

Appendix 1- Summary of multi-faceted interventions from 2014 to 2018

Summary of multi-faceted interventions:	
Safety culture dimensions	Example of interventions
1) Promotion of safety culture	-Kick-off ceremony to promote safety culture and arouse staff awareness. -Hospital Quality and Safety forum (yearly) and cluster-based Quality and Safety forum (yearly) to appraise staff good practice and effort in promoting hospital and patient safety. -Game booth for Patient safety-related topics to attract staff awareness in safety practice and concern.
2) Teamwork training	- Staff empowerment workshops (Model for Improvement, Lean, Six Sigma), team building exercise and “Crew Resource Management Program” provided to staff to enhance staff interpersonal communication, leadership and safety decision making. (Yearly) -Implement SBAR tool in clinical to enhance clinical handover effectiveness between health care team. -Workgroups were formed to structure, promote and monitor of safety-related clinical issue, e.g. fall prevention, pressure injury prevention
3) Learning Organization/ continuous improvement / training	-“Incident reporting workshop” were launched quarterly to update staff knowledge in incident management. -Web-based training and teaching materials provided to staff to recognize the incident reporting system and encourage reporting culture (quarterly)
4) Communication/ staff involvement	-Staff forum with senior management to encourage speak up culture (quarterly) -Hospital-based safety newsletter (quarterly) and cluster-based safety newsletter “Risk watch” and “i-smart” (monthly) to allow sharing of safety tips and incident events.
5) Leadership/ management commitment	-Quality and safety walk round led by senior management or supervisor level to visit individual departments for environmental and safety checking monthly. -Reformation of medical consultation system to facilitate smooth communication and direct patient care.
6) Quality improvement program	-Safe feeding educational talk and workshops provided to staff and care-giver to enhance safe feeding skill. -Additional resources dedicated to pressure injury prevention to upgrade wound dressing materials -Fall prevention program to handle fragile patient and safe patient transfer workshop to demonstrate and empower staff handling skill in fragile patients. -Strengthening of clinical handover process through process review and regular audit.
7) Service improvement planning	-Modernization of hardware like an air-conditioning installation in the treatment area and renovation of ventilation facilities to provide a better working environment; -Activate staff retention strategies in response to the staff shortage problems throughout the years -Introduction of IPMOE to standardize medication management and minimize medication error

Appendix 2-Timeline for implementation of safety interventions from 2014 to 2018

	Monthly	Quarterly	Yearly	Special program
1)Promotion of safety culture (early 2014)				-Kick-off ceremony for safety culture promotion and game-booth for staff to recognize hospital safety issue
2)Teamwork training			team building workshop; "Crew Resource Management Program"	
3)Learning Organization/ continuous improvement/ training		-Incident reporting workshop; Web-based training and teaching materials for recognition of incident reporting system.		-Workgroup was formed to structure, promote and monitor of safety-related projects, e.g. fall prevention, pressure injury workgroups -Sharing of quality improvement program and audit result for further revision of intervention plans
4)Communication/ staff involvement	- <i>"i-smart"</i> to allow sharing of safety tips and incident events.	-Staff forum with senior management to encourage speak up culture -Hospital-based safety newsletter	Clinical handover process review and audit by individual departments	Introduction of SBAR for clinical communication Introduction of IPMOE to enhance medication safety Electronic documentation practice
5)Leadership / management commitment	-Quality and safety walk round led by senior management or supervisor level. -Reformation of medical consultation system to facilitate smooth communication and direct patient care.			-Post walk round improvement work follow up by quality and safety department with progress report sharing in department meeting -Staff and patient satisfaction survey were performed to allow stakeholder to reflect their feedback
6)Quality /service improvement program			-Quality and Safety forum for staff sharing of good practice	-Safe feeding educational talk and workshops for staff training and care-giver. -Modernization of hardware to provide a better working environment; activate staff retention strategies in response to the staff shortage problems throughout the years

