Need for Shoe Wear. There is a need to develop Patient Education Pamphlets in the language the patients understand. We also need to use basic textbooks on Diabetic Foot to educate the Healthcare Workers providing foot care for Diabetics. Annual Foot Screening must be performed for all Newly Diagnosed Diabetics to detect early the “Foot At Risk” to facilitate early intervention. 4 key factors for risk of ulceration are loss of protective sensation, absence of one or both pulses, presence of foot deformity or callosity and inability to reach foot or visual impairment. We should manage people at risk of ulceration following the D Foot Risk Stratification Tool--Very Low Risk, Low Risk, Moderate Risk and High Risk Categories .

To achieve Prevention we need to launch Public Awareness Programmes. This is a massive responsibility and is best run on a National Level. Activities include:-

- Educational Talks in Primary and Secondary Schools, Colleges, Polytechnics, in Universities by face to face talks coupled with Foot Screening or by Online Talks/Modules
- Educational Talks on Radio & TV
- Features in Daily Newspapers
- Advertisements in Cinemas, in Shopping Malls, in MRTs and on Buses and Taxis.

To be successful we need Government Involvement- Ministries of Health, Education, Communication & Information, Youth etc and also the support of Volunteer Doctors, Nurses and other Healthcare Workers from Primary Healthcare Services and from all Major Hospitals. This is a massive undertaking and can only succeed with the full support and backing of our Government .

**Keywords :** diabetic foot, prevention, programme

## WOUND HYGIENE & THERAPEUTIC CLEANSING

KerylIn Carville RN, PhD, STN(Cred)

### ABSTRACT

Wound hygiene principle include cleansing, debridement, reshaping the epithelial edge, and biofilm prevention and management. In the implementation, surgical aseptic technique is used in complex wound management such as NPWT, involvement of sterile cavity, and in period of more than 20 minutes. Meanwhile standard aseptic technique is used in case where the wound cleansing was simple. Solution used for cleansing are varied, in an standard aseptic chronic wound cleansing tap water might be appropriate. However, in a condition of hard to heal wound or wound with high risk or susceptible to infection, therapeutic wound cleansing should be performed. Therapeutic wound cleansing is rigorous wound cleansing particularly prioritized hard to heal and suspected infection. This involve use of soap or surfactant and cleansing agent range from isotonic such as normal saline, hypotonic solution, and antiseptic cleanser. Furthermore, therapeutic cleansing is essential in wound bed preparation because therapeutic cleansing assure the wound clean from debris, excess of exudate as well as biofilm. Biofilm can be managed using antiseptic cleansing agent followed with debridement and topical antimicrobial therapy. Appropriate cleansing, debridement, and topical antimicrobial as well as evaluation of wound condition are essential in antimicrobial stewardship in prevention of microorganism resistance in wound care.

**Keywords :** wound hygiene, therapeutic cleansing, hard to heal, infection

## CONSERVATIVE SHARP DEBRIDEMENT

KerylIn Carville RN, PhD, STN(Cred)

### ABSTRACT

Conservative sharp wound debridement (CSWD) refer to loose necrotic tissue removal without pain and bleeding. Therefore, clinician shall meet certain competency such as comprehensive assessment skills, Good knowledge of relevant anatomy, Capable of identifying viable and non-viable tissue, acknowledges when CSWD is not appropriate, Awareness of infection control procedures, Demonstrates clinical skills required, Knows what to do if complications arise (bleeding). CSWD should be performed by competent clinician using aseptic technique, sterile sharp scissor or 15' scalpel or curette , and Adson's toothed forcep, and relaxed consenting patient. CSWD accelerate wound healing by removing necrotic tissue. Necrotic tissue prolong wound healing process by increase risk of infection and induce inflammation. Several consideration must be taken into account prior deciding debridement. Factors such as aetiology of the wound, aim of debridement, risk and benefits, speed of debridement, competency of the clinician and available resources should be considered. Therefore, holistic assessment approach is critical to be performed prior deciding. Contraindication of CSWD are dense necrotic tissue, risk of bleeding, poor perfusion, non-infected eschar on diabetic patient, non-sterile instrument, and incompetent clinician or nurse.

**Keywords :** CSWD, wound care, healthcare

## WOUND DEBRIDEMENT IN PRIMARY CARE: SHARING MYANMAR EXPERIENCES

**Assistant Professor Dr Tin Myo Han**

Myanmar Wound Care Society

### ABSTRACT

Wound debridement is crucial wound care procedure to promote wound healing by removing biofilm, bioburden along with senescent cells. In primary care, autolytic debridement, mechanical debridement and chemical and enzymatic debridement are the more applicable than surgical and biological debridement. Although bedside surgical debridement is practiced in primary care, untrained surgical skill and poor assessment leads to potentially high-risk condition and unnecessary amputation. The patients with impaired wound healing cases should be referred timely to the secondary wound care specialist's center for proper wound debridement. In Myanmar, amputation rate of patients with diabetic foot ulcer has been increasing trends. Limited uses of advanced wound materials and unmet needs of wound care training and education among professionals and patients' care givers have been revealed in the need assessment survey on wound care services of Yangon General Hospital in 2019. Thus, Myanmar Wound Care Society has set up a plan to provide the wound care training and education to both professionals and patients' care givers via the Excellent Wound Care Centre in Yangon General Hospital. Unfortunately, covid-19 epidemic and current political situation of Myanmar are challenges to move forwards for wound care professional development in general and particularly for advanced wound care training including the hands-on surgical wound debridement method among primary wound care practitioners.

**Keywords :** wound debridement, wound healing, amputation

## NPWT – OVERVIEW AND CASE STUDIES

Carol Stott RN

### ABSTRACT

Negative Pressure Wound Therapy (NPWT) is a non-invasive wound therapy that uses controlled localised negative pressure to promote healing in acute and chronic wounds. Some systems are disposable and others are not. An overview of some of the many systems on the market will be given

It is used for :

- Fluid Control
- Vascular impact
- Granulation tissue formation
- Mechanical stretch/splinting
- Decreasing the bacterial load in wounds
- Wound irrigation
- Wound debridement

Case examples will be used to illustrate the clinical advantages, indications, contraindications, precautions and benefits of NPWT

**Keywords :** NPWT, wound healing.

## NEGATIVE PRESSURE WOUND THERAPY

Ns. Ludi Maulana SKp., WOC(ET)N

### ABSTRACT

Negative Pressure Wound Therapy (NPWT) is a medical treatment that involves the application of sub-atmospheric pressure (negative pressure) to a wound to promote healing. The therapy involves placing a special dressing over the wound and connecting it to a vacuum pump that creates negative pressure within the wound area.

While NPWT can be effective in promoting wound healing, there are also some potential drawbacks and risks associated with the therapy.

Overall, while NPWT can be an effective treatment option for some patients with certain types of wounds, it is important to carefully consider the potential risks and drawbacks before pursuing the therapy. Patients should work closely with their healthcare providers to determine if NPWT is the best course of treatment for their specific wound and medical situation.

**Keywords:** NPWT; promoting healing



## THE NPWT AND PARCEL DRESSING APPLICATION ON ABDOMINAL WOUND WITH FISTULA

**Kana Fajar<sup>1</sup>, Muhammad fadli<sup>2</sup>, Khairul Bahri<sup>2</sup>, Hardeza Anggara<sup>2</sup>, Tommi abbas<sup>3</sup>**

<sup>1</sup>Coordinator Wocare Center bogor , <sup>2</sup>Cocoordinator Wocare Berjalan Bogor, Indonesia.

<sup>2</sup>Manager Wocare Center Bogor, Indonesia. <sup>2</sup> Wocare Berjalan Bogor, Indonesia. <sup>3</sup> Wocare Berjalan Bogor, Indonesia.

### ABSTRACT

**Background:** The management of entrocutaneuse fistula (ECF) in open abdomen (OA) therapy is challenging and associated with a high mortality rate. The introduction of negative pressure wound therapy (NPWT) in open abdomen management significantly improved the healing process and increased spontaneous fistula closure and effective in improving garnulasi, removing exudate, reduce bacterial, and accelerate the wound healing process.

**Methods:** This research uses a case study Mr N with entrocotaneouse fistula and abdominal open in homecare setting. The treatment Use of negatife pressure wound therapy and parcel dressing was conducted for healing of treatment with the use in patients with a history of compartemen sindrom abdomen open wound, blood sugar > 150 mq / dl, the amount of exudate > 200 cc / 24 hours, exudate purulent, strong odor, stadium IV.

**Results:** Results in getting granulation processes can be increased, wound odorless, reduced exudate and infection decreases and 2.5-3 months term care for the wound shut.

**Conclusion:** management NPWT and parcel dressing for fistula with abdominal open effective in improving garnulasi, removing exudate, reduce bacterial, and accelerate the wound healing process.

**Keywords:** ECF, NPWT, wound bag drainase and wound healing

## NPWT & NPWTi FOR DIABETIC FOOT WOUNDS

Associate Professor Aziz Nather MD, PHD

### ABSTRACT

The basic science of NPWT will be discussed. Clinical requirements for NPWT will be elaborated. Careful and complete assessment of the wound must be performed. There must be no ischaemia, no neuropathy and no deep infection. Careful selection of cases is vital to ensure a good outcome. First perform a radical debridement. Once applied must monitor the wound regularly. Further debridement may be needed.

Choose the device available with good service provided by Vendor including providing a nurse clinician and a good economic package in ward and in outpatient care. Must pay attention to all technical considerations when applying the device. The clinical evidence of NPWT is also discussed.

Our pilot study of Vac Therapy 2008 (n=11) is presented. Average of 14 dressing changes, and taking 2 to 3 weeks, average 25% wound size reduction. We recommend using Vac for wound bed preparation only. Once wound bed preparation is completed and good granulation tissue produced, stop NPWT and perform SSG. This strategy saves time and costs.

Our second pilot study with Bridge Vac Dressings in 2010 (n= 5) is also presented. This device allows offloading with platform shoes to be performed whilst NPWT is in progress. It is useful for difficult wound sites-Web Spaces in foot and for Ray Amputation Wounds.

NPWTi- an evolution of NPWT with Veraflo Therapy allows intermittent instillation of normal saline or hypochlorous acid into wounds. It is useful for wounds which after debridement still has pus present. Our preliminary study in 2014 (n = 5) is also reported. Once no more pus is seen in wound, convert NPWTi to NPWT and once wound bed preparation achieved , perform SSG for wound closure.

In conclusion NPWT & NPWTi has an important role in the management of diabetic foot wounds. With careful selection criteria and with careful application of device, good results could be produced to improve the limb salvage rate .

**Keywords :** NPWT, NPWTi, diabetic foot, wound

## EARLY RECOGNITION AND MANAGEMENT OF PEESURE INJURIES IN A NURSING PERSPECTIVE

Rhyan A. Hitalia, R.N.

### ABSTRACT

Pressure injuries, also known as pressure ulcers or bedsores, are a significant concern in the nursing field. They occur when pressure is applied to a specific area of the skin, causing damage to the underlying tissue. Here are some steps to recognize and manage pressure injuries from a nursing perspective: (1). Early recognition: Nurses should be vigilant in monitoring patients for signs of pressure injuries, such as redness or discoloration of the skin, blisters, or open wounds. Regular skin assessments should be conducted to identify any areas of skin breakdown. (2). Prevention: Prevention is the key to managing pressure injuries. Nurses should ensure that patients are repositioned regularly, especially those who are immobile or have limited mobility. Pressure-relieving devices, such as cushions and mattresses, can also be used to reduce the risk of pressure injuries. (3). Treatment: If a pressure injury is identified, it should be promptly treated to prevent further damage. The wound should be cleaned using sterile saline or wound cleanser, and a dressing should be applied to protect the area and promote healing. Patients may also benefit from the use of topical wound care products, such as antimicrobial dressings and growth factors. (4). Education: Nurses should educate patients and their families on the importance of preventing pressure injuries and how to recognize the early signs of skin breakdown. Patients should be encouraged to speak up if they experience discomfort or notice any changes in their skin. (5). Collaboration: Collaboration with other healthcare professionals, such as wound care specialists, is essential in managing pressure injuries. Nurses should work closely with these specialists to ensure that patients receive the best possible care. In summary, the early recognition and management of pressure injuries require a comprehensive approach that includes prevention, treatment, education, and collaboration. Nurses play a critical role in preventing and managing pressure injuries, and it is essential to prioritize this aspect of care to ensure positive patient outcomes.

**Keywords:** Pressure injury; Education; Collaboration

## PRINCIPLE OF NPWT

Irena Sakura Rini, MD, PhD. Plastic Surgeon

### ABSTRACT

Negative Pressure Wound Therapy (NPWT) also known as a vacuum assisted closure (VAC) is therapeutic technique using a suction pump, tubing and dressing to remove excess exudate and promote healing in acute and chronic wounds and second and third degree of burns. NPWT is generally considered safe and effective for a diverse range of wounds.

**Keywords:** NPWT; safe; cost effective

## DISASTER WOUND MANAGEMENT 7 STEPS

Ns. Edy Mulyadi, M.Kep, RN, WOC(ET)N

### ABSTRACT

Natural disasters, such as earthquakes, tornadoes, severe storms and floods affect thousands of people each year in Indonesia. They are often unexpected and can leave whole community injured and in shock. Depending on the nature of the disaster, e.g. an earthquake or flood, wounds may be contaminated with dirt, mud, seawater and debris. In addition, people who live through a disaster will experience emotional distress, such as anxiety and fear, trouble sleeping and other psychological symptoms. Administrating first aid promptly can help heal small wounds, thus preventing infection; in persons with open large wounds, it can help prevent infections and other serious complications, such as tetanus, as well as save limbs and lives. The latest disasters gave us the insights and experiences that led to the development of a strategic protocol for handling disasters, based on data and cases studies we were able to collect. The following steps provide wound clinicians with a framework based on 7<sup>th</sup> steps of care planning. Remember that disaster situations are not easy to handle and that sudden events can disrupt everything. Each step contains basic instructions and recommended actions on what to do.

**Keywords:** Disaster; 7<sup>th</sup> steps; wound management

# MANAJEMEN PERAWATAN LUKA BAKAR BERDASARKAN ; EVIDENCE BASED PRACTICE, INVESTIGATION, GUIDELINES AND PRACTICE

**Ns.Fatchulloh, S.Kep.,M.Kes.,WOC(ET)N**

Owner Fatchull Wound Care Center Dangi Godong Grobogan Jawa Tengah

Email : [purwodadigrobogan91@gmail.com](mailto:purwodadigrobogan91@gmail.com)

## ABSTRACT

Latar Belakang : Luka bakar dapat diakibatkan oleh trauma terkena api, air panas atau kimia. Namun sebagian besar diakibatkan karena penanganan yang salah terhadap luka bakar, kecerobohan dan kelalaian manusia. 70% dari 10 orang menggunakan penanganan yang salah pada luka bakar, seperti memberikan pasta gigi atau minyak..

Luka bakar merupakan kerusakan atau kehilangan jaringan yang disebabkan kontak dengan sumber panas seperti api, air panas, bahan kimia, listrik, maupun radiasi. Luka bakar merupakan kasus trauma yang sangat signifikan berdampak pada fisik maupun psikologis. Luka bakar berada di peringkat keempat sebagai trauma utama yang paling umum menyebabkan kecacatan dan kematian di seluruh dunia, sekaligus peringkat ketiga penyebab kematian akibat kecelakaan pada semua kelompok umur dengan jenis kelamin laki-laki cenderung lebih sering mengalami luka bakar dibandingkan perempuan.

Tujuan : untuk mendapatkan perawatan optimum dengan wound moisture balance concept, mencegah kontraktur dan deformity serta peningkatan quality of life pasien dengan Luka Bakar, dapat mengaplikasikan konsep TIME dalam manajemen luka bakar.

Metode : True experiment yang dilakukan di Pusat perawatan Luka Fatchull wound care center pada beberapa Pasien Luka Bakar derajat II B, III dan IV. Perlakuan yang diberikan secara langsung menggunakan perawatan dengan balutan yang menciptakan moisture balance.

Hasil : Luka bakar (*Combustio*) derajat IIB, III dan IV dengan luas area permukaan tubuh yang terlibat sebesar 38% - 75 % hasil investigasi / anamnesis, pemeriksaan fisik, dan pemeriksaan penunjang. Luas luka bakar ditentukan berdasarkan *rule of nine*. perawatan luka yang dilanjutkan dengan Prinsip T.I.M.E manajemen dan 3 M yaitu Mencuci Luka, Membuang jaringan mati (*debridement*) dan memilih topical atau dressing dengan tepat. Tatalaksana lanjutan berupa observasi pasca *debridement* berupa pemantauan klinis dan *balance* cairan.

Simpulan : Aplikasi yang dilakukan di Pusat Perawatan Luka fatchull Wound Care center terhadap pasien Luka Bakar proses Penyembuhan Luka terjadi Fast healing dan meminimalkan komplikasi terjadinya Scar, keloid.

**Keywords** : luka bakar, *combustio* , TIME management, *Dressing Primer dan Skunder tepat, Quality Of Life Patient*

## DISASTER DRESSING WOUND PACKAGE : WOUND KIT

Ns. Kana Fajar, S.Kep, WOC(ET)N

### ABSTRACT

Disaster situations are not easy to understand and manage but the objective to help the injured as early as possible must be paramount. The management of wounds during a disaster presents a significant challenge, especially if number of victims is large, i.e. earthquake in Aceh, Lombok and Palu. The most critical steps are to clean, debride and dress the wound, then review the wound at least every 48 hours to prevent or manage infections that can pose a risk to the life and limbs of the injured person. Close partnership working between different healthcare professionals and institutions are essential. We believe that the provision of effective, safe and evidence-based wound care dressing has to be a priority and that all clinicians need to understand that early and prompt treatment of patients with wounds can lead to a reduction in infections, morbidity and mortality. Our team has prepared a strategic plan and a number of tools on how to respond in an emergency.

**Keywords:** Disaster; wound dressing; priority

## TECHNOLOGY WOUND DRESSING TO PREVENT MASD (MOISTURE ASSOCIATE SKIN DAMAGE)

Ns. Agung Ginanjar, S.Kep., WOC(ET)N

### ABSTRACT

Moisture-Associated Skin Damage (MASD) is a common problem in wound care, where prolonged exposure to moisture can cause skin irritation, maceration, and breakdown. To prevent MASD, several technology wound dressings are available that can help manage moisture and protect the skin. Here are some examples:

1. Hydrocolloid dressings: These are a type of dressing that forms a gel-like layer when in contact with moisture. Hydrocolloid dressings can help absorb excess moisture from the wound bed while creating a barrier to protect the surrounding skin.
2. Foam dressings: These dressings have a multi-layered construction that can absorb and wick away excess moisture. Foam dressings can be used for wounds with moderate to heavy exudate.
3. Silicone dressings: These are a type of wound dressing that can help manage moisture by creating a waterproof barrier between the wound and the surrounding skin. Silicone dressings can also help reduce pain and irritation by reducing friction on the wound bed.
4. Alginate dressings: These dressings are made from natural fibers derived from seaweed and can absorb large amounts of exudate. Alginate dressings can help keep the wound bed moist and promote healing while preventing MASD.
5. Antimicrobial dressings: These are a type of dressing that incorporates an antimicrobial agent to help prevent infection and manage moisture. Antimicrobial dressings can be particularly useful for wounds that are at high risk for infection, such as burns or surgical wounds.

Overall, technology wound dressings can play an important role in preventing MASD by managing moisture, protecting the skin, and promoting healing in the wound bed.

**Keywords:** MASD; Dressing; Moisture

# MANAGEMENT URINARY INCONTINENCE TYPE MIX AND DIASTASIS RECTUS ABDOMINUS OF MUSCLE (DRAMs) : LITERATURE REVIEW AND CLINICAL TRIAL

**Ns. Indah Nursanti, M.Kep, WOC(ET)N**

CEO SerLOK.com by Altara Care

Co.Director Binetwork Media Digital Utama Indonesia

Co.Director ETNEP Wocare, Indonesia

Doctoral Student at Faculty of Nursing, Airlangga University

Email: indah,nursanti-2020@fkp.unair.ac.id

## ABSTRACT

Background: Urinary incontinence (UI) is defined as any uncontrolled leakage of urine. Involuntary leakage of urine in cases of increased intra abdominal pressure without bladder contraction such as coughing, sneezing and laughing is called stress urinary incontinence (SUI). Involuntary leakage of urine with a sudden sense of micturition is define as urgency UI. When both types occur together, one usually more dominant, then this type is called mixed incontinence. Mixed incontinence is more at risk in women who go through pregnancy and childbirth because of changes in wheight gain Following diastasis recti. Diastasis rectus abdominus of muscle (DRAMs) is an acquired condition in which the rectus muscle are separated by an abnormally long distance, but without fascial defects. The condition is characterized by a prominent midline as as result of increased intraabdominal pressure related to stress urinary incontinence. The problem result in failure to obtain a quality of life that contributes to social problems to economic burdens. 2018 global data, stress urinary incontinence is the most common subtype was 45,9% followed by urgency urinary incontinence 31,1% and mixed urinary incontinence 18,1%. In 2020 it was reported that the problem of urinary incontinence after childbirth is estimated to increased from 14%-45% with the consequence of an epidural, episiotomy, caesarean section, and spontaneous labor. In 2022 a review of population based studies revealed that the prevalence of 25%-45%. The needs attention to reduce this number with proper management of urinary incontinence problems and diastasis rectus abdomnius of muscle (DRAMs) which is carried out with proper prevention and management.

Purpose: Reviewing the literature on application of evidence based intervention in incontinence care to clinical practice and the important role of ET nurse in improving nursing care and quality of life in women with urinary incontinence.

Method: Literature review and clinical trial

Conclusion: The problem of urinary incontinence type mix and diastasis rectus abdominus of muscle (DRAMs) is done with proper management, including risk assessment and exercise. Surgery to treat urinary incontinence is effective but underreported due to economic reasons and acceptance of urinary incontinence as normal. Movement pilates, and pelvic floor muscle trainer (PFMT) have been shown to have an affect on urinary incontinence. Elderly women are only advise do yoga and pilates. The three exercise are good for increasing pelvic floor muscle strength but do not have much impact on the problem of urine leakage. Diastasis rectus abdominus of muscle (DRAMs) problems are advised to do abdominal training, pelvic floor

muscle training, or a combination of both in at least one trial arm. Effort to prevent urinary incontinence and diastasis rectus abdominus of muscle (DRAMs) are important by maintaining BMI, pelvis floor muscle strength, maintaining a healthy diet, good bowel patterns, also using support surface therapy during pregnancy and after childbirth, for example using a support surface which is done by Indonesian women. It is still advised to discuss the problem of urinary incontinence with ET nurse in maintaining a good quality of life.

**Keywords:** Management Urinary incontinence, Diastasis recti, quality of life



## INCONTINENCE AND THE INDIVIDUAL WHO IS OBESE

**Khairul Bahri, S.Kep., WOC(ET)N**

<sup>1</sup>Wocare Center, Bogor Indonesia

### ABSTRACT

**Background:** More than 90% of women who are morbidly obese experience some degree of pelvic floor disorder, and 50% of women indicated that symptoms were so severe that they interfered with activities of daily living (ADL) and quality of life. Obesity and overweight are directly associated with urinary incontinence (UI).

**Aim :** The aim of this study was to determine incontinence and an individual who is obese.

**Methods:** This study was done by literature review, though systematic researches on two database namely SCOPUS, PubMed and textbooks. There were five textbooks and seven international journals related to incontinence and Obesity.

**Result:** Each 1 kg/m<sup>2</sup> unit increase in BMI increased the likelihood of frequent urinary incontinence. Management in Incontinence and obesity are diet programs, maintaining skin health, body worn absorbent products, exercise, toilet techniques, fluid and nutrition, turning and repositioning and surgical treatment. The preponderance of clinical evidence suggests a relationship between weight and incontinence irrespective of age, gender, and several comorbid

**Conclusion:** Incontinence concerns individuals with ABCD have receive attention in much on the health care community. Professionals are fully aware of the challenges associated with access, assessment, intervention and follow-up to the individual who is obese.

**Keywords:** Urinary incontinence, Obesity, Urinary Incontinence Management, Obesity Management

## PRESSURE INJURY RELATED TO INCONTINENCE

Marina Ruran; Niswatul Firsyada

### ABSTRACT

The global prevalence of MASD is not accurately know. A recent national audit in Wales in which the skin of 8,365 hospital inpatients was inspected identified IAD in 4.3% of the cohort. Depending on the severity it may or may not be associated with loss of superficial skin layers and/or secondary infections. The presence of *infection*, often by opportunistic fungi and further increases morbidity. These are IAD Clinical manifestation : Erythema, Maceration, Erosion of the epidermis and/or dermis. Prevention starts with careful assessment, individualized care planning, and staff education. It requires adoption of a structured skin care regime, cleansing of the skin with appropriate cleansers rather than soap and water, and protecting the skin from further damage. To prevent pressure injuries related to incontinence, it is important to keep the skin clean and dry, and to use products that provide a barrier between the skin and moisture. This can include the use of incontinence pads or briefs, skin barriers or protectants, and frequent changing of incontinence products. It is also important to assess and manage any underlying conditions that may contribute to incontinence, such as urinary tract infections or constipation. If a pressure injury related to incontinence does develop, it is important to seek medical attention to properly manage the wound and prevent further complications. Treatment may include wound dressings, topical medications, and in some cases, surgical intervention.

**Keywords :** pressure injury, incontinence.

## STOMAL AND PERISTOMAL SKIN COMPLICATION CARE & MANAGEMENT

Eisiah Abbas, WOCN

### ABSTRACT

**Introduction :** Stoma is an Artificial opening in the Abdominal wall made through surgical procedures to help patients to eliminate Urine or Stool. Stoma creations affects patients quality of life and even his family or care givers. Assessment and managements of Stoma complications are often the responsibility of the Nurses and Ostomy care specialist and patients educators

**Aim :** This presentation aims at improving ostomy management through evidence based practice and identify barriers and propose solutions to improving nursing practice. It will also highlight appropriate treatment for each patient at risk of developing stoma or peristomal skin complications. and will update health care providers with the latest new in the care and managing of such cases.

**Method :** Stoma care Managements Educational program was identified as a need foe our nurses as expressed by professionals and key managers in most of the Hospital/ national and international Knowledge improvement will be enhanced about stoma care and peristomal skin care. Theoretical lecture about Ostomy care and management and the correct use and application of different Stoma pouches. Proper stoma siting and sizing. How to educate Ostomy patient and their care giver and maintain ongoing relationship with them will be presented

**Conclusion :** Health care provides need a lot of education and training to be self-confident and skillful to provide the best evidence based care and support to the new ostomate and their care giver in order to help them to cope with the new body image and improve their quality of life

**Keywords :** stoma, peristomal, complication.

## STANDARD OPERATING PROCEDURE FOR RELATED TO OSTOMY CARE IN VIEW TO IMPROVE SKILL OF ENTEROSTOMAL THERAPIST AND GASTRO SURGEON

Vijay Kumar, R.N. & R.M. , ET, CCPM, CWCCA, PGDMM

### ABSTRACT

A Standard Operating Procedure (SOP) for Ostomy Care can be helpful in improving the skills of enterostomal therapists and gastro surgeons. Here are some steps that can be included in an SOP: (1). Pre-operative Assessment: The first step is to assess the patient's medical history, the type of ostomy that will be created, and the patient's expectations and concerns. This should be done by an enterostomal therapist and gastro surgeon in collaboration. (2). Education: The enterostomal therapist should educate the patient and their family about ostomy care, including how to clean and maintain the ostomy, proper diet, and signs of complications. (3). Procedure: The gastro surgeon should perform the ostomy creation procedure following the standard protocols and using the appropriate equipment and techniques. (4). Post-operative Care: The enterostomal therapist should provide post-operative care to the patient, including monitoring and managing the stoma and surrounding skin, and educating the patient on proper ostomy care. The patient should also be provided with a detailed written plan on how to care for their ostomy. (5). Follow-up: The enterostomal therapist should schedule regular follow-up appointments with the patient to assess the progress of healing and address any concerns or complications that may arise. (6). Professional Development: Both the enterostomal therapist and gastro surgeon should continually update their knowledge and skills by attending conferences, workshops, and training programs related to ostomy care. (7). Quality Assurance: An SOP should include a system of monitoring and quality assurance to ensure that the highest standard of care is provided to every patient. In summary, an SOP for ostomy care should focus on pre-operative assessment, patient education, proper procedure, post-operative care, follow-up, professional development, and quality assurance. By following these steps, the skills of enterostomal therapists and gastro surgeons can be improved, leading to better outcomes for patients with ostomies.

**Keywords :** SOP, ostomy, enterostomal therapist, gastro surgeon.

## VENOUS LEG ULCERS MULTIDISCIPLINE COLLABORATION MANAGEMENT: A CASES STUDY

Rubiyanto Warja<sup>1,2</sup>

<sup>1</sup>Bilqiss Medika Clinic Wound Care Division, Bekasi - West Java - Indonesia

<sup>2</sup>Cardiovascular Center Harapan Kita Jakarta- Indonesia

### ABSTRACT

**Background:** A chronic venous leg ulcer is defined as an open lesion between the knee and ankle joint that remains unhealed for at least four weeks a stasis ulcer and occurs in the presence of venous disease. Studies patients with venous leg ulcers, irrespective of diagnosis causes of venous insufficiency. Chronic venous insufficiency is an abnormally functioning venous system due to venous valve incompetence with or without associated venous valve outflow obstruction with may affect the superficial venous system, the deep venous system, or both.

Affecting approximately 1 percent of the U.S. population. Possible causes of venous ulcers include inflammatory processes resulting in leukocyte activation, endothelial damage, platelet aggregation, and intracellular edema. account for 80% of lower extremity ulcerations. Venous ulcers are often recurrent at 57%-70% in a year.

The estimated prevalence of 0.1 and 0.3% in the UK. The lifetime risk of developing a venous leg ulcer is 1%, recent retrospective cohort study using THIN (The Health Improvement Network) data reported that in the UK 53% of all venous leg ulcers healed within 12 months. Service provision in the UK for venous leg ulcers can be poor, with around half of patients receiving inadequate care, minimal specialist involvement, and a lack of evidence-based treatment according. Prevalence in the last six months in year 2022, Bilqiss Medika recorded VLU case in 13% of total wound cases.

A multidisciplinary team which may also be known as an interdisciplinary team is a group of specialists with all the skill sets appropriate to the management of a specified condition (JWC, 2018). ASEAN Guideline recommends competencies in cardiology intervention, vascular surgeon, endocrinology, wound care nursing and diabetic nursing, orthopedics and nephrology.

**Methods:** A case study. A man 65 years old, come outpatient clinic with a complaint wound in his right leg for more six months, client has comorbid obesity, hypertension, varicose vein and chronic venous insufficiency. Wound assessment; 10cm x 9cm outside malleolus and 10cm x 8cm in side malleolus, wound condition infected with purulent exudate and little slough tissue, hyperkeratosis and dry periskin, swelling extremity. Legs diagnostic invasive severe chronic venous insufficiency saphenous magna with reflux valve vein, varicose vein superficial malleolus, No DVT and good flow arteries, C6, Es, As, Pr classification. ABPI measure 0.9, TBI 0.91. Wound bed swabbing culture Staphylococcus aureus bacterial colonies.

Collaboration management multidiscipline with EVLT (Endo venous laser therapy) and antihypertension drugs done by cardiologist vascular intervention, double antibiotic clindamycin and cefixime oral given by internist, wound care management using TIME framework; sharp and safe debridement for tissue management technic, octenidine solution cleansing, iodisorb antimicrobial topical, moisture using hydro foam and calcium alginate base, edge of wound and

skin barrier protection using transparent film dressing, Ozon adjunctive therapy. The gold standard procedure for VLU using 3 layers bandaging high pressure 40-50mmhg.

**Results :** In collaboration multidiscipline management case of Venous leg ulcers causes severe Chronic venous insufficiency healing wound for seven weeks, maximizing the competence of valve vein to distribute blood flow to cardiac.

**Conclusion :** Important case management Venous leg ulcers need collaboration and multidiscipline for EVLT and antibiotic drug to support wound healing. In this case healing a chronic wound caused of CVI in seven weeks, also reduce recurrent cases VLU.

**Keywords:** Venous leg ulcers; multidiscipline.



## THE IMPORTANCE OF A DEDICATED SKINCARE ROUTINE IN THE PREVENTION OF HOSPITAL-ACQUIRED PRESSURE INJURY (HAPI) IN INTENSIVE CARE UNIT (ICU) PATIENTS

Harvinderjit Kaur A/P Bas auhra Singh<sup>1</sup>, Hasimah Zainol<sup>2</sup>, Dr Premela Naidu A/P Sitaram<sup>3</sup>, Prof Dr Hari Chandran<sup>4</sup>  
*University Malaya Medical Centre*

### ABSTRACT

**Background :** The largest organ in the body, the skin, but it is given less attention compare to heart, brain, liver, and lungs. Pressure injury (PIs) are common conditions among patients hospitalized in acute and chronic care facilities and impose a significant burden on patients, their relatives, and caregivers<sup>1</sup>. A pressure injury is defined as “an area of unrelieved pressure usually over a bony prominence leading to ischemia, cell death and tissue necrosis”<sup>2</sup>. Hospital-acquired pressure injury (HAPI) continues to be a risk to patients and the standard of care to prevent HAPI has been a continuous effort at hospitals.

**Objectives/Aims :** To evaluate the effectiveness of the inclusion of a dedicated skincare routine which includes skin barrier cream and hyper-oxygenated fatty acid (HOFA) based emollient in preventing hospital-acquired pressure injury (HAPI) in intensive care unit (ICU) patients.

**Material and methods :** A quasi-experimental before-and-after design was carried out from March 2020 – March 2021 for both the control group and the intervention group in the ICU. Patients recruited are patients that have a Braden score of 12 and below with no sign of imported PIs upon admission

**Results :** A sample of 76 patients was obtained (51 samples from the control group, and 25 samples from the intervention group). The challenge in recruiting more patients into the interventional group was due to the conversion of ICU beds for Covid 19 patients. From the samples, 7 patients from the control group developed stage 1 pressure injury on the fifth day of observation while none of the patients in the intervention group developed pressure injury.

**Conclusion :** A dedicated skincare regime that includes the skin barrier product and emollient is vital in preventing of hospital-acquired pressure injury (HAPI) in intensive care unit (ICU) patients.

## SKIN GRAFT WOUND TREATMENT

Hantiantoro Muhammad Imamul Khoiro, WOC(ET)N<sup>1</sup>, Triwidodo, CWCCA<sup>2</sup>

<sup>1</sup> Telaten Care Center Indonesia, <sup>2</sup> Rumah Luka Semarang Medika

Email: hantiantoro@gmail.com; Phone: +628996664180

### ABSTRACT

**Background:** Autologous skin grafting is one of procedures to achieve wound closure as mentioned in 2019 journal of wound care international concensus document. Unfortunately, there are some cases which cannot easily be healed. Some problems occur such as infected tissue and inappropriate wound management.

**Methods:** This study was done by using prospective cohort and presented as a case report. There were five cases in this study involving two recipient site wounds and three donor site wounds. This study used TIME (tissue management, infection control, moisture balance, and edge preparation) as treatment principles.

**Results:** All cases in this study showed positive results, the wound size significantly became smaller up till it was healed completely. The selection of primary and secondary dressing was based on the stability of the graft, the amount of exudate and the presence of infection. Even with the use of secondary intention healing method, it was possible to manage the recipient site wound and leave it to heal without the need to re-grafting the site.

**Conclusion:** TIME principles and appropriate dressing selection has a significant impact towards skin graft wound healing.

**Keywords:** autologous skin grafting, donor site, recipient site, TIME principles, wound dressing selection

## THE USE OF COLLOIDAL SILVER HYDROGEL AND ZINC CREAM ON INFECTED WOUND WITH THICK ADHERENT SLOUGH: A CASE STUDY

Nisrina Zakiya Ulfah, S.Kep. Ners

Private Practice Nursing, Depok, Indonesia

### ABSTRACT

**Background:** Infected wounds clinically present with edema, erythema, pain, warmth worsened malodor, purulent exudate, and systemic signs such as chills, fever, and leukocytosis. In an infected wound the bacteria multiply, healing is disrupted, and wound tissues are damaged. Slough is not necrotic tissue, but rather a complex mixture of fibrins, white blood cells, exudates, degraded extracellular matrix proteins, and bacteria. Slough is firmly adherent and may be dry or slightly moist. To allow the growth of healthy granulation tissue, the slough at the wound bed should be debrided and one of the methods is autolytic debridement. Proper dressing is mandatory to overcome infection and support autolytic debridement.

**Methods:** This study was a case study in one diabetic foot ulcer patient with an infected wound and thick adherent slough treated with zinc cream. In the fourth treatment, the colloidal silver hydrogel was mixed with zinc cream to suppress the spreading infection that occurred. The dressing was changed every 2 days. The secondary dressing used was island dressing and changed with polyurethane foam in the fourth treatment due to an increase of exudate.

**Results:** In the first to fourth treatment, signs of infection in the wound persisted and the infection began to spread indicated by nearby tissues became involved. In the fourth treatment colloidal silver hydrogel was added to the treatment and the same dressings were continued. After 2 weeks of using that mixture, infection decreased, wound bed preparation was achieved with reduced slough and granulation tissue increased up to 70%. Silver hydrogel stopped after that due to an increase in exudate.

**Conclusion:** Mixing colloidal silver hydrogel with zinc cream effectively decreases infection and promotes autolytic debridement. The mixture also supports autolytic debridement to dissolve slough and promote granulation tissue.

# DIABETIC FOOT ULCER WITH SEVERE NECROSIS AS A CHALLENGE FOR A WOCN: A SINGLE-CASE INSTRUMENTAL CASE STUDY

Indaryati, Tomi Saputra, Wawan Febri Ramdani

*Griya PUSPA Wound Care Yogyakarta*

## ABSTRACT

**Background:** A diabetic foot ulcer is a common complication of diabetes that occurs due to damage to the skin and underlying tissues. Generally, diabetic foot injuries start from the onset of wounds on the toes that can extend to damage the leg bones. It is a challenge for wound nurses when finding diabetic wounds with severe necrosis that require the removal of necrosis tissue or what we better known as Conservative Sharp Wound Debridement. Researchers found cases of DFU with total necrosis of the lower limbs, but the patient refused to be referred to a hospital or doctor.

**Methods:** This study used A single-case instrumental case study. The patient was treated under the independent care of a nurse, Griya Puspa, in March 2022.

**Results:** The case of diabetic foot ulcer in patient Mr.E, years old, is necrosis in all parts of the lower limbs (tarsals, metatarsals, and phalanges) as well as stage 4 wounds on the calf to the bottom of the patella with the appearance of tibia bones 17 cm long, pain scale 2. The wound has been hospitalized for more than one month and was performed twice for surgical debridement. Doctors offered the third debridement for transfemoral amputation, but the patient refused. Wound care is carried out by a nurse who has not been certified in Wound, Ostomy, and Continence Care (WOCN) for one month at the patient's home.

On a visit to the WOCN self-practice, the wound is treated with moisture to assist in the autolysis process. On the second visit, the lower limbs were getting looser and looser, almost removing the joints. Hence, WOCN decided to perform Conservative Sharp Wound Debridement (CSWD) to release the lower limbs that had been necrosis by Total. CSWD is done carefully, of course after the patient signs the inform concern. CSWD combined with autolytics in DFU with extensive necrosis successfully reaches the wound bed preparation with less pain, minimal bleeding and is cost effective.

**Conclusion:** Severe necrosis of the diabetic foot ulcer accompanied by a neuropathy condition can be overcome by a WOCN but must be based on an understanding of foot anatomy and considering the patient's mental readiness to lose part of his limbs.

**Keywords:** Diabetic Foot Ulcer; Necrosis; Debridement

## CASE STUDY: EFFECTIVENESS USING HOCL TO REDUCE BIO BURDEN (BIOFILM) IN PATIENT WITH PRESSURE INJURY ULCERS

Ns. Muhammad Fadli, S. kep Widasari Sri Gitarja, SKp., MARS, MM., WOC(ET)N  
Wocare Indonesia | [m.fadli.ifat@gmail.com](mailto:m.fadli.ifat@gmail.com)

### ABSTRACT

**Background:** HOCL is effective in reducing biofilm, a common cause of prolonged healing in chronic wounds. HOCL usually caused by pseudomonas and staphylococcus aureus. HOCL was used as cleansing agent to decrease bioburden of the wound. Biofilm itself was a formed colonization of microorganism which prevent wound to heal.

**Method:** The method used in this report is case study of a 71 years old male patient with story of 10 years of hypertension, 5 years of Diabetes Mellitus, and 4 years of osteomyelitis. The patient also has been immobilized for two years which is the cause of his pressure injury. HOCL was compressed to the wound using gauze for 15 minutes. Then, the wound was dressed using appropriate dressing based on its assessment. Dressing was changed every three days. Then it was evaluated after two times of use.

**Result:** The result showed that HOCL reduce significantly the biofilm in pressure injury. Odor, pain, and oedema was decreased. Biofilm was easy to remove after 15 minutes of compress, epithelialization increase by 0,5cm. in second evaluation the wound had 100% of epithelialization.

**Conclusion:** Using HOCL as cleansing agent by compressing it to wound surface improved pressure injury and biofilm. It accelerate wound healing process.

**Keyword:** HOCL, Biofilm, Bioburden, Pressure Injury

## **CASE STUDY: DIABETIC WOUND CARE USING A COMBINATION OF MODERN DRESSING AND BANANA LEAF DRESSING (BLD)**

**Ns. Ever Mario Lontaan. SKep, M.MKes,WOC(ET)N**

EverCare Woundcenter\_Tomohon, Sulut – Indonesia, [mariolontaan@yahoo.co.id](mailto:mariolontaan@yahoo.co.id)

### **ABSTRACT**

Diabetes mellitus is defined as a chronic metabolic disease with multi-etiology characterized by high blood glucose levels and altered carbohydrate metabolism. A diabetic foot ulcer is an open wound in the surface of the skin due to macroangiopathy, which leads to vascular insufficiency and neuropathy. WHO and the International Working Group on the Diabetic Foot define diabetic foot ulcer as a condition of ulcer, infection, or tissue damage related to neurology alteration and peripheral vascular disease on the lower limb.

Wound care based on TIME wound management refers to cleansing the wound using wound soap and mineral water or tap water, washing the wound using PHMB, and giving adjunctive therapy (ozone). As for the dressing, Banana leaf dressing (BLD) was used. This case of a 54 years old female with a history of Diabetes Mellitus, and renal failure complications. The initial assessment found Wounded ( date 27/June/2022) Necrotic 50%, Slough 50%, Exudate: hemo-purulent, odor, edema. Plan of healing (winner scale): 36 (8 weeks).

The result of the BLD dressing showed patient wound improvement despite prolonged healing due to complications of the disease. BLD decreased hyper granulation and support epithelization. In this case, BLD is a source of Flavonoid and Allantoin which has an anti-diabetic effect, antiinflammation, and antioxidant. Flavonoid essential in BLD was helpful in a patient with diabetes by managing blood glucose levels and preventing complications and Allantoin helps to wounds and skin irritations and stimulates the growth of healthy tissue.

**Keyword:** Diabetes Melitus, Banana Leaf Dressing

## RICH PLASMA PLATELET INJECTIONS THERAPY FOR THE STERILE WOUNDS IN THE KNEE JOINT WITH OSTEOARTHRITIS

Hendrian Chaniago<sup>1,2,\*</sup>, Muhammad Nasrum Massi<sup>3,4</sup>, Muhammad Andry  
Usman<sup>5</sup>, Muhammad Phetrus Johan<sup>5</sup>

Department of Orthopaedic and Traumatology, Bhayangkara Hospital,  
Makassar, Indonesia<sup>1</sup> Medical Faculty of Universitas Muslim Indonesia,  
Makassar, Indonesia<sup>2</sup>

Department of Clinical Microbiology, Faculty of Medicine, Hasanuddin University, Makassar,  
Indonesia<sup>3</sup> Molecular Biology and Immunology Laboratory, Faculty of Medicine, Hasanuddin  
University, Makassar, Indonesia<sup>4</sup>

Department of Orthopaedic, Faculty of Medicine, Hasanuddin University, Makassar, Indonesia<sup>5</sup>

**\*Corresponding author:** Department of Orthopaedic and Traumatology, Bhayangkara  
Hospital, Makassar, Indonesia. Email: hendrianchaniago@gmail.com,  
hendrian.chaniago@umi.ac.id

### ABSTRACT

**Background:** The use of intra-articular Platelet Rich Plasma (PRP) injection is an alternative option for sterile wound therapy in case of osteoarthritis of the knee joint.

**Methods:** We are reported the management of sterile wounds in case of knee joint Osteoarthritis using Platelet Rich Plasma (PRP) intra-articular injection therapy, with follow up 6 months after treatment.

**Results:** We report 7 patients who came to our department with complaints of pain in both knees, and received Platelet Rich Plasma (PRP) intra-articular injections. The mean complaints of pain 3 years, after a follow-up of 3 and 6 months. the complaints of pain decreased significantly to an average of 1-2/10 (4.64), VAS (Visual Analogue Scale).

**Conclusions:** Intra-articular injection therapy using Platelet Rich Plasma (PRP) are significantly reduced knee pain due to sterile wounds that occur in osteoarthritis knee joints.

**Keywords:** Osteoarthritis, Sterile Wounds, Platelet Rich Plasma, VAS.

## THE RELATIONSHIP BETWEEN NURSE'S SELF-EFFICIENCY AND PATIENT SATISFACTION at the EMERGENCY DEPARTMENT

**Nisfu Laili<sup>1</sup>, Dania Shofiyani<sup>2</sup>, Hamka<sup>3</sup>, I'ien Noer'aini<sup>2</sup>, Arlies Zenitha Victoria<sup>2</sup>**

<sup>1</sup>Asyifa' Care Centre Malang, <sup>2</sup>Stikes Telogorejo Semarang, <sup>3</sup>Akper Batari Toja Watampone

### ABSTRACT

**Background:** Nurses' self-efficiency may take control in a dire situation and may yield a higher level of patient satisfaction. The quality of services may be illustrated by provision of nursing care by the hospital staff themselves.

**Aim:** The purpose of this study is to demonstrate the relationship between nurses' self-efficacy and patient satisfaction.

**Methods:** The design of this study is descriptive correlation with cross-sectional approach. The number of samples in this study is 70. To measure self-efficacy, we use General Self-Efficacy (GSE) question forms, whereas and to measure patient satisfaction, we compose qualitative satisfactory-related questions.

**Results:** The results imply that nurses' self-efficacy is in good standing in as many as 8 respondents (40%), and as many as 35 respondents (70%) are very satisfied. Statistical test showed that self-efficacy is related to patient satisfaction ( $p$ -value = 0.028 and  $r = 0.906$ ).

**Conclusion:** Nurses should strive for a good level of self-efficacy to provide better service in order to gain the highest level of patient satisfaction.

**Keywords:** self-efficacy, health service, health education.

## THE EFFECT OF HYPERTENSION DIET EDUCATION ON KNOWLEDGE LEVEL AND DIET MOTIVATION OF HYPERTENSION PATIENTS

Irawati<sup>1</sup>, Riska Novi A<sup>2</sup>, Hamka<sup>1</sup>, Danny Putri S<sup>2</sup>, Nugroho Lazuardi<sup>2</sup>, Andi Artifasari<sup>1</sup>  
<sup>1</sup>Akper Batari Toja Watampone, <sup>2</sup>Stikes Telogorejo Semarang.

### ABSTRACT

**Background:** Hypertension is a cardiovascular disease characterized by an increase in systolic pressure 140 mmHg and diastolic pressure 90 mmHg. This disease is often called the silent killer disease, where sufferers rarely feel signs and symptoms but when diagnosed there are already complications that accompany it. Complications of hypertension can be prevented and controlled through efforts to improve health promotion, one of which is the provision of hypertension diet education.

**Objective:** This study aims to determine the effect of providing education on hypertension diet on the knowledge and motivation of diet for hypertension sufferers at the Dadapayam Health Center.

**Methods:** This study used a quasi-experimental approach with a pre-post-test design group involving 62 respondents through a purposive sampling technique. Statistical analysis of this study used the Wilcoxon signed rank test.

**Result:** There is an effect of education on hypertension diet on the level of knowledge and motivation of diet for hypertension sufferers at the Dadapayam Health Center (p-value 0.000).

**Conclusion:** The importance of the role of health workers to provide education on hypertension diet to patients with hypertension to improve the ability to take good care of themselves.

**Keywords:** Education and counseling, Health services, Hypertension

# THE ECONOMIC ASPECT OF WOUND CARE FROM THE PERSPECTIVE OF: COST EFFECTIVENESS, CARE SUSTAINABILITY, AND RISK REDUCTION

Ahmad Hasyim Wibisono<sup>1</sup>, Ayu Nanda Lestari<sup>2</sup>

<sup>1</sup> Department Of Nursing Universitas Brawijaya

<sup>2</sup> Pedis Care Nursing Center, Malang

## ABSTRACT

**Background:** The evolving technologies and methods in wound care has led wound clinician worldwide to a rapidly improving wound care strategies to improve patient outcomes. A dramatic transformation has been witnessed, from the traditional or so called conventional to modern wound care that focuses on the unique conditions encountered across patients. The use of moisture management concept, infection control, debridement methods, as well as adjunctive treatments make wound care become one of the most innovative field in healthcare. However different issues and questions are raised in different countries about the cost effectiveness, economic burden to patients, and how significant the outcomes are

**Aim:** This abstract aims to provide elaboration on how recent advances in wound care have brought positive impacts in terms of cost effectiveness, care sustainability, and risk reduction

**Method:** A scoping review method was used to generate latest evidence, and elaborate the findings from reliable sources

**Results:** There are many benefits that emerge as the result of wound care innovations and improvements towards wound care practices. These benefits include: (1) Optimal infection control, (2) increased efficiency in nonviable tissue management, (3) accelerated tissue regeneration, (4) reduced length of care, (5) reduced treatment frequency, and (6) decreased complication incidence.

**Discussion:** With robust benefits offered by modern wound care materials and methods, it is undeniable that positive direction is on its way. Despite the increased cost per treatment that emerge, the total expenditure for the whole wound care course is surprisingly lower. This, in addition to better clinical outcomes and reduced amputation rate, urges wound clinician to continually upgrade their knowledge and skills.

**Conclusions:** Recent advances in wound care has brought new lights towards a better practice and ultimately patient outcomes

**Keywords:** wound care advancement, cost effectiveness, clinical outcomes, continuous education

## MODERN DRESSING WOUND TREATMENT USING ZINC OINTMENT ON HEALING DIABETIC ULCER

Shanty Chloranyta<sup>1</sup>, Rusmala Dewi<sup>2</sup>, Vika Putri Anggraeni<sup>3</sup>  
STIKes Panca Bhakti Bandar Lampung  
E-mail: [Shanty@pancabhakti.ac.id](mailto:Shanty@pancabhakti.ac.id)

### ABSTRACT

**Background :** Chronic hyperglycemia in diabetes increases the risk of various complications. One of the complications that often occurs is diabetic ulcers. Improper ulcer care increases the risk of amputation. Modern dressings with moist principles using zinc ointment can improve the healing of diabetic ulcers.

**Aim :** The purpose of this study was to determine the treatment of modern wound dressings using zinc ointment on diabetic wound healing.

**Method :** Case study research method, number of respondents 2. The research was conducted at the Lampung Wound Care Clinic, for 30 days from 20 June-20 July 2022. The research instrument was the Bates Jansen Wound Assessment Tool (BWAT).

**Result :** The results showed that there was an increase in the healing of diabetic ulcers in Mr. M. The initial score of BWAT 37 days to 30 changed the BWAT score to 29, while in Mrs.L the initial BWAT score from 33 days to 30 BWAT scores became 30.

**Conclusion :** Conclusion of modern wound care dressings using zinc ointment proven effective in improving the healing of diabetic ulcers. It is hoped that the modern wound care method using zinc ointment can be applied to all health services in order to improve wound healing in patients.

**Keywords:** hyperglycemia chronic, modern dressing, wound healing, zinc ointment

## TREATMENT OF CELLULITIS (TALASE) IN OUTPATIENT AT HEALTH FACILITIES : CASE STUDY

**Author : Ns. Nila Indrayati, M.Kep, WOC(ET)N**  
Raditya Medical Center, Depok-West Java, Indonesia  
[Nilaindrayati525@gmail.com](mailto:Nilaindrayati525@gmail.com)

### ABSTRACT

**Introduction:** Cellulitis is an inflammation of the dermis and subcutaneous tissue with severity ranging from mild to life-threatening because its to easy progress to sepsis. Cellulitis is characterized by erythema, swelling, high fever, and pain. The causative factors include trauma (insect bites, scratching, or post-surgery), immunosuppression, old age, diabetes, obesity, and smoking. The most common bacterial agents are Staphylococcus aureus, group A Streptococcus, Escherichia coli, and other anaerobic enterobacteria.

**Methods:** A case report of a 53-year-old female patient with a diagnosis of cellulitis, SIRS condition, unstaged initial wound, and complications of obesity, anemia, and hepatitis B.

**Discussion:** Management of Cellulitis (TALASE) is handling deficits in immunity, circulation, and skin integrity so that the patient can recover according to the target time (Winner Scale) within 9 weeks. Recommendation: Cellulitis patients who were originally only able treated in hospitals, have proven to be able treated in outpatient health facilities by collaboration in establishing the right diagnosis and treatment using "TALASE".

**Keywords:** Immunity, Skin Integrity, Cellulitis, Circulation

## WOUND MANAGEMENT OF INFECTION WITH IMMUNE DISEASE

Rossy Januar Halim Abdulgani, S,Kep., Ners., MMRS., WOC(ET)N

### ABSTRACT

**Background :** Autoimmune is an immune response to tissue antigens itself. Autoimmune caused by the failure of normal mechanisms that roled in maintaining the self tolerance of B cells, T cells, or both. Systemic autoimmune diseases have a chronic trajectory and share characteristics that can cause inflammation, as well as other clinical aspects. Wound infection is the invasion of wounds by microorganisms that proliferate to a level that elicits a local and/or systemic response in the devotee. The presence of microorganisms in the wound causes local tissue damage and inhibits wound healing. Intervention is generally necessary to assist the host's defense in destroying the invading microorganisms.

**Aim :** This study aims to describe the management of infectious wound management in patients with a decreased immune system (Autoimmune Disease).

**Result :** The results showed that the implementation of a good infection wound management protocol will prevent death and will speed up the wound healing process.

**Keywords :** Autoimmune, Wound Infection, Wound Management Infection

# THE EFFECT OF PHYSICAL ACTIVITY AND EXERCISE FOR HEALTHY FEET AND ANKLE ON THE PREVENTION OF NUMBNESS AND ULCER ON DM TYPE 2 PATIENTS; A REVIEW OF LITERATURE

Asrizal<sup>1</sup>, Mara Sonang Daulay<sup>2</sup>, M. Ihsan<sup>2</sup>

<sup>1,2</sup> Asri WOC Center Medan

[asrizal1510@gmail.com](mailto:asrizal1510@gmail.com)

## ABSTRACT

**Background:** Diabetic neuropathy is one of the complications of diabetes mellitus which has a high risk of microvascular disorders. As a result, there will be a decrease in sensory in the feet, resulting in foot ulcers. Exercises that involve the legs and mobility to strengthen the function of the feet, ankles, and lower extremities. Diabetes gymnastics is a series of movements for diabetics that are performed to improve blood circulation in the legs while avoiding tingling, numbness, and sores.

**Aim:** to prevent the development or the progression of risk factors for numbness and foot ulcer.

**Methods:** Physical activity includes all movement that increases energy use, whereas exercise is planned, structured physical activity. Activities such as walking, cycling, jogging, and swimming rely primarily on aerobic energy-producing systems. Exercise involves repeated and continuous movement of large muscle groups. Structured lifestyle interventions that include at least 150 min/week of physical activity and dietary changes resulting in weight loss of 5%–7% are recommended to prevent or delay the onset of type 2 diabetes in populations at high risk and with prediabetes.

**Results:** Physical activity and exercise, if done according to standards, will have an impact on results by being able to control blood sugar levels, weight, and emotions. Likewise, other effects that can be felt by patients are blood pressure can be more stable, heart problems will be lighter, stress levels will be lower, and last but not least is to avoid the risk of diabetic foot injury.

**Conclusion:** Exercise is an effective non-pharmacological intervention to improve diabetic foot-related outcomes. Combined multi-disciplinary care is more effective in preventing foot complications in diabetic patients.

**Keywords:** Exercise, Foot Numbness, Foot Ulcer, DM T-2

## EFFECTIVENESS OF TYPE 2 DIABETES WOUND TREATMENT WITH HYALURONIC ACID AND SILVER SULFAZIADINE CREAM

Ns. Munawar, S.Kep.,CWCC

CEO of Istiqamah Wocare Center, Aceh Indonesia

[nursemunawar@gmail.com](mailto:nursemunawar@gmail.com)

### ABSTRACT

**Background:** Wounds are the interruption of the continuity of a tissue due to an injury or surgery. Hyaluronic Acid and Silver Sulvadiazine cream as primary dressing for autolytic debridement and antimicrobial processes in wound care.

**Objective:** This case study aims to provide an overview of the application of Hyaluronic Acid and Silver Sulvadiazine cream as a primary dressing in the treatment of type 2 diabetes wounds.

**Case Study :** Elderly aged 76 years with complaints of postoperative type 2 diabetes wound on the right leg. Stage 4-5 wound, wound size >80 cm. Wound presentation 10% necrotic tissue, 60% sloughy tissue, 30% granulation a lot of wound fluid. The results of the examination showed that the ankle joint was loose and he patient was completely bedridden and physically weak. Wounds are treated with TIME management. tissue management; removal of necrotic and sloughy tissue by autolysis debridement using Hyaluronic Acid and Silver Sulvadiazine cream. Inflammation and Infection control; washing the wound with normal saline 0.9% and antiseptic gel, compressing 0.1% polyhexamethylene biguanide (PHMB) for +-5 minutes, Moisture balance; primarily dressing Hyaluronic Acid dan Silver Sulvadiazine cream, secondary dressing; gauze, orthopedic wool, and cohesive bandage. Edge epithelization; nutritional support sufficient calories and protein. The dressing was changed the next 3-4 days, within 6 weeks of treatment the wound had 100% granulation, and in he next 10 week the wound had shown 80% epithelialization.

**Discussion:** The process of autolysis of 100% necrotic tissue debridement in 3-4 weeks with Hyaluronic Acid and Silver Sulvadiazine cream, the wound showed 80% epithelialization within 16 weeks.

**Conclusion:** Hyaluronic Acid and Silver Sulvadiazine cream are effective in helping the autolysis process of necrotic and sloughy tissue, Hyaluronic Acid and Silver Sulvadiazine cream are also effective in accelerating the process of granulation and epithelialization of wounds.

**Keywords:** Type 2 Diabetes Wound; Hyaluronic Acid dan Silver Sulvadiazine cream

## CASE STUDY: APPLICATION OF THE USING MODERN DRESSING WITH COMPLEMENTARY DRESSING (BANANA LEAF DRESSING – BLD) IN THE CARE OF CHRONIC WOUND ULCUSES IN DIABETES MELLITUS

Ns. Melanthon Junaedi Umboh, S. Kep, M. Kes

Eza Care Indonesia, Tahuna, Sangihe Islands Regency, North Sulawesi - Indonesia

[melanthonjunaediumbogh@gmail.com](mailto:melanthonjunaediumbogh@gmail.com)

### ABSTRACT

**Background :** *Chronic Wounds* are wounds that are difficult to heal due to disruption of wound healing by systemic, local, and other factors so that the wound does not heal according to the standard wound healing time. Diabetes Mellitus (DM) is a chronic metabolic disease or disorder with multiple etiologies characterized by high blood sugar levels and disturbances in carbohydrate metabolism. Characteristics of diabetic wounds include changes in skin condition, varying wound depths, varying amounts of exudate, edema, warm peri wound skin, infection, reduced reflexes / less sensitivity, impaired walking, palpable peripheral pulses, normal capillary refill, location usually found on: heels, fingers, plantar, phalanges, metatarsal.

**Aim :** The purpose of this study was to determine the effects of BLD usage in the treatment of diabetic ulcer chronic wounds.

**Method :** T.I.M.E management was the method used in wound care on patient Mrs. N.S, aged 71 years, with diabetic ulcers, wound condition before wound bed treatment: Necrotic 50%, Slough 50%, exudate: hemopurulent, odor, edema. Plan of Healing (winners scale) 36 or 8 weeks, by applying Tissue Management, Inflammation Control, Moisture Balance, and Epithelial Edge, which were: washing the wound using pre-boiled guava leaves water, wound soap, then rinsing with PHMB liquid and drying it, then using ozone therapy then wrapping the wound with Banana Leaf Dressing – BLD as a primary dressing and layering with a modern dressing that was low absorbent exudate.

**Result :** In this case, BLD was the source of flavonoid which had anti-inflammation, anti-diabetic and anti-oxidant properties. The wound care results using a combination of complementary treatments and modern dressings were very effective and efficient, as evidenced in the treatment on 23rd of June, 2022, the wound development was good, the granulation was red. And on 25th of June, 2022, the process of epithelialization of wound healing was rapid. On the other hand, this method was very simple.

**Conclusion :** The raw materials for banana leaves were abundant and easy to get. This also reduced the cost of wound treatment by using modern dressings, which was relatively expensive for low-income or disadvantaged people.

**Keywords:** Wound, Diabetes Mellitus, BLD

## DIABETIC FOOT ULCER MANAGEMENT USING ZINC CREAM IN PRIVATE PRACTICE SETTING

**Ns. Isman Santoso, S. Kep**

Tanah Bumbu, Kalimantan Selatan - Indonesia

[Ismansantoso89@gmail.com](mailto:Ismansantoso89@gmail.com)

### ABSTRACT

**Introduction:** Diabetic foot is a chronic wound that is very difficult to treat with various factors, one of the causes is increased blood sugar levels and bacterial infections. Zinc cream has antibacterial properties (bacteriostatic and bactericidal) and has a moisturizing effect because it is oil-based, so it can overcome infection faster and accelerate the wound healing process.

**Aim :** Overcoming infections in diabetic feet by using zinc cream and secondary dressing with the TIME management application

**Methods :**Case study in patients with diabetic ulcers, with zinc cream application as a primary dressing and foam application, wound care was carried out every 3 days, maintenance debridement and cleaning with antiseptic, to assess wound development, wound care was carried out every 3 days.

**Results:** Mr. JE, 63 years old with diabetic ulcer, wound condition before woundbed treatment: Necrotic 10%, red 40%, Slough 50%, Exudate: hemopurulent, odor, edema. The infection began to decrease in the 2nd week of wound care at the 4th meeting with a decrease in inflammation, the granulation process took place on the 3rd week of the 7th meeting wound treatment with the start of reducing the size of the wound, the epithelial formation process on the 12th week of the 21st wound care treatment with the formation of a layer of skin .

**Conclusion:** Zinc cream is effective in the treatment of infected wounds as a primary dressing, zinc cream is antibacterial and creates moisture, and stimulates tissue granulation and epithelialization.

# IMPLEMENTATION OF CEDEXOMER IODINE AND POLYHEXAMHETYLENE BIGUANIDE TO REDUCE INFECTION ON THE HEALING CHRONIC VENOUS LEG ULCERS: A CASE REPORT

Asmat Burhan<sup>1,\*</sup>

1 University of Harapan Bangsa Purwokerto

\*Corresponding author. Email: [asmatburhan@uhb.ac.id](mailto:asmatburhan@uhb.ac.id)

## ABSTRACT

**Background:** Chronic Venous Leg Ulcers (CVLUs) are vascular diseases and require complex wound care from patient factors, wounds, health professionals, and dressings. Cadexomer Iodine and Polyhexamethylene Biguade are broad-spectrum antimicrobial and wound-washing fluids. Infection if not controlled will be a shrinkage of wound recovery due to the activity of bacteria or plankton from the biofilm stage, contamination, colonization, and critical colonization, which will cause damage to granulated tissue, and the formation of odor. CVLUs cause the flow of venous veins to be disrupted so that edema and plasma leaks occur so that excess exudation on the surface of the wound can trigger the occurrence of maceration and widespread scale of wounds. So that the transmission of angiogenesis in the network is shackled due to the activity of bacteria and prolongs the healing of CVLUs the use of CI and PHMB can inhibit the process of evolving bacteria, biofilm control decreases exudate so that delays in wound healing do not occur.

**Aim:** Knowing the combined effect of Cadexomer Iodine and Polyhexamethylene Biguade on the healing process of Chronic Venous Leg Ulcers.

**Method:** This study is a case study, using samples of chronic venous leg ulcers, with designs pre-test - post-test, CVLUs patients get topical antimicrobial intervention cadexomer iodine and wash wounds using Polyhexamethylene Biguade on the wound surface during 8 weeks treatment to control wound infection. Assessment of wound healing results using Bates Jensen Wound Assessment Tool instrument.

**Result:** The combination of Cadexomer Iodine and Polyhexamethylene Biguade has been shown to improve the wound-healing process of CVLUs by controlling wound infections. In the second week, the size of the wound was 26cmx15cm with slough tissue has been reduced, and achieved a partial red base wound in the third week of stage 4 wounds, with a decrease in slough, and an increase in granulation of 75%.

**Conclusion :** The treatment of the edges merges with the surface of the wound and epithelialization increases. During treatment week five, there is no slough with the surface of the wound red surface and the depth of the wound stage 3, all areas of the wound edge fused, edema and erythema reduced inwards, seventh treatment growth scale wound size 7cmx4cm, stage of the wound into satay 2 and a significant increase epitalization to 75%.

**Keywords:** venous leg ulcer 1, infection control 2, wound healing 3

# RISK FACTORS FOR PRESSURE INJURY IN CARDIOVASCULAR INTENSIVE CARE UNIT PATIENTS: A SYSTEMATIC REVIEW

**Marina Ulfa**

Pro Emergency, [marinaulfaetn@gmail.com](mailto:marinaulfaetn@gmail.com)

## ABSTRACT

**Background :** Pressure injury represents a significant problem for patients, professionals, and health systems. Their reported incidence and prevalence are significant worldwide. A pressure injury is recognized as an adverse event occurring in healthcare settings. Patients in intensive care are at high risk of developing a pressure injury. Cardiac patients are also among those at higher risk.

**Objective :** To identify risk factors associated with the occurrence of pressure injury in cardiovascular intensive care unit patients.

**Method:** The PRISMA Declaration recommendations have been followed and adapted to studies identifying risk factors. We searched the following databases: Google Scholar, ClinicalKey, Science Direct, and ProQuest.

**Results :** Of 171 abstracts reviewed, 20 were identified as potentially eligible and 5 fulfilled eligibility criteria. Age, mobility/activity, perfusion, and vasopressor infusion emerged as important risk factors for pressure injury development, whereas results for risk categories that are theoretically important, including nutrition, surgery time, body temperature at the time of ICU adm, use of a mechanical ventilator, use of vasopressors, use of sedative drugs, and ECMO treatment. Methodological limitations across studies limited the generalizability of the results, and future research is needed, particularly to evaluate risk conferred by altered nutrition and skin/pressure injury status, and to further elucidate the effects of perfusion-related variables.

**Conclusions :** In summary, this study found that cardiac surgery, operation time, use of a mechanical ventilator, use of vasoconstrictors, use of sedative drugs, body temperature at ICU admission, and ECMO treatment are significant risk factors for pressure injury. Our findings can be used to create nursing interventions that aim to prevent pressure injury in cardiovascular surgical ICU/CCU patients who are particularly at a high risk of developing it.

# THE EFFECTIVENESS OF PINEAPPLE FIBER APPLICATION ON WOUND BED PREPARATION AND REDUCTION INFECTION LEVEL OF DIABETIC FOOT ULCER

Ns Alhuda, S.Kep. M.Kes. WOC (ET)N

CEO Alhuda Wound Care Lhokseumawe, Aceh Indonesia

[alhuda\\_ahonk@yahoo.com](mailto:alhuda_ahonk@yahoo.com)

## ABSTRACT

**Background:** Diabetic foot injury is a type of chronic wound that is at risk of infection and requires prolonged wound healing. Pineapple fiber is one of the primary dressings for the autolysis debridement process and that can be used on various chronic infected wounds and gangrene. This case study aims to provide an overview of the Application of Pineapple Fiber for Wound Bed Preparation in Diabetic Foot Ulcers.

**Method of the Research:** A 55-year-old man, Mr. IH, complained of rot on the back of his foot and right toes. The initial wound appeared like water bubbles and turned black 2 weeks ago. The patient had a history of Diabetes Militus for 10 years. On physical examination, there are wounds on the back and right toes, stage 4 with a size of 8 cm x 5 cm, the presentation of the wound color is 40% yellow, 60% black, and purulent exudate. There are signs of infection. In patients with GDS 320 gr/dl, the increase of leukocytes is 14,000 / mm<sup>3</sup>, and Hb is 9 gr/dl.

**Result :** The wound was treated with Tissue management Inflammation and Infection control, Moisture Balance, and Edge epithelialization (TIME) Management. Tissue management: Removal of necrotic tissue using the Mechanical Debridement type Conservative Sharp Wound Debridement (CSWD) method followed by autolysis debridement using Pineapple Fiber. Inflammation and Infection control: Washing the wound with antiseptic tile soap, PHMB Compress, Moisture Balance: Pineapple Fiber primary dressing, secondary dressing gauze foam, and fixated using Orthopedic Wool and Crepe Bandage. Edge epithelialization; Provide high nutritional support for Protein and Calories, change the dressing 2 days later.

**Discussion:** Wounds show 80% granulation results within 2 weeks, and 100% within 3 weeks. Whereas in general granulation in chronic wounds will form in 2-4 weeks.

**Conclusion:** The application of Pineapple Fiber is very effective for Wound Bed Preparation and Reduction Infection level in Diabetic Foot Ulcers.

**Keywords:** Pineapple Fiber: Wound Bed Preparation and Reduction Infection Diabetic Foot Ulcer.

## ROLE OF RED FRUIT (PANDANUS CONOIDEUS) TOWARDS PSORIASIS

Elvi Oktarina, M.Kep., Ns.Sp.Kep.M.B., RN., WOC(ET)N

DD Care, Padang, West Sumatera  
Faculty of Nursing, Universitas Andalas

### ABSTRACT

**Background :** Red Fruit (Pandanus Conindeus Lam) is a native plant from the Provinces of Papua Indonesia and Papua Guinea. This fruit is 68-110 cm in size and 10-15 cm in diameter is red and contains  $\alpha$ -Carotene,  $\beta$ -Carotene,  $\beta$ -Cryptoxanthine, Vitamin E, Oleic Acid, and Linoleic Acid. Psoriasis is a multisystem inflammation in which cellular changes occur in the skin, and hyperplasia of epidermal cell keratinocytes which are also called disorders caused by the immune system. Even though the incidence of psoriasis is low, 59.9 per 100,000 per year or 1-6% of the world's population, the effects or signs felt by patients are a pain in the skin in the form of spots, even to the joints, itching like burning. This condition makes the patient unable to carry out activities, experience sleep disturbances, and patient hygiene is not met.

**Aim :** The purpose of this study was to see the effect of Red Fruit (pandanus Conoideus Lam) in dealing with complaints of Psoriasis patients.

**Methods :** Case Study of a woman, 36 years old. Diagnosed with Psoriasis 3 months ago and has been given medical therapy but there has been no change. In the study, white spots appeared on all parts of the body's skin accompanied by grade 2 injuries, the patient stated that he currently felt Scale 7 pain in the skin and joints when walking, especially when splashed with water, the patient said he could not sleep with the current condition so the patient was only in the room. The triggering factor for this complaint is the burden of the mind. Nursing management carried out on patients is the patient is bathed with Red Fruit (Pandanus Conoideus Lam) to overcome Hygiene Then given Red Fruit Lotion (Pandanus Conoideus Lam) on all skin that has psoriasis spots and Zinc Oxide to treat wounds, to reduce patient pain relaxation and distraction techniques are carried out

**Result :** The results obtained after the 6th day of using Red Fruit (Pandanus Conoideus Lam), reduced spots on the patient's skin, reduced the pain of Scale 3 throughout the body including when walking, wounds healed and patients can walk out of the room, and do activities around the house. On day 16 the patient was able to return to daily activities and work again.

**Conclusion :** Red fruit (Pandanus Conoideus Lam) is a fruit that can treat psoriasis by breaking up hyperplasia of epidermal cell keratinocytes besides being important for nurses to assist psoriasis patients in overcoming the causes of patient complaints.

**Keywords:** Red Fruit, Pandanus Conoideus, Papua, Psoriasis

## CASE STUDY: CHRONIC WOUND CARE WITH BONE EXPOSED USING FIBERCELLE DRESSING

Indaryati, Tomi Saputra, Dwi Lita  
Griya PUSPA Wound Care Yogyakarta

### ABSTRACT

**Background:** Stage 4 chronic wounds with bone sightings are at high risk of osteomyelitis, which requires amputation and, if not treated properly, can lead to other complications, such as sepsis, to the point of causing death. Good and correct treatment, namely choosing the right wound dressing, is one of the keys to minimizing the risk of complications. Therefore, this case report aims to see the progress of wound care in a chronic wound with bone exposed using fiberelle dressing.

**Methods:** This study used a case report. This case is on one of the patients who carried out wound care at the Griya Puspa Nurse Independent Practice in Yogyakarta. The treatment of the wounds reported in this case report is from May 24 to August 18, 2022. The progress of the case was analyzed using photos of wounds in each treatment.

**Results:** The result of this case study was in Mr. E, 62 years old, with Diabetic Foot Ulcer after amputation of the lower limbs with stage 5 wounds (Wagner scale) with the appearance of tibia bones 17 cm x 3 cm long. Blood sugar levels are controlled with anti-diabetic drugs, insulin 14 units/8 hours: support antibiotics, analgesics, multivitamins, and protein supplements. The patient has a history disease of anemia and hypoalbuminemia. Wound dimensions: 13 x 5 x 0.7 cm, the base of the wound is red, many exudates, pain scale 4. Wound treatment is carried out twice a week using some dressings, namely hydrogel, Fiberelle, Metcovazin cream, foam, and gauze. Treatment using Fiberelle starts on May 24 to August 18, 2022, with good results, namely the growth of granulations on visible bones. Before using Fiberelle, the proliferation phase of the bone was stagnant. Unfortunately, we were unaware of the progression of the wound as the treatment was continued by the other nurses.

**Conclusion:** Treatment of chronic wounds of degree 4 using Fiberelle as a secondary dressing has been proven effective in optimizing moisture so that granulation grows on the bones.

**Keywords:** Diabetic Foot Ulcer; bone expose; wound care, advanced dressing

## THE CHALLENGES OF TREATING AN EXTENSIVE SKIN GRAFT WOUND WITH VARIOUS FACTORS INHIBITING WOUND HEALING

Indaryati, Moh Hidayat, Wawan Febri  
Griya PUSPA Wound Care Yogyakarta

### ABSTRACT

**Background:** Split-Thickness Skin Graft (STSG) skin graft procedure, is a skin graft procedure that involves the epidermis and part of the dermis, This is done to close a large wound in the hope that the wound will heal faster than natural healing through the epithelialization phase. After the STSG procedure, good wound care is needed to provide optimal protection for the wound from environmental influences, pathogens, temperature, and excessive water loss. Extensive skin grafts are a challenge for a wound nurse.

**Methods:** A retrospective case study

**Results:** An STSG was performed on 46 years old Mrs. P with a donor site of 1/3 of the skin of the lower thigh and the recipient was the entire right leg. Mrs. P had a wound with extensive skin damage due to a traffic accident, and no history of diabetes. Anemia and hypoalbuminemia are resolved when the client is in the hospital, but socio-economic conditions are constrained so that inadequate nutritional intake allows anemia and hypoalbuminemia to occur again. Inadequate sanitation and personal hygiene are a high risk of infection. Psychological stress due to lack of family support also has the potential to be an obstacle to healing.

Wound care started on April 12, 2019, after more than 1 month the patient was hospitalized by applying the moist concept using various dressings such as calcium alginate, Intrasite gel, Metchovazine cream, iodisorb powder as anti-microbial, Melolin and Alevyn as secondary dressings, gauze, orthopedic wool, and crepe bandage. Wound cleansing using special soap for wounds, boiled water followed by PHMB compresses. Oral albumin, multivitamin, and mineral supplements were also given psychoeducation to support the healing process.

**Conclusion:** Post-STSG chronic wound care using a moist concept and a comprehensive nursing approach gives good results, namely healing within 22 weeks (12-4-2018 to 23-8-2018) although there are many inhibiting factors for wound healing, namely extensive wound conditions, inadequate nutritional intake, poor economic conditions, poor sanitation, and personal hygiene, and psychosocial stress on clients.

**Keywords:** skin grafts, moist wound care, inhibiting factors wound healing

## WOUND CARE AND MANAGEMENT IN THE CASE OF EXPOSED BONE

Nisfu Laili<sup>1</sup>, Hamka<sup>2</sup>, Alfian Mas'ud<sup>2</sup>, Mardiana<sup>2</sup>, Siti Lestari<sup>3</sup>

<sup>1</sup>Asyifa' Care Centre, Malang, Indonesia. <sup>2</sup>Akper Batari Toja Watampone, South Sulawesi, Indonesia. <sup>3</sup>Stikes Telogorejo Semarang

### ABSTRACT

**Background:** Wounds with exposed bone/s are unique obstacles in the wound-healing phase, due to deep tissue damage and lack of mobilization. Such a case is an interesting topic to discuss among wound care clinicians.

**Methods:** This research is a case study of 10 wounds with exposed-bone. The treatment is based on the principle of moist wound healing -- minimizing bone exposure with StarAg® hydrogel, lanolin-based zinc cream, and garlic oil-based zinc.

**Results:** Four-time daily wound care with the aforementioned principle demonstrated healing progress on the fifteenth day.

**Conclusion:** StarAg® hydrogel creates moisture balance and prevents bones from drying out, whereas the combination of silver and lanolin or garlic oil may control infection.

**Keywords:** exposed bone, moist wound healing, StarAg® hydrogel, lanolin zolve, garlic-oil zolve.

## PHENOMENOLOGY STUDY: EXPERIENCE OF FRESH GRADUATED HEALTH STUDENTS IN PARTICIPATING IN ENTREPRENEUR TRAINING

Tioma Naibaho<sup>1</sup>, Hamka<sup>2</sup>, Danny Putri Sulistyaningrum<sup>3</sup>, Rusmayati<sup>3</sup>, Siti Mukaromah<sup>4</sup>  
<sup>1</sup>Akper Pelni Jakarta, <sup>2</sup>Akper Batari Toja Watampone <sup>3</sup>Stikes Telogorejo Semarang, <sup>4</sup>ITKes Wiyata Husada Samarinda

### ABSTRACT

**Background:** Becoming a graduate health student is an opportunity that leads to definite job opportunities in the health sector. However, the large number of graduates and the lack of employment opportunities make graduates healthy students have a high chance of becoming unemployed. Entrepreneur training is one solution to create the mindset of graduates to choose to become entrepreneurs.

**Aim:** This study explores the experiences of students participating in entrepreneurial training.

**Methods:** Qualitative research with a phenomenological study approach was delivered to 45 participants using the padlet application as an initial stage, after which in-depth interviews were conducted regarding how they felt after participating in the entrepreneur training. Results: this study, obtained 3 themes as a result of the study, namely; (1) Feelings are motivated, grateful, and open insight; (2) Feeling the material is useful, interesting, not available during lectures and the delivery of fun information; (3) Experience getting new knowledge about the steps to starting a business, ideas, finding opportunities, financial management, business development, and becoming a successful person.

**Conclusion:** Entrepreneurship training in the fresh graduate phase is the best knowledge provision for graduates of health students in responding to opportunities.

**Keywords:** Entrepreneur, Health Student Graduate, Entrepreneur Training

## EFFECTIVITY OF ACTICOAT FLEX 3, KILLBAC AND ALLEVYN DRESSING IN MANAGING BACTERIAL RESISTANT CHRONIC WOUNDS POST AMPUTATION

Noorman Wahyu Arfany

Wound Practitioners Nurse at Semarang Medical Center Telogorejo Hospital

### ABSTRACT

**Background:** The Antibiotic resistant bacteria are a major concern to wound care because of their ability to resist many of the antibiotics used today to treat infections. Consequently, other antimicrobials in particular ionic silver, are considered ideal topical agents for effectively helping to manage and prevent local infection. Acticoat flex 3 is a silver impregnated dressing facilitating the delivery of silver to the wound surface. It contains nanocrystalline silver which when moistened with Killbac releases silver ions onto the wound surface. The invitro antimicrobial action of silver has been demonstrated to destroy within 30 minutes, both Gram positives and negative bacteria as well as Vancomycin-resistant enterococci (VRE) and Methicillin-resistant *S. Aureus*.

**Methodology:** The wound was assessed using TIME concept. The wound is cleansed using Killbac. De-sloughing and debridement was done to remove the slough, necrotic tissue, and devitalized tissue. Acticoat Flex 3 was used to reduce the bacterial burden, and Allevyn was used to dress the wound. Changes in dressing every 3- 5 days.

**Case 1:** 42 years old, Female, History of Diabetes mellitus since 4 years ago. Came to the hospital with a wound on the heel to below the knee of the right length with 60% infection. The patient was recommended for below-knee amputation. After 13 days of the amputation, the post-operative wound started to become infected. It has been treated for 5 weeks. Many antibiotic and antimicrobial topical therapies are used for wounds that trigger resistance to germs in wounds. The use of silver can help overcome this resistance, as evidenced by reduced biofilm, growth of granulation, and epithelization of the wound.

**Case 2:** 64 Years old, Female, History of Diabetes mellitus since 12 years ago. Came to the hospital with a wound on toes 1 and 2 right foot with necrosis (black) and there was gangrene until below-knee. The patient is recommended for below-knee amputation. After 13 days of the amputation, the post-operative wound started to become infected. It has been treated for 4 week. Many antibiotic and antimicrobial topical therapies are used for wounds that trigger resistance to germs in wounds. The use of silver can help overcome this resistance, as evidenced by reduced biofilm, growth of granulation, and epithelialization of wounds.

**Conclusion:** All wounds started to heal with granulation tissue. There was a reduction of the exudates, biofilms, and bacterial bioburden. Wound Size reduction was seen. Healing was noted with the used Acticoat Flex 3, Killbact, Allevyn

## CASE STUDY: THE EFFECTIVENESS OF USING HOCL ON BIOFILMS IN PATIENTS WITH DIABETIC FOOT ULCERS

Eko Susanto

Wocare Center, West Java, Indonesia

### ABSTRACT

**Background:** HOCL is a wound cleansing that is considered a gentle antiseptic. HOCL supports the wound healing process, is a non-toxic liquid, and is friendly to fibroblast cells. HOCL functions as an inhibitor for the formation of biofilms in chronic wounds. Biofilms in chronic wounds trigger a chronic inflammatory response and tissue damage due to an accumulation of polymorphonuclear leukocytes (PMNs) and macrophages surrounding the wound. Biofilms occur from the accumulation of colonized microorganisms that form polymeric bonds and inhibit the wound-healing process.

**Method:** This method was an experimental study or case study in patients with diabetes mellitus by evaluating the development of the healing process in wound care. The patient, Mr. S, is a 58-year-old man with a diabetic foot ulcer. The use of HOCL was carried out for 3 visits with dressing changes every 3 days. The use of HOCL is done by compressing the wound for 15 minutes using gauze. Evaluation of wound improvement was carried out using the winner's scale score.

**Results:** After using HOCL, biofilms were easy to remove, pain or burning was absent, there was an improvement in epithelialization of 1.5 cm in the first evaluation, the second evaluation increased epithelialization by 1 cm, and changes in wound size. Before the application of HOCL, the wound size was length x width: 19x6 cm. After the usage of HOCL. the wound size length x width was 14x2.9 cm.

**Conclusion:** The use of HOCL by compressing for 15 minutes in the case of the patient Mr. S with a Diabetic Foot Ulcer, has proven to be effective because it makes it easier for officers to remove the biofilm so that it can accelerate the wound healing process.

Keywords: HOCL, Biofilm, Diabetic Foot Ulcer, Acceleration of wound healing process.

## CASE STUDY: THE EFFECTIVENESS OF USING SILVER CA ALGINATE AS AN ANTIMICROBIAL TO REDUCE BIOFILM IN DIABETIC FOOT ULCERS

**Mella Marianti Putri**

Wocare Center Bogor Indonesia

[mella.mpoo@gmail.com](mailto:mella.mpoo@gmail.com)

### ABSTRACT

**Introduction:** Calcium Alginate Dressing is a naturally derived gelling fiber dressing that aids exudate management and hemostasis. Calcium Alginate which contains silver can function as an antimicrobial in combating pathogenic microbial activity in wounds. Silver in Calcium Alginate provides a broad spectrum of antimicrobial activity including MRSA and MRSE. In the case of chronic wounds with Diabetic Foot Ulcers, pathogenic microbes are often found or commonly referred to as biofilms. A biofilm is a group of microorganisms attached to the wound surface. The risk of chronic wound DFU infection increases due to the presence and prevalence of endogenous and exogenous microorganisms. Dressings containing an appropriate antimicrobial content such as silver can be applied to at-risk or infected wounds.

**Method:** The method used is a case study. The patient Mrs. R 52 Years, Woman with a diabetic foot ulcer. History of Hypertension 5 years ago, Diabetes Mellitus since 2010. The use of silver ca alginate is applied as a primary dressing with dressing changes every 5 days. The evaluation was carried out 6 times using silver ca alginate and wound development using the winner's scale score.

**Results:** After 5 times using silver calcium alginate on biofilms with Diabetic Foot Ulcer wounds on Ny. The R, biofilm decreased compared to the condition before silver ca alginate was administered on September 14, 2022 Previous Winner's scale scored 22. After the application of Silver Calcium Alginate on October 10, 2022 Winners' scale score improved to 20. The use of silver calcium alginate was continued but the biofilm decline was seen to decrease.

**Conclusion:** Silver calcium alginate is effective for diabetic foot ulcers with biofilm by applying six times as a primary dressing on wounds.

**Keywords:** Silver, Ca alginate, Biofilm, Diabetic foot ulcer

# THE EFFECTIVENESS OF USING HYDROGEL TO REDUCE HYPEREMIA IN BURNS: A CASE STUDY AT THE WOCARE INDONESIA CLINIC

Ns, Rifa Qidya Ardi S. Kep  
Wocare Center Bogor Indonesia

## ABSTRACT

**Background:** Based on the 2014-2018 Riskesdas, the incidence of burns increased by 35% in Indonesia. The first treatment for burns is to prevent the spreading of the hyperaemic zone from developing into ischemia and necrosis. Hydrogel is one of the dressing materials that can be used in the treatment of burns because it is based on water and CMC - carboxymethylcellulose in the form of a gel and aims to reduce hyperemia. The purpose of this study was to identify the effectiveness of Hydrogel in reducing hyperemia in burns.

**Methods:** This study uses a case study design, social situation in burn patients at the Wocare clinic, with a sample of 3 (three) respondents (1 male, 2 female) with burns scalded with hot water. The use of hydrogel respondents was used as a primary dressing, with a change of dressing every 3 days. The evaluation was carried out using photos of wound development and observation of respondents' responses and evaluation analysis with domain analysis.

**Results:** Based on the analysis and observation, it was found that Hydrogel was effective in reducing hyperemia within 3 days which was characterized by localized hyperemia zone, reducing erythema, and burning sensation around the wound. The first evaluation on respondents (1) hyperemia was not widespread, erythema reduced, heat reduced, pain reduced from moderate to mild; respondents (2) hyperemia was not widespread, erythema reduced, heat reduced, the pain reduced, and respondent (3) Hyperemia zone was not widespread, Erythema reduced, Heat reduced, the pain was not present.

**Conclusion:** The effectiveness of using Hydrogel to reduce hyperemia in burns can be seen from the localization of the hyperemia zone within 3 (three) days, reducing erythema and burning sensation and pain in burns.

*Keywords* Luka Bakar, Hydrogell, Hiperemia

## OVERVIEW OF EVALUATION OF HEALTH WORKERS ON ENTREPRENEURIAL TRAINING IN THE HEALTH SECTOR

Irawati<sup>1</sup>, Hamka<sup>1</sup>, Muhammad Ruhman<sup>2</sup>, Resa Nirmala Jona<sup>3</sup>, Siti Juwariyah<sup>3</sup>, Laura Khatrine Noviyanti<sup>3</sup>

<sup>1</sup>Akper Batari Toja Watampone, <sup>2</sup>Fasyankes NCI Centre Samarinda, <sup>3</sup>Stikes Telogorejo Semarang

### ABSTRACT

**Background:** Health workers are at the forefront of state health, but the opportunity to become professionals and entrepreneurs in the health sector is an opportunity for health workers to improve the welfare of health services and the welfare of health workers.

**Aim:** This study provides the results of an evaluation of the implementation of entrepreneurship training in the health sector for health workers.

**Methods:** Analytical descriptive is the approach used by giving some pre and post-training questions to 93 related samples about the belief in becoming an entrepreneur after attending the training session.

**Results:** The training participants consisted of 86% (80 people) women and 14% (13 people) men, 94.6% did not have a business, 97.9% wanted to have a business changed to 100% wanted to have a business after attending the training session, 11.8% chose to become a changed employee only 6.5% want to remain an employee, after participating in the training session 63.4% are very confident that they will become an entrepreneur, 25.8% are sure that they will become an entrepreneur, 9.7% are quite sure that they will become an entrepreneur, and 1.08% are not sure that they will become an entrepreneur. 39.8% chose the health business, the rest chose the non-health business. 72.04% stated that this training was very important after attending the training where the pretest score was 63.4%, 22.6% stated that entrepreneurship training was important, 4.3% said it was quite important, and 1.08% said it was less important both in the pre and post-training scores.

**Conclusion:** Becoming an entrepreneur not only requires knowledge but the experience of other people's success is also the strongest lever to change the mindset.

**Keywords:** Entrepreneurship Training, Health Services, Health Workers

## BREASTFEEDING SELF EFFICACY RELATIONSHIP WITH MOTIVATION ON MOM POST SECTION CAESARIA IN HOSPITAL

Muhammad Basri<sup>1</sup>, Hamka<sup>1</sup>, Irawati<sup>1</sup>, Rusmiyati<sup>2</sup>, I'ien Noer'aini<sup>2</sup>, Danny Putri S<sup>2</sup>, Wahyu Ranti Luriyanti<sup>2</sup>, Andi Artifasari<sup>1</sup>

<sup>1</sup>Akper Batari Toja Watampone, <sup>2</sup>Stikes Telogorejo Semarang

### ABSTRACT

**Background:** Sectio Caesarea is a medical procedure that is needed to assist childbirth that cannot be carried out normally due to maternal health problems and fetal conditions.

**Aim:** The mother feels pain on the surgical wound area causing a lack of ambulation or early mobilization so it becomes difficult for the mother to breastfeed her baby.

**Method:** The design of this study is a descriptive correlational technique with a cross-sectional approach. There are 55 participants in this study which was recruited using a purposive sampling technique. The statistical test in this study is the Spearman Rank test.

**Results:** The results of this study indicate there is relationship between breastfeeding self-efficacy and breastfeeding motivation of post-section Caesarea mothers, the Spearman Rank Correlation test showed a p-value of 0.007. ( $\alpha < 0.05$ ) then this means that there is a significant relationship between breastfeeding self-efficacy and breastfeeding motivation for post-section Caesarea mothers at Dr. Oen Kandang Sapi Hospital, Solo. While the results of the Spearman rank correlation test are 0.343, this indicates the relationship between breastfeeding self-efficacy and breastfeeding motivation is positive and unidirectional, but a low . Thus, the better breastfeeding self-efficacy, the higher the breastfeeding motivation.

**Conclusion:** Nurses can help mothers after section Cesarea surgery to increase their confidence so that the motivation to breastfeed their babies also increases.

**Keywords:** Breastfeeding, Education, Health Service

## PATIENT SATISFACTION WITH HOME CARE SERVICES AT SUNANDAR WOUND CARE CENTER

Sunandar Fatwa

Sunandar Wound Care Centre, [sfmedikalbedah@gmail.com](mailto:sfmedikalbedah@gmail.com)

### ABSTRACT

**Background:** Home care is a continuous and comprehensive health service. Patient satisfaction is an indicator of the quality of services provided. Sunandar Wound Care Center is an independent practice nursing service that is engaged in home care services for wound, stoma and continence care. This study describes patient satisfaction with home care services at SWCC.

**Methodology:**

**Result:** The results of this study include: on Tangible (Evidence) all patients (100%) are satisfied with SWCC services, on Reliability (Reliability) all patients (100%) are satisfied with SWCC services, on Responsiveness (Responsiveness) all patients feel satisfied with SWCC services, on Assurance (Guarantee) all patients are satisfied with SWCC services, on Empathy (Empathy) all patients (100%) are satisfied with SWCC services.

**Conclusion:** Maximum home care services will provide satisfaction to patients.

**Keywords:** Home Care, Satisfaction, Sunandar Wound Care Center

## MANAGEMENT OF DIABETIC FOOT ULCER WOUNDS WITH BURNAZIN PLUS IN ACCELERATING THE WOUND HEALING PROCESS

Mansyur Hidayat, CWCCA & Nidaul Khoiriyah, CWCCA

Email : [ncurhidayat93@gmail.com](mailto:ncurhidayat93@gmail.com)

Fatchul Wound Care Center Dangji – Godong

### ABSTRACT

**Background :** Foot Ulcer is one of the most feared chronic complications of diabetes mellitus. DFU is a disease of the feet of diabetics with the characteristics of sensory, motor, and autonomic neuropathy as well as macrovascular and microvascular disorders. DFU is a major morbidity and cause of hospitalization for diabetics. Ulcers, infections, gangrene, amputations, and death are significant complications that require significant costs and longer treatment. A multidisciplinary approach is needed to treat DFU disease. complications in the feet of diabetics due to uncontrolled high blood sugar levels (hyperglycemia). These complications are generally in the form of diabetic ulcers or wounds due to infection or damage to skin tissue on the feet of diabetics. At Fatchull Wound Care Center Diabetic Ulcer and Diabetic Foot Ulcer Chronic Wounds 98% while 2% are treated for acute wounds. From 98% DFU to 90% and 8% with DU.

**Aim :** To find out the effectiveness of using Topical Ointment as Primary Dressing (Burnazin Plus) in the preparation of the wound base and Dressing which creates Moisture Balance as a Secondary Dressing to Accelerate the Healing Process of Diabetic Wounds

**Case Study :** Client No. R, 53 years old, with a wound on his right leg caused by wearing boots that are too narrow when working in the fields and blisters accompanied by a history of diabetes with a blood sugar level of 426 g/dl. Mrs. R has had a history of diabetes since 4 years ago, and there has been a recurrence for the second time. Bates Jensen Wound Assessment Tools Expected Day 11 weeks.

**Methods :** This case study uses the 3M Treatment Principle, namely washing the wound, removing dead tissue, and choosing the right dressing. The Wound care planning with the Falanga Model is TIME management. Tissue Management: Removal of necrotic tissue with Autolysis Debridement using Burnazin Plus, Inflammation, and Infection Control: washing with gentle antiseptic, 0.9% cadexomer iodine compress with 0.1% killbac for +- 5 minutes, Moisture Balance: Burnazin Plus primary dressing, secondary dressing foam, gauze, fixation using orthopedic wool, cohesive bandage, edge epithelialization, nutrition, and Protein Support, changing the dressing for the next 3 days, and adjunctive ozone bagging therapy when changing the dressing.

**Conclusion :** selection of the use of dressings in the treatment of Diabetic foot ulcers on Ny. R using Burnazine Plus showed significant results in the preparation of the wound base color and the Wound Healing Process.

## MANAGEMENT OF HYPERGRANULATION WITH POLYURETHANE FOAM

Hardeza Anggara Amd.Kep  
Wocare Indonesia

### ABSTRACT

**Background:** Hypergranulation is abnormal granulation tissue that grows beyond the wound margin and can inhibit the wound healing process. Several therapies that can be used to treat hypergranulation include silver nitrate, surgical excision, topical corticosteroids, and polyurethane foam. The earliest recommendation for treating hypergranulation is with polyurethane foam because it does not cause trauma to the wound. In the case of hypergranulation, besides functioning to absorb wound fluid, Polyurethane foam also functions to provide pressure and reduce the growth of hypergranulation.

**Methods:** This study used a case study on two patients with diabetic foot ulcers with complications of hypergranulation and used polyurethane foam as a secondary dressing. In 4 weeks the dressing is changed 8 times. Evaluation and observation included the length, width, and area of the wound through documentation.

**Results:** Based on the evaluation results within 4 weeks, it was found that polyurethane foam was able to suppress the growth of hypergranulation so that the epithelialization process occurred. In the first patient, the initial wound size was 10x6.5 cm to 8x5.3 cm and in the second patient was 9x9 cm to 5x7.6 cm. These results prove a significant change even though there is a difference in length, width, and wound area, this is also influenced by the different nutritional and systemic status

**Conclusions:** Polyurethane foam is effectively able to suppress hypergranulation growth, but the use of this dressing takes a long time with continuous frequency. continuously. In this case, the patient's condition also affects the healing process. More in-depth analysis of hypergranulation is needed to determine the appropriate management.

**Keywords:** Hypergranulation, polyurethane foam, diabetic foot ulcers

# THE EFFECTIVENESS OF USING CADEXOMER IODINE 0.9% AS AN ANTIMICROBIAL IN TIME MANAGEMENT

**Mareta Fitria Wulandari**  
Wocare Center Bogor Indonesia  
[maretafw@gmail.com](mailto:maretafw@gmail.com)

## ABSTRACT

**Background:** Cadexomer Iodine 0.9% is an antimicrobial with a broad spectrum against Gram-positive and Gram-negative bacteria. The use of Cadexomer Iodine 0.9% as an antimicrobial in TIME management can reduce the number of bacteria and reduce slough. TIME Management aims to prepare the wound bed from infection, foreign bodies, or dead tissue to a red wound base with a good epithelialization process. The purpose of this study was to identify the effectiveness of using cadexomer iodine 0.9% as an antimicrobial in TIME management.

**Methods:** This research uses a case study design. The patient is Mr. H, 53 years old, a man with a diabetic foot ulcer, and Ms. D 31 years old, female with a foot ulcer. The use of Cadexomer Iodine as TIME Management in inflammation and infection control bioburden was applied as a primary dressing with a thickness of about 3 mm. Change of dressing every 3 days, evaluation of 3 times the use of cadexomer iodine, and wound development with a winner scale score.

**Results:** For 3 times the use of 0.9% cadexomer iodine as an antimicrobial in the TIME Management of Mr. H and Ms. D, there is a change in the color of the wound bed and a decrease in the amount of exudate. The third evaluation was a change in the color of the wound base from slough 80% to red 100% and the amount of exudate from large to moderate.

**Conclusion:** The use of Cadexomer iodine as an antimicrobial in inflammation management and infection control is very effective and the application of TIME management in wound management accelerates the reduction of the slough.

**Keywords:** Cadexomer Iodine 0.9%, Antimicrobial, TIME Management.

## EFFECT OF CHITOSAN HEMOSTATIC DRESSING TO CONTROL MODERATE TO SEVERE BLEEDING IN METASTATIC OSTEOSARCOMA WOUND PATIENTS

Mara Sonang Daulay<sup>1,2</sup>, M. Affan<sup>2</sup>, Raja S. Lubis<sup>2</sup>

<sup>1</sup>InWCCA Sumatera Utara Governor, <sup>2</sup>Asri WOC Center Medan

### ABSTRACT

**Background:** Osteosarcoma is a bone tumor that most commonly affects children, adolescents, and young adults. Osteosarcoma exhibits a predilection to occur in the metaphysis of long bones and most commonly occurs in the distal femur (43%), proximal tibia (23%), or humerus (10%). The risk of osteosarcoma wound causing bleeding is in about 38% of cases; this figure is quite high.

**Aim:** To help control moderate to severe bleeding in patients with metastatic osteosarcoma.

**Methods:** Mr. Timothy, 26 years old, has been suffering from a wound for 5 months on his thigh with osteosarcoma for the past 1.5 years. The condition of thigh is currently swollen, and the wound is prone to bleeding and difficult to do activities. The current condition of the thigh is edematous, and the wound is prone to bleeding. Asri's wound care team is actively providing treatment. The intervention using the TIME management method and the application of 3W (wound cleansing, wound debridement, and wound selective dressing) cleaned the wound using 0.9% NaCl combined with PHMB solution. Perform autolytic debridement with and without mechanical debridement to avoid bleeding from mechanical stimulation. The choice of a primary wound dressing with hemostatic chitosan combined with zinc cream (regular metcovazin) and polyurethane foam as a secondary dressing, then supplemented with compression therapy (orthopedic wool and cohesive dressing).

**Results:** During the 1.5-month treatment process, no severe bleeding was found; only 1 treatment-experienced moderate bleeding. Previously, while still being treated at the hospital, he always experienced bleeding almost every day, so the use of chitosan hemostasis was very good for patients with osteosarcoma metastatic wounds. The patient is prevented from decreasing hemoglobin levels.

**Conclusion:** Chitosan hemostatic has a very good effect when used to help control moderate to heavy bleeding in patients with metastatic osteosarcoma.

**Keywords:** Chitosan, Bleeding, Osteosarcoma, Wound

## SINGLE USE NEGATIVE PRESSURE WOUND THERAPY TO MANAGE DIABETIC FOOT ULCER WITH EXPOSED BONE: A CASE STUDY

Ns. Nisrina Zakiya Ulfah, S.Kep.  
Private Practice Nursing, Depok, Indonesia

### ABSTRACT

**Background:** Diabetic foot is defined as the presence of infection, ulceration, and/or deep tissue destruction associated with neurological abnormalities and various degrees of peripheral arterial disease in the lower limb of a person with diabetes. Wound care clinicians have to face major negative impacts on patient quality of life, which raises the expense of therapy and the risk of consequences when a wound is not progressing toward healing. The need to end the cycle of chronic wounds has never been greater. In order to achieve this, wound care clinicians must be proactive in identifying wounds that, despite best-practice therapies, are still not healing after 4 weeks. The value of early intervention in difficult-to-heal wounds and the contribution of advanced therapies to the progression of a wound toward healing were recently demonstrated in an evaluation of the impact of single-use negative pressure wound therapy (sNPWT).

**Methods:** This study was a case study of one diabetic foot ulcer patient with an infected wound, thick adherent slough, and exposed bone. Infection was treated, and debridement and ischemia-related foot revascularization was done. After six weeks of treatment, sNPWT was used for seven days.

**Results:** At 5th week of treatment, the wound development was quite slow, the exposed bone was not covered with granulation tissue, and there was still a 10% thin slough in the wound. After installing sNPWT in seven days with two dressing changes, the wound area was reduced by 24%, and granulation tissue formed by 100%.

**Conclusion:** The use of sNPWT has been shown to reduce wound size by up to 24% within seven days. Understanding and recognizing when a wound is not healing properly should prompt wound care clinicians to alter their course of treatment in order to save patients from having to deal with a wound longer than necessary.

# ANALYSIS OF WOUND CLEANSER MADE OF GUAVA LEAF AND BETEL LEAVE EXTRACT AS ANTI-BACTERIA

Ayu Tri Agustin<sup>1</sup>, Eko Julianto<sup>2</sup>, Julianus<sup>2</sup>, Jepri Riranto<sup>2</sup>

1 Medical Laboratory Technology Study Program, Yakpermas Polytechnic Banyumas

2. Nursing Study Program, Yakpermas Polytechnic Banyumas, Indonesia

## ABSTRACT

**Background:** The profile of biotic compounds in water extract of betel leaf using HPLC analysis showed the presence of ascorbic acid, gallic acid, catechin, caffeic acid, syringic acid, rutin, cinnamic acid, p-coumaric acid, ferulic acid, myricetin, quercetin, apigenin, kaempferol, and eugenol. Wound cleansing uses a non-toxic solution to accelerate wound healing and control further bacterial contamination so that odor can be minimized. One example can use herbal astringents, namely a decoction of guava leaf (*Psidium guajava*) and red betel leaf (*Piper crocatum*). Green betel leaf (*Piper betle* L.) is one of the many herbal products in Indonesia with many uses due to its anti-fungal and anti-bacterial effects.

**Objective:** The purpose of this study was to determine the effectiveness of using guava leaf (*Psidium guajava*) and red betel leaf (*Piper crocatum*) to control the number of bacteria at the wound care stage.

**Methods:** This study used a quasi-experimental design with a Posttest Only Design approach. The sampling technique used is non-probability sampling with an accidental sampling method and obtained 20 respondents.

**Results:** This study was a laboratory study to test the antibacterial and antifungal effectiveness of green betel leaf (*P. betle* L.) packaged in the form of V-Cleanser foam with the test microbe of *Staphylococcus aureus* and *Candida albicans* containing -Ketoacil-[Acyl Carrier protein] Synthase I (FabB) is a protein that plays a role in the synthesis of fatty acids in the peptidoglycan membrane of *E.co* bacteria.

The antibacterial effect of green betel leaf (*P. betle* L.) packaged in the form of V-Cleanser foam was 99.97% for a contact time of 30 seconds and 99.99% for a contact time of 60 seconds. The antifungal effect of this product is 86.67% for a contact time of 30 seconds and 90.00% for a contact time of 60 seconds.

**Conclusion:** From the results of this study, it can be concluded that wound cleansing using a decoction of *Piper crocatum* leaves so that it can be concluded that green betel leaf (*P. betle* L.) packaged in the form of V-Cleanser foam has proven to be effective as antifungal and antibacterial.

**Keywords:** Wound cleansing, *Psidium guajava*, *Piper crocatum*

## EFEKTIFITAS PENGGUNAAN TCC (TOTAL CONTACT CAST) PADA PASIEN DENGAN FOOT DROP (DIABETIC FOOT ULCER)

Takesi Arisandy, Ns.,M.Kep, CWCC

### ABSTRAK

Penatalaksanaan ulkus kaki diabetik diperlukan untuk mempercepat proses penyembuhan. Terdapat 3 prinsip utama yang sangat penting dalam penatalaksanaan ulkus kaki diabetik, yaitu, kontrol infeksi, *debridement* serta *off-loading*. *Off-loading* adalah sebuah teknik yang digunakan untuk mengurangi tekanan pada pelantar kaki atau daerah yang mengalami ulserasi dengan mentransfer beban ke daerah lain. Empat metode *off-loading* yang umum digunakan dalam praktik klinis yaitu: teknik *casting*, penggunaan sepatu khusus, teknik *off-loading* bedah dan teknik *off-loading* alternatif. Metode *casting* dengan menggunakan *total contact cast* (TCC), merupakan metode *off-loading* yang efektif dibandingkan dengan metode lain.

# MANAGEMENT OF SCROTAL ABSCESS IN TYPE 2 DIABETES MELLITUS PATIENTS AT THE RIZKY WOUND CARE CENTER IN PALU CITY, CENTRAL SULAWESI PROVINCE OF INDONESIA: CASE STUDY

Syaiful Rustam Tahir, Dewa Made Putra Darma, Alma Arif Al-Amin  
Lecturer of the Justitia Palu Nursing Academy, Central Sulawesi Province

## ABSTRACT

**Background :** Diabetes Mellitus (DM) is a degenerative disease and its prevalence continues to increase in the world. Complications of diabetes can cause injuries including scrotal abscesses. Modern wound care management is a nursing intervention that can be carried out which does not require high costs but is very helpful in dealing with wound problems in the scrotum and can help speed up wound healing.

**Aim :** This case study aims to apply the management of moist wound care to scrotal abscesses in patients with type 2 diabetes mellitus.

**Methods:** This case study uses modern wound care techniques with the moisture balance method approach. The respondent in this case study was a 41-year-old man, a patient who had a scrotal abscess. The blood glucose test results were 345 mg/dl, the scrotal abscess was experienced  $\pm$  6 days before treatment, the condition of the wound was 100% necrotic, pus mixed with blood, maximum exudate, the patient knew he had diabetes for two years before getting sick, in this case study the initial wound care was washed using normal saline, Gentle antiseptic, PHMB fluid, the wound was applied using modern dressing and the wound was made hypermoist where the wound was treated using hydrogel, transparent film, gauze, wound digitization with hypoallergenic plaster. The 2nd treatment after wound washing, mechanical debridement was performed; CSWD, then calcium alginate, zinc cream, antimicrobial, foam, and underpad was applied, wound fixation with hypoallergenic plaster. The 3rd treatment to 6th treatment the application is the same as the second treatment, the 7th treatment uses zinc cream alginate, island dressing, fixation by using hypoallergenic plasters. The 8th treatment, wounds were declared cured but wound care was still carried out using the moist method with the application of hydrocolloid as the primary and secondary dressing. Wound care is carried out every 72 hours, with home visits.

**Results:** In this case study, healing of a scrotal abscess wound was found during treatment  $\pm$  2 months with eight visits.

**Conclusion:** modern wound care with moisture balance techniques can help the healing process of scrotal abscess wounds, even though nursing interventions can be given to patients with wounds due to type 2 diabetes mellitus.

**Keywords:** Moist method of wound care helps the wound healing process.

## MODERN WOUND TREATMENT IN CHRONIC WOUND MANAGEMENT IN THE CITY OF SOLOK, WEST SUMATRA

Wenny Lazdia<sup>1\*</sup>, Ratna Dewi<sup>2</sup>, Wiwit Febrina<sup>3</sup>, David Musneldi<sup>4</sup>

<sup>1,2,3,4</sup>, Fort De Kock University

[wenny.lazdia@fdk.ac.id](mailto:wenny.lazdia@fdk.ac.id)

### ABSTRACT

**Background :** Wounds are damage to the epithelial integrity of the skin due to trauma. The wound healing process is determined by its type, namely acute or chronic. West Sumatra, Indonesia also recorded a high number of chronic wound cases, one of the problems that often arises is chronic wound care which takes a long time to heal and has complications such as Diabetic wounds, Burns, Infectious wounds, burger diseases, Arterial Ulcers.

**Objective:** This preliminary study aims to determine the effect of modern dressings on the chronic wound healing process.

**Methods:** This study involved 15 respondents using a quasi-experimental research design, with a One Group Pre test-Post test Design approach.

The intervention uses the BWAT (Bates-Jensen Wound Assessment Tool) which consists of 13 items by providing a total score on the Wound Status Continuum line. Topical dressing/dressing on the wound area based on modern dressing SOPs, such as Zinc Metcovazine, Hydrocolloid, Hydrogel. This research was conducted for 14 days in August 2022, the data were analysed using SPSS version 26.0.

**Results:** The results showed that the average chronic wound healing before being given modern dressing was 34.67 SD and the average chronic wound healing after being given Modern Dressing was 21.13 SD, the score decreased by 13.5. Based on statistical results obtained P-Value 0.003 means that there is a significant effect between before and after the intervention on the provision of Modern Dressing in the wound healing process for chronic wound patients, namely Diabetic wounds, Burns, Infectious wounds.

**Conclusion:** Modern dressings have a significant effect on the wound healing process in patients with chronic wounds

**Keywords:** Chronic Wounds, Wound Care, Modern Dressing

# THE EFFECT OF BROMELAIN BASED ENZYMATIC DEBRIDEMENT AS A TREATMENT OF CHOICE ON THE DIABETIC NECK ABSCESS; A CASE STUDY

Asrizal<sup>1</sup>, M. Ihsan<sup>2</sup>, Hari Syaputra<sup>2</sup>

<sup>1,2</sup>Asri WOC Center Medan

[asrizal1510@gmail.com](mailto:asrizal1510@gmail.com)

## ABSTRACT

**Background:** A popular remedy for promoting tissue regeneration is a mixture of enzymes produced from pineapples called bromelain. Clinical and experimental evidence shows superior results for soft tissue healing when bromelain is present. Bromelain has no set dosage. Although daily doses of up to 2000 mg have been used because of their relatively low toxicity, the recommended dose is usually between 80 and 320 mg.

**Aim:** Enzymatic debridement is an effective method for removing necrotic tissue from diabetic wounds on the neck and also to make the wound heal as quickly as possible with the least amount of pain and good result

**Methods:** Male, 53 years old, suffering from diabetes mellitus for 4 years ago. Within one month, the patient was hospitalized because of an abscess on the left side of the neck with 100% necrotic tissue condition, inflammation, swelling, a pain scale of 6, difficulty with activities, and a blood sugar level of 382 mg/dL. The patient is currently being treated at a wound care center in Medan City. Wound care intervention uses the concept of TIME management with a focus on this tissue management case intervention using the enzymatic debridement method (bromelain). Necrotic tissue 100%.

**Results:** The second treatment was on the third day, and the results of the treatment were very clear: the necrotic tissue had lysed 80%; on the 6th day of treatment (3rd treatment), the wound condition was 100% lysis. 100% of the wound bed preparation is red. Patient's current pain scale: 3. Patients are more comfortable with their current condition than before. The inflammatory reaction is reduced, and the swelling also disappears.

**Conclusion:** Bromelain aids wound healing by 1) reducing swelling 2) increase anti-inflammatory mediators 3) reduce pain, 4) reduce healing time, 5) increasing tissue proliferation.

**Keywords:** Bromelain Enzymatic, Diabetic Neck Abscess.

# THE EFFECT OF PEER GROUP SUPPORT ON THE QUALITY OF LIFE OF PATIENTS WITH HIV/AIDS AT THE PUSKESMAS JUMPANDANG BARU, MAKASSAR CITY

Maria Ulfah Ashar<sup>1</sup>, Musdalifah Muhktar<sup>2</sup>, Nur Hidayah<sup>3</sup>  
<sup>1,2,3</sup> UIN Alauddin Makassar

## ABSTRACT

**Background:** HIV/AIDS is still a major health problem in the world, although its prevention is progressing rapidly. HIV/AIDS is included in the group of infectious diseases that cause problems in physical health that occur due to a decrease in body resistance, causing people living with HIV to be very susceptible to various types of diseases and can cause other complications. Health problems experienced by PLWHA can cause a decrease in quality of life. Support from peer groups can support the quality of life in PLWHA.

**Aim:** The purpose of this study was to determine the effect of peer group support on the quality of life of patients with HIV/AIDS at the Puskesmas Jumpandang Baru, Makassar City.

**Methods:** quantitative method with a cross-sectional approach to research design. The sampling technique in this study used a non-probability sampling method, namely accidental sampling. The number of samples in this study was 30.

**Results:** The results of the Somer's D statistical test obtained a p value of 0.000 with a significance level of 0.05, meaning that the p value < 0.05 which means that there is a relationship between peer group support on the quality of life of patients with HIV/AIDS at the Jumpandang Baru Health Center Makassar City with a correlation strength of 0.646. (strong).

**Conclusion:** There is influence of peer group support on the quality of life of people with HIV/AIDS at the Jumpandang Baru Public Health Center, Makassar City.

**Keywords:** Peer group support, HIV/AIDS, Quality of life

# MUROTTAL THERAPY SURAH AR RAHMAN INTERVENTION TO REDUCE ANXIETY SCORES OF DIABETES MELLITUS PATIENT

Musdalifah mukhtar<sup>1</sup>, Maria Ulfah Azhar<sup>2</sup>, Syamsiah Rauf<sup>3</sup>, Ismayanti<sup>4</sup>  
<sup>1,2,3,4</sup> Department of Nursing Alauddin State Islamic University Makassar

## ABSTRACT

**Background:** The prevalence of people with diabetes mellitus in Indonesia is increasing. Patients with diabetes mellitus not only show physical symptoms but also psychological responses, such as anxiety. Anxiety problems in patients with diabetes mellitus can affect the patient's health status. Therefore, it is necessary give the patient treatment in controlling this anxiety response, one of which is by non-pharmacological therapy, where currently non-pharmacological therapy is associated with the spiritual dimension, such us murottal therapy

**Aim:** This study aims to determine the effect of murottal therapy in reducing anxiety scores of patients with diabetes mellitus.

**Methods:** The approach used in this research is quantitative research, a quasi-experimental research design with one group pretest-posttest type. The sample collection technique is accidental sampling technique. There are 15 respondents who became the subject of research in this study.. Anxiety score data collection using the Hamilton Rating Scale For Anxiety (HARS) questionnaire

**Results:** The results showed that there was a decrease in anxiety scores after murottal therapy, where the mean score before therapy was 33.33 and after therapy was 18.13. From the results of statistical tests using paired-t test obtained p-value 0.0001 which is interpreted that there is an effect of giving murottal therapy in reducing anxiety scores of patients with diabetes mellitus.

**Conclusion:** The results of this study indicate that the murottal therapy intervention is effective in reducing anxiety scores in diabetes mellitus patients. This intervention can be considered as one of the non-pharmacological therapies in dealing with anxiety.

Keywords: Murottal therapy, surah Ar Rahman, anxiety, diabetes mellitus.

## THE EFFECTIVENESS OF NPWT

Freti Yunanti

Freti Wound Care

[Fretigunata19@gmail.com](mailto:Fretigunata19@gmail.com)

### ABSTRAK

**Introduction :** Negative Pressure Wound Therapy (NPWT) is a type of wound treatment that can be used for wounds in all parts of the body. The mechanism of the NPWT device is to draw fluid from the wound, reduce edema, increase the rate of formation of granulation tissue, and stimulate circulation. NPWT can be applied to all body surfaces, where the application is not difficult and there are portable tool products. The average duration of treatment with NPWT therapy was 15 days, and all wounds showed significant granulation and were cleared of bacterial infection at the end of therapy.

**Objective:** The purpose of this study was to determine the performance of the NPWT device applied to patients with Diabetes Foot Ulcers. and Pressure Injury patients with wound conditions that produce excess exudate and have complications.

**Methods:** A case study with experimental application of NPWT on diabetic foot ulcer and pressure injury patients, with as many as 2 people with the control group and 2 patients with similar cases.

**Results:** The pressure of the NPWT ranged from 80–120 mmHg. The size of the wound in the treatment group was smaller than in the control group. The intensity of inflammation in the treatment group was also less than in the control group.

**Discussion:** Our study shows that NPWT can be used as a wound therapy, and has been shown to stimulate the process of granulation and epithelialization so that the progress of wound healing becomes more significant. Further research is needed to prove the effectiveness of the NPWT device on other wound types and risk factors that influence the wound healing process.

**Keywords:** DFU, pressure injury, NPWT

## FOKUS GRUP DIKSUSI (FGD) TENAGA KESEHATAN TENTANG PENCEGAHAN DAN MANAJEMEN KAKI DIABETES

Sispa Tauriska

[sispatauriska@gmail.com](mailto:sispatauriska@gmail.com)

### ABSTRAK

**Latar belakang :** Permasalahan kaki diabetes sangat umum, namun menjadi masalah serius saat dirasa penderita mulai mengganggu kualitas hidupnya, oleh karena itu perlu pemahaman menyeluruh bagi tenaga kesehatan umumnya dan perawat khususnya tentang penyebab dan manajemen kaki diabetes.

**Tujuan :** Tujuan dari penelitian ini adalah untuk mengetahui pengetahuan dan pemahaman tenaga kesehatan terkait pencegahan dan manajemen penanganan permasalahan kaki diabetes, sehingga dapat melakukan asuhan ke pasien secara holistic.

**Metode:** Fokus grup diskusi (FGD) dengan media zoom meeting dalam bentuk webinar dengan 130 partisipan, yang seluruhnya adalah tenaga kesehatan.

**Hasil:** 80% participant adalah tenaga kesehatan yang tersertifikasi sebagai praktisi perawatan luka. 60% partisipan terlihat antusias mengikuti diskusi dengan memberikan pertanyaan pada *room chat* terkait materi yang disampaikan narasumber, dan diketahui sebagian besar partisipan belum mengetahui dan memahami apa yang dimaksud dengan kaki diabetes, karena peserta menganggap ulkus kaki diabetes adalah kaki diabetes, bukan sebagai faktor risiko terjadinya kaki diabetes. Namun hal tersebut dapat mencerminkan minat dan motivasi yang besar dari peserta untuk lebih memahami mengenai pencegahan dan manajemen kaki diabetes.

**Simpulan:** Pencegahan dan manajemen penanganan permasalahan kaki diabetes penting dilakukan untuk mencegah terjadinya risiko amputasi bahkan kematian.

**Kata Kunci :** Diabetes, kaki diabetes.

# MODERN WOUND CARE FOR INFECTION CONTROL IN PALLIATIVE PATIENT DURING COVID-19 PANDEMIC

Rahmad Effan Fahri Mahendra<sup>1</sup>, Hendra<sup>2</sup>, Beta Karlistiyaningsih<sup>3</sup>, Endang Murwaningsih<sup>4</sup>, Anjarsera Rukmadewi Aulia<sup>5</sup>

<sup>1,2</sup>Pontianak Nursing Center  
rahmadefm@gmail.com

<sup>3</sup>Sekolah Tinggi Ilmu Kesehatan Yarsi Pontianak  
betakarlistiyaningsih@gmail.com

<sup>4</sup>RS Kanker Dharmais Jakarta  
emurwaningsih@gmail.com

<sup>5</sup>RSUD dr. Iskak Tulungagung  
Sera.aulia@gmail.com

## ABSTRACT

**Background :** Pandemic Covid-19 results in increasing the large scale social restriction almost all regions of Indonesia. It has impact on patient with a wound that makes it impossible to get medical treatment in the hospital. The most common wounds are chronic wound and the number increases every year. One of them is a cancer wound which is a type of wound that can not heal, and therefore requires palliative care for patient.

Hospital Of Cancer Dhar is a treatment on patient with a disease that is difficult to cure. Palliative care is very familiar with cancer cases or on patient with certain situation and leads to chronic disease or even until the end of life, therefore requires proper treatment, and one of them is modern wound care. The way to approach on palliative patient is to maximize the quality of life.

**Aim :** The purpose of this research were identifying palliative care with modern wound care to control infection occur in cancer patient and increased quality of life.

**Method :** This research used a structured observation method. This research was a quasi experimental study using a structured observation approach with a treatment using modern dressing method. Treatment carried out at home with 2 (two) visits in a week. The number of sample in this study were 4 (four) persons with a medical diagnosed in 3 (three) persons with breast cancer (CA Mammae) and 1 (one) person with thyroid cancer (CA thyroid). The costs that must be incurred by the patient at each visit range from IDR 250,000 - IDR 380,000.

**Result :** Results of the study found significant changes in the cancer wound, no signs of infection in the wound area such as reddish rashes, hot or warm sensation around the wound, odor/smell.

**Keywords :** Covid-19, cancer wound, infection control, modern wound care, palliative care.

## MINERAL WATER AS A CHRONIC WOUND CLEANSER FLUIDS

Gresty Natalia Maria Masi<sup>1</sup>, Mario Esau Katuuk<sup>2</sup>

<sup>1,2</sup>Nursing Programe of Medical Faculty Sam Ratulangi University

### ABSTRACT

**Background:** Wound Cleansing is an important part of chronic wound management. The wound cleansing process is the use of non-toxic fluids for removing residual debris and exudate, there are for creating an optimal wound environment for the healing process. There are several fluids that are a recommendation as wound cleansers, but some of them are toxic or can be damage a healthy tissue. Normal saline is one of the recommendation for wound cleansing because it doesn't harm healthy tissue. In addition to normal saline, tap water (ready to drink) is a recommended fluid for wound cleansing. Indonesia is doesn't available of tap water, but there is water (packaged water) that can be drunk directly and have the same composition as tap water.

**Aim :** The purpose of this study is to determine the effectiveness of mineral water as a wound cleanser on chronic wound healing

**Methods:** This study is a pre-experimental method with pre-test and post-test only design

**Results:** The statistical test results showed that there was a significant change in the PUSH score in each treatment and in wound healing. The process of wound care is to carry out the wound until it can be closed and epithelialized. This is in line with research by Terricone *et al* (2020) who provide the same result that mineral water can accelerate the heal process, this is because the pH contained in mineral water is normal so it can help the wound healing faster and doesn't damage a healthy tissue. The other study also showed in line with this study that mineral water can help the wound healing process faster (Morton & Phillips, 2016).

Wound cleansing is conducted until the wound is completely clean from the old residual dressing and debris. In several studies are shown clearly that the use of mineral water as a wound cleanser is safe for the wound healing process because mineral water can reduce the incidence of infection and there is no difference with other wound cleanser fluids (Huang Chia-Yu., & Choong Mun-Yau, 2018). Other studies have shown that washing wounds using mineral water or tap water can reduce a gram-positive bacteria, and they are found that no difference in the colonization of hemolytic bacteria, gram-negative bacteria and, fungi (Resende *et al.* 2016). Tap water or normal saline are recommended as wound cleanser fluids because that is easier to get in the community and are low in price (Camargo-Parea *et al.*, 2021; Bilgen *et al.*, 2021). Indonesia mineral water is very easy to get in the community with a low price and of course can help patients to save money (Ljubic A., 2013)

**Conclusion:** Mineral water is effective as a wound cleanser in the chronic wound healing process and mineral water can be recommended as a wound cleanser because easy to get and low in price.

**Keywords:** Mineral water, chronic wound, Wound Cleanser, Wound Healing

## THE AMAZING OF AUTOLYSIS DEBRIDEMENT IN RURAL AREA: PEMATANG SIANTAR

**Verawati Christina**

Siantar Woundcare

Email: verawatychristina578@gmail.com

Hp +62 813-2157-8863

### ABSTRACT

**Background :** Chronic wounds in diabetics can be assessed from the physical appearance of the wound with a yellow base color, solid and can exudate. Yellow tissue is not always infected. Case in Pematang Siantar, patient male 58 years old with 95% yellow and 5% red wound base, very little exudate (dry). The patient had previous treatment using gauze and povidone iodine.

**Aim :** This study aims to accelerate the process of autolysis of yellow necrotic tissue. This study aims to accelerate the process of autolysis of yellow necrotic tissue.

**Results :** After evaluating the use of zinc cream and hydrogel in preparing the wound base color. It was very effective with the use of zinc cream and hydrogel as well as autolysis debridement, the base color of the wound is 100% red in 2-3 weeks. Furthermore, the treatment is carried out using olive oil interspersed with the use of Chitosan Zinc Cream 1x per week maximum epithelialization. Modern wound care applications using simple dressings are indispensable in care, especially in the area where maximum wound care without expensive costs.

**Conclusion :** Autolysis Debridement is a very easy strategy in preparing the wound bed from yellow to red. The use of wound dressings is based on the color of the wound base and the patient's systemic condition so that wound care management can occur optimally.

## EFFECTIVENESS OF ZINC CREAM ON DIABETIC FOOT ULCER WOUND WITH POST OPERATIVE DIABETIC BULLAE

Jus Alim<sup>1</sup>, Ernawati<sup>1</sup>, Ahmad Jamaluddin<sup>2</sup>, Fitriani<sup>3</sup>

<sup>1</sup>Celebes Care Centre, <sup>2</sup>UIN Alauddin Makassar, <sup>3</sup>Fit Home Care

### ABSTRACT

**Background:** The incidence of diabetes mellitus in Indonesia is increasing every year. Diabetic Bullae is a complication that often occurs in people with diabetes mellitus with uncontrolled blood glucose levels which can lead to infection or diabetic foot ulcers.

**Purpose:** This study aims to see the effectiveness of using zinc cream on diabetic foot ulcers after Diabetic Bullae surgery.

**Methods:** This study used the case study method with a sample of 1 case which was carried out with in home care patients in an independent practice in Makassar.

**Results:** The patient was a 56 years old female who had an injury to her left leg 2 weeks before treatment. The results of the study using the winners scale obtained a score of 31 and after being treated for 6 weeks using zinc cream with the moist method there was a decrease in the score of 15.

**Conclusion:** This shows that zinc cream is effective for use on diabetic foot ulcer wounds after Diabetic Bullae surgery as seen from the diminishing winners scale score.

**Keywords:** DFU, Zinc Cream, Diabetes Bullosa

## EFEKTIVITAS DERMFACTOR PADA PASIEN LUKA DEKUBITUS

<sup>1</sup>Joko Sugito, <sup>2</sup>Beta Karlistiyaningsih, <sup>3</sup>Rahmad Effan Fahri Mahendra  
<sup>1</sup>Raihomecare and Woundcare Center Gunung Sindur Kabupaten Bogor  
[jokosugito5@gmail.com](mailto:jokosugito5@gmail.com)  
<sup>2</sup>Sekolah Tinggi Ilmu Kesehatan Yarsi Pontianak  
[betakarlistiyaningsih@gmail.com](mailto:betakarlistiyaningsih@gmail.com)  
<sup>3</sup>Pontianak Nursing Center  
[rahmadefm@gmail.com](mailto:rahmadefm@gmail.com)

### ABSTRACT

Latar Belakang : Stroke merupakan penyakit sistem persyarafan yang paling banyak terjadi saat ini, Data Risesdas 2013 prevalensi stroke nasional 12,1 per mil, sedangkan pada Risesdas 2018 prevalensi stroke 10,9 per mil. Stroke menyebabkan kelemahan dan kelumpuhan pada pasien sehingga membutuhkan perawatan cukup lama. Sebagian besar pasien stroke dirawat dengan kondisi tirah baring lama yang dapat mencetuskan terjadinya luka tekan/*pressure ulcer* atau yang dikenal dengan dekubitus. Angka kejadian dekubitus pada pasien stroke cukup banyak terjadi. Salah satu alternatif yang tepat untuk mempercepat proses penyembuhan luka decubitus adalah dermfactor. Tujuan penelitian ini adalah untuk mengidentifikasi efektivitas dermfactor terhadap pasien luka decubitus. Penelitian ini merupakan quasi eksperimen menggunakan pendekatan observasi terstruktur dengan perawatan menggunakan metode modern dressing. perawatan dilakukan pertiga hari ,jumlah sampel dengan penelitian ini berjumlah 6 org dengan diagnosa medis sama yaitu stroke, adapun biaya yg harus dikeluarkan oleh pasien jasa, alkes dan bahan habis pakai setiap kunjungan berkisar antara Rp 500.000 – Rp 700.000. Metode yang digunakan adalah observasi terstruktur. Adapun hasil yang didapatkan pada penelitian ini adalah dermfactor efektif dalam membantu proses penyembuhan luka decubitus sesuai dengan target perhitungan luka.

**Kata Kunci :** Decubitus, Dermfactor, Stroke.

## EFFECTIVENESS OF HYPOCHLORITE ACID (HOCL) AGAINST INFECTIOUS CONDITIONS IN DIABETIC FOOT ULCER

Ns. Slamet Wibut M, S. Kep., CWCC.

### ABSTRACT

**Background :** Diabetic foot ulcer (DFU) is a common complication of diabetes mellitus and causes morbidity and mortality such as local or open infection, delayed healing, and the spread of multiresistant organisms. It is estimated that 19-34% of patients with diabetes will likely be affected by DFU in their lifetime, and the International Diabetes Federation reports that 9.1 - 26.1 million people will experience DFU each year. Antimicrobial management is a major challenge that continues to require new solutions for microbes and their biofilms. Because systemic antibiotics can hardly penetrate the wound biofilm and those applied topically can easily cause resistance, antiseptics are the method of choice for treating wound germs.

**Aim :** This paper aims to develop a technology that will enable the continuous application of controlled concentrations of HOCl to wound biofilms.

**Method :** The use of hypochlorite acid was carried out using a case study of Mr. K with diabetic foot ulcers.

**Result :** After treating the wound by washing and cleansing the wound properly with hypochlorite acid, it was found that infection in the wound decreased on the 15th day after using the HOCl antiseptic. **Conclusion :** Hypochlorous acid (HOCl), is very active against bacterial, viral, and fungal microorganisms. In addition, HOCl is active against biofilm and increases oxygenation of the wound site to promote healing. Natural HOCl is unstable; through technology, it can be stabilized into an effective topical antiseptic agent.

**Keywords:** DFU, HOCl, antiseptic, infection, biofilm

## BURN MANAGEMENT USING ZINC CREAM IN HOME CARE SETTING (CLINICAL EXPERIENCE IN REMOTE AREA)

**Stella Tangkilisan**  
Manado Sulawesi Utara

### ABSTRACT

**Introduction :** Luka bakar merupakan salah satu luka yang paling berbahaya dan penyebab utama kecacatan hingga kematian. Luka bakar dapat diartikan sebagai salah satu masalah serius di masyarakat dan tercatat menyebabkan sekitar 265.000 kematian setiap tahunnya. Zinc Cream dengan Base oil dapat menjaga kondisi luka agar tetap lembab dan memiliki kemampuan terhadap antibacterial yang tinggi untuk mencegah infeksi, mengurangi trauma dan nyeri saat ganti balutan serta dapat merangsang proses granulasi dan epitelisasi lebih cepat.

**Method:** Adalah sebuah Case study, pada bayi dengan umur 10 bulan yg tersiram air panas, dengan stadium 2, dengan menggunakan zinc cream sebagai balutan Primer dan low adherent dressing sebagai balutan sekunder, perawatan dilakukan dengan kunjungan rumah setiap 3 hari sekali, mencuci luka dengan NaCL, dan Aplikasi zinc cream setiap penggantian balutan.

**Results:** Proses perawatan dan penyembuhan luka dengan pembentukan epitelisasi selama kurang lebih 2 minggu. Dari tgl 31 Mei - 14 Juni 2022.

**Conclusion:** Zinc Cream base oil dengan low adherent dressing sebagai balutan sekunder efektif dalam perawatan luka bakar, menciptakan kelembaban dan mempercepat proses epitelisasi.

**Key words :** luka bakar, zinc cream, epitelisasi.

## THE EFFECT OF USING METRONIDAZOLE POWDER IN THE TREATMENT OF TYPE II DIABETIC ULCER ON REDUCING ULCERS ODOR IN BATULICIN CITY

Mesy Trisnaneng Susilowati, Faisal Rahman

### ABSTRACT

**Background :** Diabetes Mellitus (DM) is a metabolic syndrome disease characterized by hyperglycemia caused by decreased insulin secretion or decreased activity of insulin, diabetes is now one of the biggest causes of death in Indonesia. If left untreated, this condition can lead to reduced productivity, disability, and premature death. One of the pharmacological therapies that can be used is Metronidazole Powder.

**Aim :** The purpose of this study was to determine the effect of using metronidazole powder in the treatment of type II diabetic ulcers on reducing ulcer odor in Batulicin City in 2018

**Method :** This study used a quasi-experimental method with a time series design. The sample in this study was 10 respondents using an accidental sampling technique.

**Result :** The results of the study using the Wilcoxon signed rank test showed that there was a difference in the pretest scores, almost half (27%) of the respondents experienced a very bad smell and none of the posttest scores (0%) of the respondents experienced a very bad smell, the result was a p-value of 0.000 (<0.05).

**Conclusion :** This study concludes that there is an effect of using Metronidazole Powder in the treatment of type II diabetic ulcers on reducing ulcer odor in Batulicin City. It is suggested to respondents to routinely use Metronidazole Powder in the treatment of type II diabetic ulcers and for future researchers to be able to continue and develop existing research.

## COST-EFFECTIVENESS: MOIST WOUND HEALING, EFFECTIVE AND EFFICIENT WOUND CARE TECHNIQUES

Ilyas Agus, S.Kep, Ns, WOC(ET)N<sup>1</sup> Hantiantoro M.I. Khoiro, S.Kep, Ns, WOC(ET)N<sup>2</sup>

<sup>1</sup> Sidenreng Wound Care, Sidrap, Sulawesi Selatan

<sup>2</sup> Telaten Care Center, Pemalang, Jawa Tengah

Phone: +62885328504926

### ABSTRACT

**Background :** The word modern is synonymous with expensive, some people still consider the high cost of modern wound care regardless of the effectiveness or benefits it produces. This assumption must be straightened out, to assess this aspect the principle of cost-effectiveness should be used, namely to get the best results at minimum costs.

**Aim :** The purpose of writing this article is to prove the cost-effectiveness of applying modern dressings.

**Method :** Data collection was carried out using the literature study method.

**Result :** The results obtained show that the cost of treating moist wound healing is more effective and efficient for healing both acute and chronic wounds.

**Conclusion :** The application of modern wound care is expected to accelerate wound healing so that costs due to the length of the treatment process can be reduced.

**Keywords:** modern dressing, moist wound healing, cost-effectiveness

## IMPLEMENTATION OF TIMERS MANAGEMENT ON DIABETES FOOT ULCER : HOME CARE SETTING

Syaiful<sup>1,3</sup>, Sintawati<sup>1,3</sup>, Mardani<sup>4</sup> Eva Arna Abrar<sup>2,3</sup>

<sup>1</sup>Universitas Megarezky

<sup>2</sup>Stikses Nani Hasanuddin

<sup>3</sup>Etn Centre Indonesia

<sup>4</sup>Isam Cahaya Holistic Care

Correspondence : [Syaifulsyarifo@gmail.com](mailto:Syaifulsyarifo@gmail.com) +62085242430145

### ABSTRACT

**Background:** One of the Complications of Diabetes Mellitus (DM) is Diabetic Foot Ulcer (DFU). DFU treatment requires good management, which is the use of dressings and topical therapy, especially while home caring. If it's not handled properly, DFU will be risk for amputation

**Objective:** To determine the effectiveness of the implementation of TIMERS Management in diabetic foot ulcer patients who are treated at home.

**Methods:** This study was conducted on patients with diabetic foot ulcers (DFU) in private practice with a home care setting method. It was carried out using the TIMERS Management method, and using the Bates-Jensen Wound Assessment Tools instrument to evaluate wound healing, and determine the degree of wound healing and the length of the wound healing process. Treatment is carried out every 3 days with TIMERS management. The wound care process is carried out by certified wound nurses (CWCC and WOC(ET)N). Wound documentation using an Android cellphone (10 MP – 18 MP camera quality).

**Results:** After the implementation of TIMERS Management for 12 weeks of treatment for diabetic foot ulcer patients with stage IV wound conditions. Evaluation of the healing process using the Barbara Bates Jensen scale score, there were many improvements from the initial score of 42 to 30. The wound healing process improved until the formation of epithelial tissue in the wound without scarring and contractures

**Conclusion:** The implementation of TIMERS Management in home care has been proven to be effective for people with diabetic foot ulcers

**Keywords :** TIMERS Management, Diabetic Foot Ulcer (DFU), Homecare

## ZINC CREAM DRESSING IN THE INITIAL MANAGEMENT OF SECOND DEGREE BURNS PATIENTS TO PREVENT INFECTION IN BURN PATIENTS

Ns. Elheart Budiman. M. Kep WOC(ET)N

[mr.elheart@gmail.com](mailto:mr.elheart@gmail.com)

### ABSTRACT

**Background :** Burns are tissue damage caused by fire, electricity, high temperatures, and very hot objects or chemicals. Clinically, according to the depth and scope of injured tissue, demands on the patient, it is from deep to superficial divided into III, II, and I degrees. Second degree burns are deep and wide-reaching burns, often easily causing wound infection. Early management of the burn patient is critical for future morbidity and mortality. Therefore, it is very important to prevent and cure wound infections in burn patients. Early management of wound care, for Second Degree burns usually fails to achieve the ideal effect. To avoid the end result of pigmentation, scarring, and even limb dysfunction, it is also necessary to treat burns effectively.

**Aim :** The purpose of this study was to evaluate the use of zinc cream at the beginning of wound care management in preventing second degree burn infection in second degree burn patients.

**Method:** Burn patients received basic wound care, and wound healing time and pigmentation fade time for all patients were recorded. And the patient's wound healing rate is calculated during the wound care day.

**Results:** After basic treatment for second degree burn patients using Zinc Cream. It was observed that after treatment, there was significant efficiency; wound healing rate, healing time.

**Conclusion:** Zinc Cream in treating deep burns can effectively reduce wound infection and promote wound healing.

**Keywords:** Burns, Early Management, Treatment



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**Secretariat Office I**

WOCARE Center Bogor  
Jl. KH. Soleh Iskandar No. 93 Kel. Cibadak,  
Kec. Tanah Sereal, Kota Bogor, Indonesia  
Mobile:  
+62 813 2280 0110 Marina Ruran  
+62 8134 2020 300 Ikram Bauk  
Email:  
[event@wocare.org](mailto:event@wocare.org)  
[srigitarja@wocare.org](mailto:srigitarja@wocare.org)  
[aseanwoundsummit@gmail.com](mailto:aseanwoundsummit@gmail.com)  
Web:  
[event.wocare.org](http://event.wocare.org)

**Secretariat Office II**

DPW PPNI DKI Jakarta  
Jl. Raya Lenteng Agung Timur Gang,  
Jl. H. Shibi No. 1A, RT.1/RW.2, Srengseng Sawah,  
Jagakarsa, South Jakarta City, Jakarta 12640  
Mobile:  
+62 811 9292 997  
Email:  
[ppni\\_dki@yahoo.com](mailto:ppni_dki@yahoo.com)  
Web:  
[ppnidki.org](http://ppnidki.org)

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