

Index

1 AI for Patient
Radiation Protection

5 Staff Development

2 Cholera treatment and
preventive strategies

6 World Diabetes Day

3 Retention Plan

7 Patient Safety

4 Psychological
Benefits of
Breastfeeding

8 Season Greetings
and Entertainment



AI for Patient Radiation Protection Artificial Intelligence: An Asset for Patient Radiation Protection

Technological innovation plays a crucial role in improving medical care, and artificial intelligence (AI) is no exception, especially in medical imaging. Since radiation exposure is a significant concern in radiological exams, AI is making a substantial contribution by reducing this exposure while maintaining high-quality imaging.

One of the main advantages of AI is its ability to optimize imaging device parameters. Using advanced algorithms, CT scanners and X-rays can produce high-resolution images with a reduced radiation dose. For example, AI systems automatically adjust device settings to ensure clear images while minimizing exposure. This means that patients can undergo accurate exams without being subjected to excessive radiation levels.

AI also plays a key role in monitoring radiation doses. Intelligent systems can track, in real-time, the cumulative dose received by each patient and issue alerts if safety thresholds are reached. This allows radiologists to better manage exams and avoid unnecessary radiation, thereby reducing potential risks for patients.

Moreover, AI enhances diagnostic accuracy, which can decrease the need for repeated exams. By detecting abnormalities with high precision, AI tools enable radiologists to make more accurate diagnoses from the first exam. Fewer repeated exams mean less radiation exposure, which is beneficial for patient health.

AI algorithms are also capable of segmenting images by automatically identifying areas of interest. This capability allows for targeting only specific regions of the body during exams, thus reducing exposure to unnecessary radiation for other parts.

In summary, integrating AI into medical imaging is revolutionizing patient radiation protection. By optimizing images, monitoring doses, and improving diagnostic accuracy, AI contributes to safer and more efficient imaging. These technological advances ensure that patients receive the best possible care while minimizing the risks associated with radiation.

Although we do not yet have these technologies in our department, we are hopeful that we will soon integrate AI to offer even safer and more effective care to our patients. We look forward to seeing how these innovations can enrich our practice and further enhance the quality of care we provide.

Nada Bechara, Coordinator Medical Directory

In this newsletter you can expect:

Optimizing Imaging Parameters

Monitoring and Managing Radiation Doses

Enhancing Diagnostic Accuracy

Targeted Imaging with AI

Future Implementation

Cholera treatment and preventive strategies

An Ancient Disease with Modern Solutions



Overview

Cholera is a severe diarrheal illness caused by the bacterium *Vibrio cholerae*, posing a major health threat, particularly in areas with poor sanitation. The disease can cause massive fluid loss and electrolyte imbalances, potentially leading to hypovolemic shock and death if not treated promptly.

Understanding Cholera

Vibrio cholerae primarily spreads through contaminated water and food. Once ingested, the bacteria target the small intestine and release a toxin that disrupts normal electrolyte balance, resulting in significant water and salt loss. The hallmark symptom is profuse, watery diarrhea, often described as "rice-water stool" due to its pale, cloudy appearance.

Factors that increase susceptibility include poor sanitation, medications that lower stomach acidity, and genetic traits like blood type—individuals with type O blood are at higher risk of severe illness.

Symptoms and Diagnosis

Cholera symptoms vary from mild to severe, with most cases being asymptomatic or mild. However, about 10% of cases can progress to life-threatening dehydration, characterized by sudden severe diarrhea, abdominal cramps, and vomiting. Signs of severe dehydration include dry mouth, sunken eyes, low blood pressure, and a rapid pulse. Diagnosis is usually clinical during outbreaks, but severe cases may require stool analysis to confirm the presence of *Vibrio cholerae*.

Rapid diagnostic tests and darkfield microscopy are also available for quicker confirmation.

Treatment and Management

The primary treatment for cholera is rehydration therapy to replace lost fluids and electrolytes. Mild cases are managed with Oral Rehydration Solutions (ORS), such as alfyte, while severe cases require intravenous fluids. Antibiotics, like doxycycline, may be used to shorten the duration of the illness, depending on the region's bacterial resistance patterns. Early intervention is crucial timely hydration and electrolyte replacement can reduce the mortality rate to less than 1%. Without treatment, severe cases can result in death within hours.

Prevention and Control

Cholera prevention relies on public health measures focused on improving sanitation, access to clean water, and good hygiene practices. Key strategies include educating communities on boiling water, washing produce thoroughly, and avoiding raw or undercooked shellfish. Effective sewage disposal and access to safe drinking water are critical in controlling the spread of cholera. For travelers to areas where cholera is common, a live attenuated oral cholera vaccine is available for individuals over one year of age. However, maintaining strict hygiene and water safety practices is essential, as vaccination does not completely eliminate the risk of infection.

Sources:

1. Updated global burden of cholera in endemic countries. Ali M, Nelson AR, Lopez AL, Sack D. (2015) PLoS Negl Trop Dis 9(6):e0003832.
2. Cholera Annual Report 2023. Weekly Epidemiological Record, 9 September 2024, Vol 99(36), (pp481-496).

In this newsletter you can expect:

Overview of Cholera

Understanding Cholera

Risk Factors

Symptoms and Diagnosis

Treatment and Management

Prevention and Control Strategies

Modern Solutions for a Persistent Problem

Randa Haddad, Head of Pharmacy

Retention Plan

Building a Strong Retention Plan for Our Healthcare Team

Retention is a crucial part of any healthcare organization, and we are committed to supporting, developing, and retaining our skilled team members.

As we grow and strive to provide high patient care, it's important to recognize and reward our employees, foster professional growth, and ensure a work environment that supports well-being and work-life balance. Here's a look at our retention plan and the initiatives we're implementing to make our hospital a place where our team feels valued and empowered.

Creating a Positive Work Environment

We understand that a supportive workplace directly impacts job satisfaction and retention. This year, we're focusing on enhancing our team culture by encouraging collaboration, open communication, and recognition of achievements.

Managers are receiving additional training on fostering inclusivity and providing constructive feedback, ensuring every team member feels respected and heard.

Employee Recognition Programs

Recognizing hard work is essential for a positive workplace. Our Employee of the Month program highlights outstanding employees, and we're introducing awards for exceptional patient care.

Professional Development and Career Growth

To help our team members advance, we are expanding training programs and workshops that support upskilling and certification.



Opportunities for cross-departmental training will help employees broaden their expertise, offering pathways for promotions and lateral career growth.

We're also developing a mentorship program to connect newer employees with experienced team members, fostering growth and connection within the hospital.

Fostering Work-Life Balance

Maintaining a healthy work-life balance is essential in a healthcare setting. Our hospital is implementing new scheduling and increasing paid time-off accrual for long-tenured employees.

Competitive Compensation and Benefits

Competitive pay is key to retaining skilled professionals. We are reviewing salaries annually and making adjustments as needed to keep pace with industry standards.

Engaging with Feedback

We value the feedback of our employees. This year, we're launching more frequent surveys, so our staff can share thoughts on how to improve the workplace. These insights are crucial for adapting our retention efforts and demonstrating our commitment to continually improving the work environment.

Our commitment to retention isn't just about keeping employees on board; it's about building a place where they feel supported and valued.

Let's make this a great year!

Maria Moukhaiber, Chief Human Resources Officer

In this newsletter you can expect:

Creating a Positive Work Environment

Employee Recognition Programs

Professional Development and Career Growth

Fostering Work-Life Balance

Competitive Compensation and Benefits

Engaging with Feedback

A Commitment to Support and Value

Psychological Benefits of Breastfeeding Fostering Maternal Well-Being and Child Development



Breastfeeding goes beyond its nutritional value, providing substantial psychological benefits for both mothers and children. This practice plays a critical role in fostering emotional bonds, promoting maternal mental health, and supporting child development.

Psychological Benefits for Mothers:

- **Bonding through Oxytocin:** Breastfeeding triggers the release of oxytocin, a hormone associated with love and attachment, strengthening the mother-infant bond.
- **Reducing Postpartum Depression:** Mothers who breastfeed are at a reduced risk of postpartum depression and anxiety, experiencing focused relaxation similar to meditation.
- **Boosting Self-Esteem and Empowerment:** The act of breastfeeding enhances maternal confidence and provides a sense of accomplishment, empowering mothers in their role.

Child Developmental Benefits:

- **Nutritional Support for Brain Development:** Breast milk contains essential nutrients like DHA and ARA, crucial for brain and visual system development.
- **Enhancing Cognitive and Emotional Growth:** Physical closeness, eye contact, and skin-to-skin touch during breastfeeding foster emotional security, aiding cognitive and social development.
- **Strengthening Immunity and Gut Health:** Breast milk contributes to a strong immune system and healthy gut microbiota, which can impact long-term health and metabolic functions.

Maternal Psychological Well-being:

- **Positive Mental Health Impact:** Hormones released during breastfeeding induce calmness, joy, and emotional balance, improving overall happiness.
- **Body Positivity:** Breastfeeding supports body positivity, allowing mothers to appreciate their bodies' ability to nourish their babies.

Challenges and Strategies:

- **Addressing Common Difficulties:** Mothers may face challenges like sore nipples or low milk supply, requiring education and support.
- **Education and Lactation Support:** Access to education and lactation consultants is crucial for successful breastfeeding and maternal well-being.
- **Overcoming Societal Barriers:** Supportive workplace policies, comfortable spaces for breastfeeding, and public acceptance are essential to reducing stress and promoting breastfeeding.

Conclusion:

Promoting breastfeeding contributes to a nurturing society that values the health and happiness of mothers and children. Awareness and support are key to fostering a healthy environment where breastfeeding is encouraged, benefiting both maternal well-being and child development.

Source: Modak A, Ronghe V, Gomase K P (2023) The Psychological Benefits of Breastfeeding: Fostering Maternal Well-Being and Child Development. *Cureus* 15(10): e46730. DOI 10.7759/cureus.46730

Lena Khoury, Head Nurse - Obstetrics and Gynecology

In this newsletter you can expect:

Psychological Insights for Mothers

Child Developmental Advantage

Maternal Mental Well-being

Practical Support for Breastfeeding

Conclusion

Staff Development Importance and Impact

Staff Development is the process of assessment, development, and evaluation that enhances the performance or professional development of health care.

Staff development refers to all training and education provided by an employee to improve the occupational and personal knowledge, skills and attitude of vested employees e providers.

Importance and need for staff development

- To update knowledge, skill, and practices with the advancement in the medical field
- To have a challenge in growing unionization and legislative control of nursing
- To help nurses to be aware of unfamiliar practice roles and rules 3.
- To emphasize quality rather than quantity

Goals and objectives of staff development

- To improve the knowledge, competence, and attitude of the staff
- To maximize potential and utilization of staff
- To identify the training needs of staff
- To assist new entrants in getting adjusted to a new environment, new roles, and responsibilities
- To satisfy the interest of the staff in a particular area
- To have competent and talented persons in the organization
- To develop staff professionally and personally

Advantages of staff development program

- To improve the knowledge, skill, and attitude of nurses
- To develop competent future Head Nurses and Registered Nurses



- To develop a positive attitude and inculcate motivation among staff to work hard
- To prepare nurses to assume increased responsibilities
- To educate new nurses on workplace culture issues specific to that hospital

Conclusion

When more care and attention is paid for the staff development through the staff development programs, the staff morale, conflict resolutions, patient satisfaction and staff satisfaction have improved. Nurses need to update themselves and every institution needs to strive to keep their nurses updated with current knowledge in nursing which can be facilitated through the staff development programs. Nurses need to attend the staff development programs regularly to gain knowledge and to translate that knowledge into patient care as patient safety and quality patient care is our prime concern.

Sources

1. Prasad CM. (2004). Principles & Practice of Management. 6th edition. India: Sultan Chand & Sons Publication. p. 214-218
2. Chabra. (2003). Principles Practice of Management. 8t Edition. New Delhi, India: Darpar Rai and Co
3. Francis CM, Soyza MC de. (2000). Hospital Administration. 3rd edition. New Delhi, India: Jaypee Brothers. p. 270-281.

**Jacqueline Choucair, Staff
Development Nursing Coordinator**

In this newsletter
you can expect:

Key Concepts of
Staff Development

Why Staff
Development is
Essential

Goals and
Objectives

Advantages of Staff
Development
Programs

Focus on Quality
Care

Conclusion



World Diabetes Day

Yes, People with Diabetes Can Enjoy Sweets!

World Diabetes Day, celebrated on November 14, is a great opportunity to break the myths about diabetes, especially the idea that people with diabetes can never eat sweet food. In fact, with proper management, they can enjoy adapted treats that don't disrupt their blood sugar levels.

Recommendations Include:

- Sweeteners: Alternatives like sucralose, stevia, or aspartame can sweeten food without raising blood sugar levels.
- Low Glycemic Index Desserts: Desserts made with ingredients like whole-grain flour or low-sugar fruits (berries, apples) are good choices.
- Dark Chocolate: With at least 70% cocoa, it can be enjoyed in small amounts.

The Importance of Balance in Meals:

For people with diabetes, it's all about balance:

- Combine complex carbs and fiber (like vegetables or whole grains) to slow sugar absorption.
- Include proteins and healthy fats to ensure lasting satiety.
- Watch portion sizes to avoid excessive glycemic load.

Examples of Diabetic-Friendly Treats:

- Sugar-Free Jelly: Made with sweeteners and low-carb fruits.
- Homemade Pastries: Using fiber-rich flours and sweeteners.
- Yogurt-Based Desserts: Plain yogurt topped with fresh fruits and a touch of stevia.
- Unsweetened Compotes: Made with naturally low-sugar fruits.

A Message for World Diabetes Day:

World Diabetes Day is a wonderful chance to remind everyone that complete deprivation is not the answer. People with diabetes can still enjoy life and good food while following their healthcare providers' advice.

This day can also be an opportunity to offer patients surprise boxes filled with adapted treats like sugar-free jelly, a balanced homemade dessert, and an educational leaflet about diabetes-friendly eating.

Nadine Akiki, Head of dietetics and nutrition

In this newsletter you can expect:

Debunking Myths about Diabetes and Sweets

Key Recommendations for Diabetic-Friendly Sweets

Finding Balance in Meals

Examples of Diabetic-Friendly Treats

A Positive Message for World Diabetes Day

Conclusion from the Head of Dietetics and Nutrition

Patient Safety

Safeguarding patient care standards and improving hospital practices



As Patient Safety Officer in the Quality Department, I am dedicated to advancing initiatives that safeguard patient care standards and improve hospital practices.

My recent efforts have focused on leading projects to enhance patient identification, medical order accuracy, and communication protocols across departments.

Alongside these efforts, my colleagues in the Quality Department play a vital role in addressing Occurrence Variance Reports (OVRs), managing patient complaints, and analyzing satisfaction surveys.

By regularly reviewing satisfaction reports, we identify trends, address concerns, and celebrate areas of excellence.

Together, we work to identify areas for improvement, respond proactively to feedback, and uphold our commitment to providing safe, high-quality care for every patient.

Patient Identification Training and Audits

Accurate patient identification is critical to safe and effective care. Our recent training emphasized standardized identification practices, including the correct application of ID bracelets and protocols for addressing exceptional cases. Follow-up audits across various departments assessed compliance, highlighting our team's dedication to implementing these essential safety practices.

Medical Orders Accuracy Audit

The Quality Department also supported a detailed audit of medical orders, focused on ensuring accuracy and completeness in documentation. This audit helps us prevent errors and aligns with our broader quality goals, safeguarding patient outcomes and empowering staff to provide care with confidence.

Improving Communication and Responsiveness

Clear communication with patients and families is another key area we are strengthening. Preparing an audit for the Outpatient Department (OPD), Admissions, and Emergency Room (ER) admissions, we aim to ensure patients receive accurate and timely information throughout their care journey.

Feedback and Proactive Improvement:

Addressing Complaints and OVRs
Our Quality Department's role in managing patient feedback, including complaints and Occurrence Variance Reports (OVRs), has been invaluable.

These reports offer insights into areas where we can improve processes, enhance patient satisfaction, and address potential safety concerns. Each OVR and complaint is an opportunity for proactive improvement, allowing us to resolve issues swiftly and reinforce our standards of care.

These combined efforts demonstrate our commitment to a safe, patient-centered environment. Thank you to the staff for their ongoing dedication and to the Quality Department for their crucial role in our continuous improvement process.

Rita Ishak, Quantity Management and Patient Safety Officer

In this newsletter you can expect:

Debunking Myths about Diabetes and Sweets

Key Recommendations for Diabetic-Friendly Sweets

Finding Balance in Meals

Examples of Diabetic-Friendly Treats

A Positive Message for World Diabetes Day

Conclusion from the Head of Dietetics and Nutrition



Season Greetings and Entertainment

Warm Wishes for the Holiday Season!

As the year draws to a close, we reflect on the moments that brought us together as a community and strengthened our mission to provide exceptional care and service.

Notre Dame University Hospital extends heartfelt wishes to all our staff, patients, and their families for a joyful holiday season filled with peace, love and happiness.

Upcoming Holiday Events

We are excited to share a calendar of festive activities planned to bring cheer to everyone in our hospital:

1. Tree Lighting Ceremony

Date: December 23, 2024

Time: :2:00 PM

Location: Main Lobby

Join us as we illuminate the holiday season with our annual tree lighting!

2. Reception ceremony and parade

Date: December 23, 2024

Location: Outpatient department

3. Santa's and priest visit for our Patients

Date: December 24, 2024

Location: Pediatrics and Inpatient floors

4. Santa Claus will be spreading joy and delivering gifts to our youngest patients.

Holiday Wellness Tips

The holidays are a time for celebration, but it's essential to prioritize your health and well-being.

- Stay Active: Take brisk walks or try gentle exercises to stay energized.
- Eat Mindfully: Enjoy festive treats in moderation and balance them with healthy choices.
- Prioritize Rest: Amid the excitement, ensure you get enough sleep to recharge.
- Stay Connected: Reach out to friends and family to share the holiday spirit.
- Festive Decorations Competition: Departments are encouraged to participate in decorating their areas with holiday themes. The most creative design will win a special prize announced on December 23rd.

A Heartfelt Thank You

To our dedicated staff: Your commitment and compassion make Notre Dame University Hospital a beacon of hope and healing.

Your hard work this year has been extraordinary, and we deeply appreciate your unwavering efforts.

Happy Holidays!
Notre Dame University Hospital
Administration

Dr Fadi Saad, Chief Executive Officer

In this newsletter you can expect:

Upcoming Holiday Events

Holiday Wellness Tips

Festive Decorations Competition

A Heartfelt Thank You

Closing Note