

Improving Patient Safety in Lebanese Hospitals



ROLA HAMMOUD, MD, MHA, FACHE

Learning Objectives

- 1. Identify the progress of Patient Safety in the Lebanese Healthcare System
- 2. Recognise the challenges and the opportunities for improvement
- 3. Analyse the methods used to improve patient safety
- 4. Criticise the project for performance improvement



Patient Safety in Lebanon

Patient safety is an issue of increasing public interest, with news broadcasts, television programs and newspaper articles covering stories of complications, medical errors, injuries and preventable deaths.



Patient Safety in Lebanon: actions

<u>Fast Response Mechanism</u>: developed by the MOPH: a <u>telecommunication</u> company is hired to receive patient complaints 24 hours a day.

Contacts syndicate of private hospitals to resolve the most urgent complaints.

MoPH is contacted if no response.

(Lebanon files, 2015b).

Patient Safety in Lebanon

- ❖ Patient safety is an issue of increasing public interest, with news broadcasts, television programs and newspaper articles covering stories of complications, medical errors, injuries and preventable deaths.
- ❖ No published data and numbers 1,2



Addressing Medical Errors in the Lebanese Healthcare System



Challenges affecting patient safety in Lebanon

Under-reporting of incidents and near misses.

60% of providers refrain from reporting medical errors and near misses:

- ■81.7% percent feel that their mistakes, if reported, will affect them negatively and will be held against them.
- 82.3% of providers are concerned that incidents occurring, even if related to problems in the organization's system, will be kept in their personal files instead of being used for performance improvement
- **❖ No requirements to report adverse events** to a national centralized system ^{4,5}

Challenges affecting patient safety in Lebanon

- Lack of explicit national quality improvement and patient safety policies
- Absence of a national sets of standardized and comparable indicators for hospital performance benchmarking and improvement
- No legislative mandates to report on a national set of standardized performance indicators for benchmarking and quality improvement 4,5
- Absence of system approach
- Blame culture

RECOMMENDATIONS

- 1. Enhance clinical governance through the integration of evidence-based clinical guidelines, education and training of providers, and conducting audits and performance appraisals
- 2. Develop and implement **policies** that promote **anonymous** incident **reporting** at the organizational and national level
- 3. Revise and update current **accreditation systems** to ensure patient safety goals, indicators and training requirement are explicit in the standards and integrated in the contractual arrangements
- 4. Empower patients to enhance quality of care and patient safety

ACTIONS

- Lebanese Society for Quality & Safety in Healthcare
 Stay Safe Awareness Campaign: patient & community engagement
 Setting up National Patient Safety Goals
- Accreditation Standards
- Patient Safety Chapter

Lebanese Society for Quality and Safety in Healthcare (LSQSH)

Non-governmental and not for profit organization founded in 2012

❖ Mission: Promote quality and safety in public and private health sectors in Lebanon to improve the lives of our people.

❖ Vision: Be a recognized leader and partner to provide expertise and information

LSQSH operates with the leadership of a governing board.





Dr. Jamal Hobballah Vice President



Roula Zahar



Maysaa Jaafar Secretary







Founding & Honorary Member

Achievements



Organizing congresses on an annual basis:

2013

Quality &
Safety in
Healthcare:
Standardizatio
n of Practices

2015

Patient Engageme nt 2017

Bridging the gap for safer care 2019

Leading Sustainable Change















2014

Patients First 2016

Quality and Safety: A Iuxury or A Necessity? 2018

Teaming
Up for
Safety

Achievements



- Providing educational sessions and workshops
- Participating in congresses
- Organizing awareness campaigns
- Consultancy Services for hospitals





Achievements

- Partnering with American Society for Quality (ASQ)
- Collaboration with Patient Safety Movement
- Collaboration with the WHO
- ❖Initiating IHI Open School in Lebanon
- ❖ Partner with the Patient Safety Movement Foundation





National involvement in Patient Safety

- > Partner with LMOPH
 - # Experts members for the revision of the Lebanese Standards of Accreditation (TRACC Project)
 - # Ensure Patient Safety is a comprehensive entity in those standards
 - # Board members on the training faculty of Lebanese Surveyors
- > Partner with National and International Patient Safety Movements
- > Partner with WHO: STAY SAFE CAMPAIGN
- World Patient Safety Day



Stay Safe Project

- LSQSH in collaboration with the WHO has initiated the **Stay Safe Project**, which constituted of 2 stages:
- 1) Stage 1: Developing the Stay Safe Video and Booklet
 - To empower patients/family members to take an active role in their health and to make them aware of some issues that might face them during a hospital encounter.
 - To encourages them to speak up regarding any safety concern to improve the system.





Stay Safe Project

2) Stage 2: Establishing the "National Patient Safety Goals"

- •To have a national set of patient safety measures and indicators that are standardized for all hospitals in Lebanon to assess and monitor the hospital's performance on patient safety practices ^{1,3}
- •To motivate all stakeholders on the importance of patient safety
- •To benchmark data and set a framework to standardize practices in the Lebanese healthcare system in order to reduce errors and prevent harm.
- → This would lead to accountability and increased patient trust in the hospital system

Safe Environment

Safe Access Safe Assessment Safe Treatment Safe Discharge

Safe communication

Lebanese National Patient Safety Goals

Safe Access to care

- Patient Identification
- Immediate ER triage
- Medication reconciliation

Safe Assessment

- Reduce Falls
- Reduce Pressure Ulcers

Safe Treatment

- Safe Surgery
- Safe Mom & Baby
- Reduce Medication errors
- Reduce Health Care Associated Infections
- Blood components management

Safe Discharge

- Discharge instructions & education
- Medication reconciliation

Safe Communication

- Effective Communication of Information
- Patient Engagement

Safe Environment

- Employee safety
- Facility Safety

Patient Safety Goals

- For each goal, the following was described:
 - Definition
 - Historical
 - Rational
 - •Components
 - Audit
 - References

Piloting Phase

Purpose:

To test the proposed indicators and audit tools and have some objective feedback regarding the relevance of these indicators and the feasibility of data collection.



Education and Training

- *Quality Department representatives of the hospitals were invited to a training session to explain the project, the indicators included in the piloting phase, and the data collection tools.
- Training presentation and audit tools were sent to the representatives after the meeting.

Patient Safety Indicators

- 1) Percentage of patients identified using 2 identifiers
- 2) Time to be seen by physician in ER (in minutes)
- 3) Compliance rate on medication reconciliation at admission
- 4) Falls Rate
- 5) Hospital acquired pressure ulcers rate
- 6) Rate of compliance with WHO surgical safety checklist
- 7) Number of reported medication errors
- 8) Percentage of Elective Deliveries (induction or cesarean) between 37 & 39 weeks

- 8) Percentage of Elective Deliveries (induction or cesarean) between 37 & 39 weeks
- 9) Staff compliance with hand hygiene
- 10) Blood transfusion reactions
- 11) Percentage of completed discharge instruction forms
- 12) Percentage of completed transfer forms
- 13) Percentage of completed informed consents
- 14) Employee incident and accident rate
- 15) Number of water cultures performed quarterly



Creating the Electronic "Safety Portal"



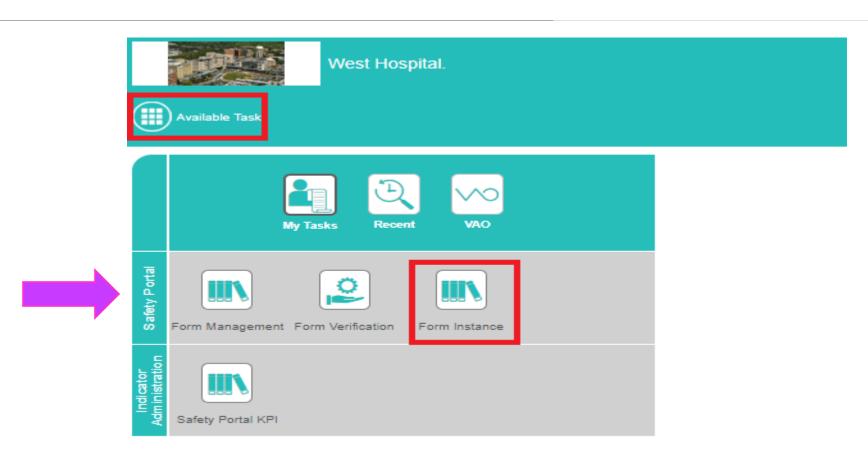
Safety Portal

❖Purpose :

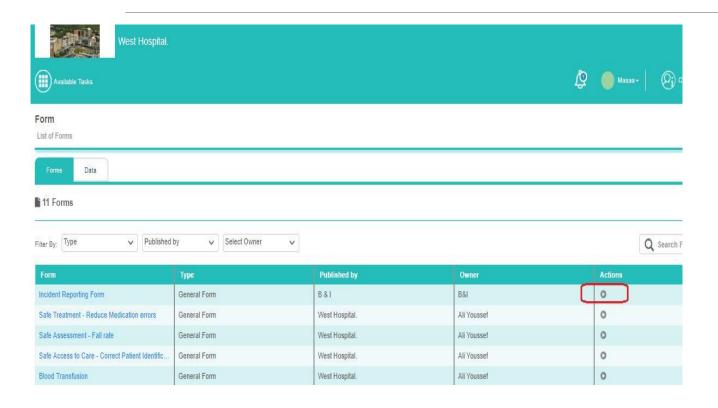
- •Acts as a comprehensive tool and reference guide for hospitals for collection, aggregation, and analysis of data in a standardized manner.
- •Identifies incorrect /invalid data / outliers that can impact the results of the indicators and skew results and allows hospitals to correct the data.
- Provides a measure of quality and patient safety.
- •Improves insight into the results by providing comparisons with similar organizations and also comparisons over time in the same organization.
- •Allows the hospital to graphically present the data in charts / graphs which can be circulated to all units
- ■Aids hospitals to identify the high priority areas for improvement in quality and patient safety 6,7,8

Safety Portal



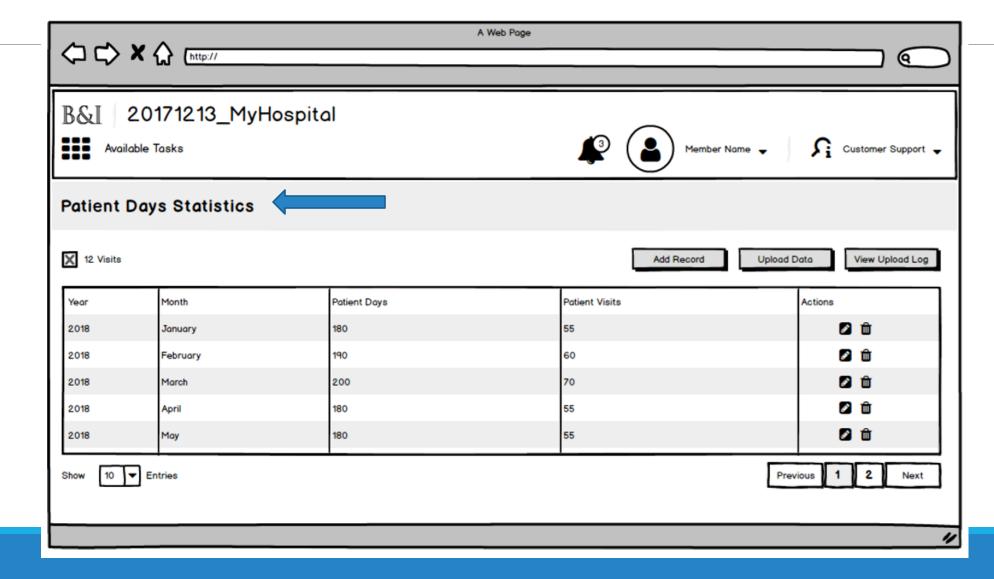


Safety Portal: QI Program & Incident reporting tool



Details of the Incident	Affected Person	
Date of Occurence: *	Person:	
12/12/2017	○ Patient ● Staff ○ Others	
Time of Occurrence:	Name:	
14:12:22	John Smith	
Location of The Incident:	DOB:	
ER	14/12/1964	
Discovery Date and Time:	Gender:	
12/12/2017	Male O Female MRN:	
Department Involved:		
	14741254	
Incident Type: ● Incident ○ Neor Miss ○ Sentinel Event		
Incident Type:		
Incident Type: Incident O Near Miss O Sentinel Event What is the incident type?	What is the incident category? O Incorrect Putent Identification O Breach of Identification Policy O Committed in Folian O Reporting /Receiving	
Incident Type: Incident O Near Miss O Sentinel Event What is the incident type?	What is the incident category? O Incorrect Patient Identification O Duplicate Medical Record O Breach of Identification Policy	
Incident Type: Incident Near Miss Sentinel Event What is the incident type?	What is the incident category? O Incorrect Patent Edentification O Duplicate Medical Record O Breach of Identification Policy O Communication Follure Reporting/Receiving Critical Results	
Incident Type: Incident Near Miss Sentinel Event What is the incident type?	What is the incident category? Incorrect Potent Identification Breach of Identification Policy Communication Follure Reporting/Receiving Critical Results Niscommunication No response to call Handows-Incounted Pilesing	
Incident Type: Incident Neor Miss Sentinel Event What is the incident type?	What is the incident category? Incorrect Patent Identification Displace Medical Record Breach of Identification Policy Communication Failure Reporting/Receiving Critical Results Miscommunication No response to call Handware-Inaccurate/Missing Information No Consent Service Delivery Problem Deloy to Provide Core Inadequate Pain Management	
What is the incident type?	What is the incident category? Incorrect Patent Identification Duplicate Medical Record Breach of Identification Policy Communication Foilure Reporting/Receiving Critical Results Miscommunication No response to call Information Information Service Delivery Problem	
Incident Type: Incident Near Miss Sentinel Event What is the incident type? Putient Identification	What is the incident category? Incorrect Potent Identification Breach of Identification Policy Communication Follure Paperting/Receiving Critical Results Niscommunication No response to call Handover-Incorporate/Nissing No Consent Service Delivery Problem Delay to Provide Core Indeequate Pain Management Indeequate Incompilete Assist Medical Advisor	

Safety Portal ... Cont'd



Performance Indicators

- 1) Percentage of correct patient identification
- 2) Falls per 1000 patient days
- 3) Falls with injury per 1000 patient days
- 4) Hospital acquired pressure ulcers rate
- 5) Rate of compliance with WHO surgical safety checklist
- 6) Medication Errors per 1000 patient days
- 7) Medication Near Misses per 1000 patient days
- 8) Incidence of Healthcare associated infections (HAI)
- 9) Blood Transfusion Reactions

Next Steps



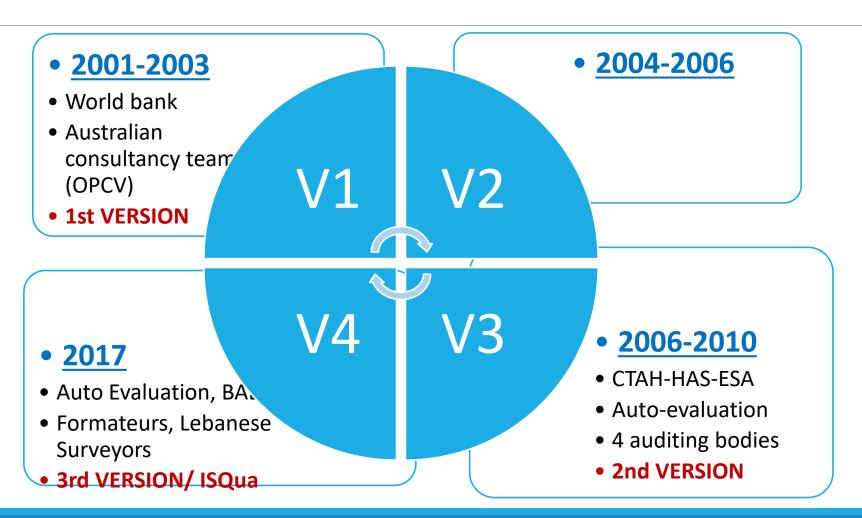
- 1) Educating hospitals on the measures and method of data collection by Nov. 2019
- Initiating the data collection and producing benchmarks (starting Jan. 2020)
- 3) Adoption the National Patient Safety Goals at the Ministry of Public Health
- → Outcome: benchmarks for patient safety measures that can be used by all hospitals in Lebanon for performance improvement and setting safe practices.

Recruitment of more hospitals A Challenge



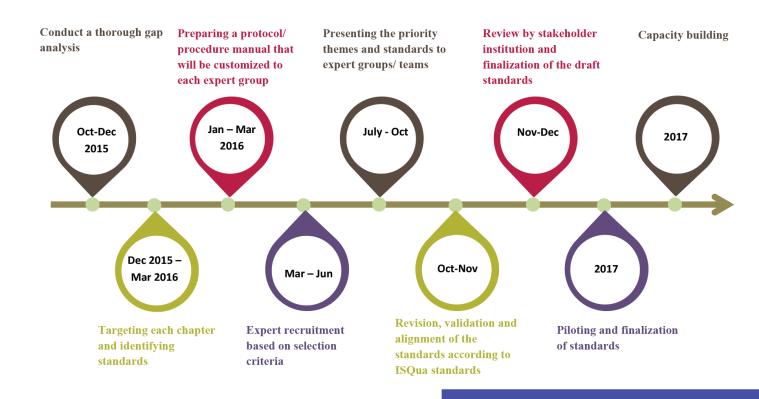
Lebanese Hospital Accreditation History



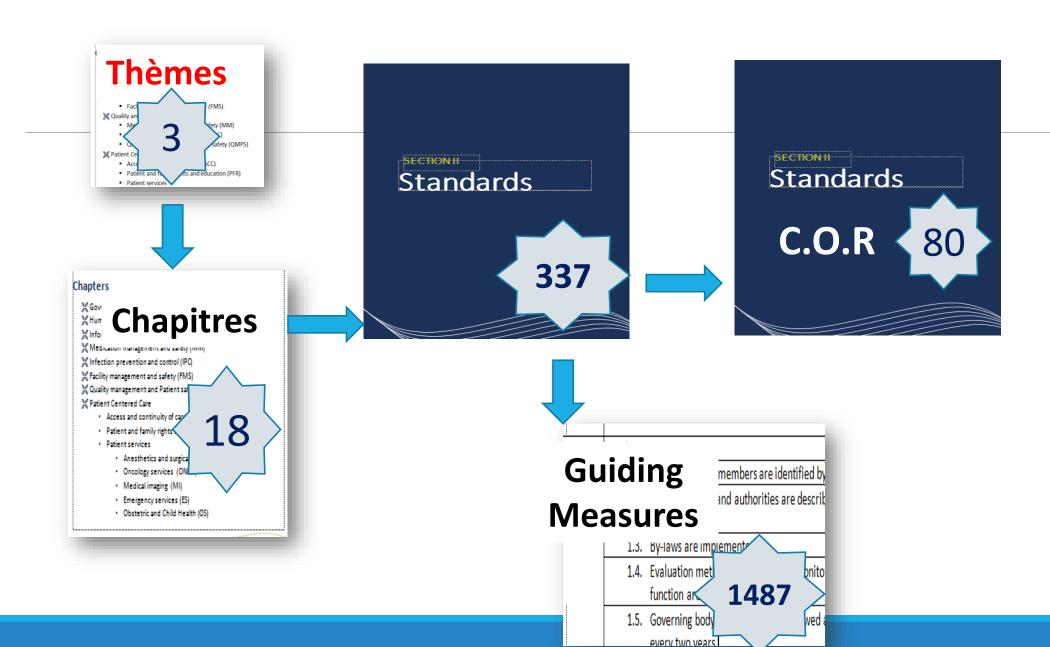


LEBANESE ACCREDITATION STANDARDS





Expert Involvement



Théme 1: Hospital Management 4 CHAPITRES			
1	Governance and Leadership	GL	
2	Human Capital	НС	
3	Information Management	IM	
4	Facility management and safety	FMS	
Théme 2: Quality and Risk Management 3 chapitres			
1 Medication management and safety		MM	
2 Infection prevention and control		IPC	
3 Quality management and Patient safety		QMPS	



EXAMPLES FROM LEBANESE HOSPITALS

CLEMENCEAU MEDICAL CENTER







VAP PREVENTION



Ventilator-associated pneumonia (VAP) is pneumonia that develops 48 hours or longer after mechanical ventilation is given by means of an endotracheal tube or tracheostomy. Ventilator-associated pneumonia (VAP) results from the invasion of the lower respiratory tract and lung parenchyma by microorganisms. Intubation compromises the integrity of the oropharynx and trachea and allows oral and gastric secretions to enter the lower airways. The ICU has adopted the VAP prevention as one of her key performance indicator since the beginning. The target rate was less then 4% and less then 15per 1000patients. The ICU had an high incidence in July, August, September and October >4%, an improvement plan was implemented; the rates had decreases significantly to zero in November, December.

Team

Dr Wajdy Abi Saleh: Head of division of ICU Dr Hassan Makhzoumi: intensivist Miss Subudya Sakaya: Nuse manager ICU Miss Amenda Semaan: Infection Control practitioners Mostafa Al Moula, Mohamed Flouni, Ibrahim Hamriti, Nabil Chahine, Mary Fahed: Respiratory Therapists Wael Tarhini, Lara B Hajj, Malek Shammas, Hiba Galth, Maisa El kontar, Hala Ghadban, Moh'd El Enein, Ahmad Ibrahim, Fadi Hishi, Moh'd Ismail, Ahmad J.Dine: ICU feam

Distribution of health care associated infections in ICU / month / over 2010-

Health-care associated infections / units	Target	Jan-10	Feb-10	March-10	April-10	May-10	June-10	July-10	Aug-10	Sep-10	Oct-10
VAP incidence		0	0	4	0	0	0	4	1	4	4
VAP Health care Associated infection rate	< 4 %	0	0	16.6	0	0	0	18.2	10	25	28.5
VAP per 1000 patient days	< 15 / 1000 patients	0	0	58.8	0	0	0	38.5	20.4	15.6	32.3

The Current Process

- Guidelines for the prevention of ventilator-associated pneumonia where implemented:
- 1- Maintain cuff pressure at 20cm H2O
- 2- Maintain Head of bed between 30-45 degrees.
- 3- Proper oral care three times per day and prn
- 4- Initiating Orders for enteral feeding as soon as the patient is stabilized.
- 5- Subglottic suctionning.
- 6- Use the Evac ETT
- 7- Stop using NSS while suctionning.
- 8- Orotrhacheal intubation preferred over nasotracheal.
- 9- Ventilator circuit not to be changed on the basis of duration use.
- 10- HAND WASHING







Process improvement:

Patient related: sick patients, multiple admissions to ICU,

open wounds (pressure

ulcer, infected wound

Shortage of staff

Breeching o

Cause -effect of VAP incidence



Doors need to be closed

Family related: breeching of visitation policy along

with PPE applications

manually were kept

open all of the time









Plan for improvement/ Action Plan:

Action		By Whom	By When	Update
1- assign one to one nursing care for patient on maximum isola	1- By NM	On daily basis, on going		
2- staff awareness (nurses, physicians, paramedical)				
3- Family awareness and visitors limitations		2- Bv NM. ICO		
4- Hand Hygiene is to be practiced by all staff and visitors in c patients, personnel and healthcare environment. 5-Using proper personal protective equipment while caring for especially isolated cases (and changing them between patient 6-Doors of all rooms (occupied and empty) are to be closed at 7-Door handles and knobs are to be cleaned several times per 8-Top surfaces and keyboards are to be cleaned several times per 9-deep cleansing, culture of the occupied and unoccupied roor.	patients contact) all times da per day	3- all ICU staff 4- ICO, NM 5- all ICU staff, paramedics, physician, family 6,7- all ICU staff 8- USM Cleaning personnel, to b monitored 9- NM	On going, each staff meeting On going	
10- post posters which alert staff about "VAP" bundles		By NM	End of May 2011	7
11- monitor practice of VAP bundles implementation		NM	June 2011	
12- monitor trends, analyse and develop PIP accordingly		ICU staff, NM, ICC,		

Outcome

Health-care associated infections / units	Target	Nov10	Dec10	Jan11	Feb11	March11	April11
VAP incidence		0	0	1	0	0	0
VAP Health care Associated infection rate	< 4 %	0	0	10	0	0	0
VAP per 1000 patient days	< 15 / 1000 patients	0	0	15.6	0	0	0

CLEMENCEAU MEDICAL CENTER



Compliance rate with SSI-Antibiotic prophylaxis protocol



Compliance Rate with SSI Antibiotic Prophylaxis Protocol

→ Linear (Compliance Rate with SSI Antibiotic Prophylaxis Protocol)



First healthcare institution in Lebanon to be a committed partner with the **Patient Safety Movement Foundation in 2018**

Actively involved in research regarding optimizing the detection, active surveillance and measurement of adverse events in healthcare institutions. Published in Journal of Patient Safety (Saikali et.al, J Patient Saf, 2017)

J Patient Saf. 2017 Nov 21. doi: 10.1097/PTS.00000000000442. [Epub ahead of print]

Evaluation of a Broad-Spectrum Partially Automated Adverse Event Surveillance System: A Potential Tool for Patient Safety Improvement in Hospitals With Limited Resources.

Saikali M, Tanios A, Saab A.

Bellevue Medical Center, Lebanon





- Implementation of Patient safety
 Walk rounds as per IHI
 recommendations
- 2. Implementation of Bedside Shift report to improve handover communication and reduce communication errors.

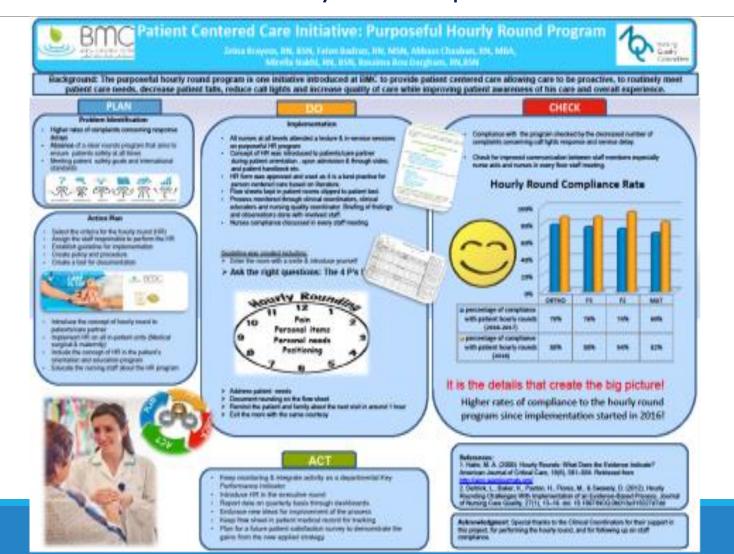
Bellevue Medical Center, Lebanon

grand Constitution and Constitution	grade and the same of the same	and the same of th	Telephone and the second
■ BMC	METHOD	BESULTS	DESCUSION
	Inspection and the Inspection of the Inspection	Participants computed the train self the national part States (Art Collect States Applicated) reserve the collection district Art Tel. (Collection).	Other in providing controlled and state of their provide comparisons of their interest provides of the
MERCONCIDENT AMERICAN AND A CAMPACT AS PRINCIPAL AND ADDRESS OF A CAMPACT AS PRINCIPAL AND ADDRESS OF A CAMPACT AS A CAMP	Commission constitution on the Constitution of	E 23	Martin reprocessor arts, conque con all fact for the more for appropriate constraints a constraint. See the contract of the contract of the contract contract more all some other processor contract contract and all some other processor contract contract and all some other processor contract contract and all some other processor contract and all some other proce
Nacestration with indigated until Territoria should place of antiquentiary artists, course of any processes on the indigated association expenses materia and place traps in close.) This process of the following one set indigated and the place bytes extract a larger of druggles is for	Commence of the control of the contr	Transcription or other concepts alphabety or 1 mil.	regions/station of first, incurrence lives distinctive processes of must be informative from the Problems and processed from verying by lane, transport principle adults for souls control to the control and principle of source parties for principle of first in control principle control and other lane.
	medicates and community are the second property of the community of the co	Copiettis Separati, arread rise perset of promise looks (sparapropris) ole alexand in Serv. Not the Pris.	
Comment and the comment of the comme	Particular to the state the state of the sta		the end record or the record in color pro-
OBJECTIVES AND HYPOTHESIS	manufaction of the control of the co	Final tale angular problem to a visit and the particles of the control of the con	CONCLUSIONS AND LESSONS LEARNED
ODACIA INCO AND INTUINIDAD AND AND AND AND AND AND AND AND AND	procurements of the delivery and the deplications with the hydronic optimization from the orthodoloxide. An experimental process of the community Procurement of the community of the community of the following and control optimization of the community of the following and community control optimization. The community of the community of the community control optimization of the community optimization control of the community optimization control optimization of the community optimization optim	Service Company of the Company of th	emplates sente hata fellera en la material alle al separativa de la material de l
The second second second process of the second process of the second sec	P10 17		
A TI			A
3.8	Substantian minima Substanti		ACKNOWLEDGEMENTO This was prouble as at 10 thm, who are proportionally as a 10 thm, who are proportionally as a 10 thm, and a 10 thm, and the second like a local manufacture of the second like a local manufacture
ENCYCLOSIS AND AND ADDRESS.	Contract Con	The same of the sa	A STATE OF THE PARTY OF THE PAR
CONTRACTOR OF THE PARTY OF THE	and the second second second second	- Lancaco	The second secon

- 3. Crash cart redesign with pre-post intervention study through the implementation of **Human factors engineering (HFE)** ameliorating medication identification and retrieval times
- 4. Revision of Communication Boards to improve compliance with skin integrity, engaging patients and their families in their care and encouraging them to speak up.
- 5. Decreasing patient falls through implementation of several interventions such as revision of assessment forms, staff and patient education, physical adjustment of side rails,

Bellevue Medical Center, Lebanon

6. Implementation of Patient Hourly Rounds process



Celebrating Patient Safety Day

Celebrating the First World Patient Safety Day













لا ينبغي بأي حال أن يُصاب أحد بأذى فى مجال الرعاية الصحية











The Future: Integrated approach to patient safety

- *Prioritizing the goals and making use of the resources available
- Continuous learning, mindfulness and accountability
- ❖ Putting more **emphasis on safety** over productivity and increased **standardizatio**n along with the creation of a learning organization
- Political support and commitment
- Comprehensive, effective **national program** for patient safety improvement at the top level which sets national regulations, guidelines, policies, strategies and specific rules.⁶

Integrated approach to patient safety

- A regulatory body at the national or regional level with strong enforcement activities and associated standards of performance.
- Integrating patient safety and quality into the medical and nursing curriculum to raise awareness and improve the skills and competencies of the health workforce.
- Strong patient safety leadership that encourages meaningful and sustained change towards improving the quality and safety of care
- Research resources for addressing patient safety problems⁶

IHI Framework: March 2017

Public Health Framework for the Prevention of Harm in Health Care



References

- 1. El-Jardali, F., Jaafar, M., Dimassi, H., Jamal, D., Hamdan, R. (2010). The current state of patient safety culture in Lebanese hospitals: a study at baseline. *International Journal for Quality in Health Care. 22 (5).* 386–395.
- 2. AUB study on patient safety in Lebanese hospitals: Poor reporting of medical errors. Press release by Ms. Maha Al Azar Associate Director for Media Relations at American University of Beirut. Accessed via: https://website.aub.edu.lb/communications/media/Documents/march-2013/patient-safety-EN.pdf
- 3. Hospital National Patient Safety Goals, 2018. Joint Commission. Accessed via: https://www.jointcommission.org/assets/1/6/2018_HAP_NPSG goals final.pdf
- 4. El-Jardali, Fadi, et al. "Addressing Medical Errors in the Lebanese Healthcare System: Making Healthcare Healthy." *Executive Magazine*, Mar. 2016, www.executive-magazine.com/economics-policy/adressing-medical-errors-in-the-lebanese-healthcare-system.
- 5. El-Jardali, Fadi, and Racha Fadlallah. "A Review of National Policies and Strategies to Improve Quality of Health Care and Patient Safety: a Case Study from Lebanon and Jordan." BMC Health Services Research, 16 Aug. 2017, doi: 10.1186/s12913-017-2528-1.
- 6. Anema, H., Kievit, J., Fischer, C., Steyerberg, E., Klazinga, N. (2013). Influences of hospital information systems, indicator data collection and computation on reported Dutch hospital performance indicator scores. *BMC Health Services Research*. 13(212). Accessed via: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3698115/pdf/1472-6963-13-212.pdf
- 7. European portal for action on healthcare inequalities. Accessed via: http://www.health-inequalities.eu/resources/data-indicators/
- 8. Data for Measuring Health Care Quality and Outcomes. Accessed via: http://www.oecd.org/els/health-systems/health-care-quality-indicators.htm

Webpage: http://www.lsqsh.org



LSQSH org



@LsqshSafety



Lebanese Society for Quality and
Safety in Healthcare
@lsqsh

