



Singapore Healthcare Management 2018

SHM_OP061

ENHANCEMENT OF SAFETY THROUGH PRODUCT DESIGN CHANGE

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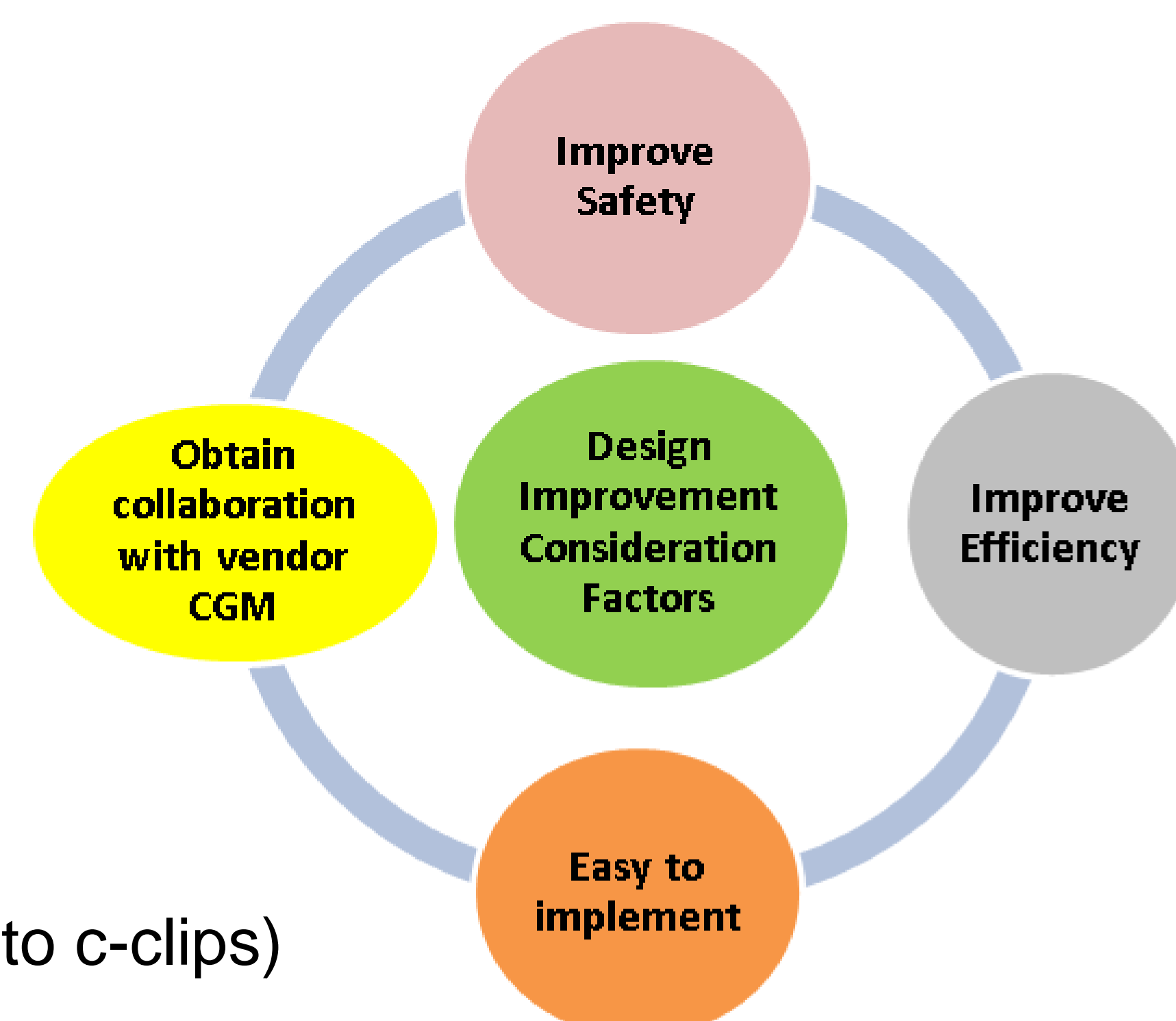
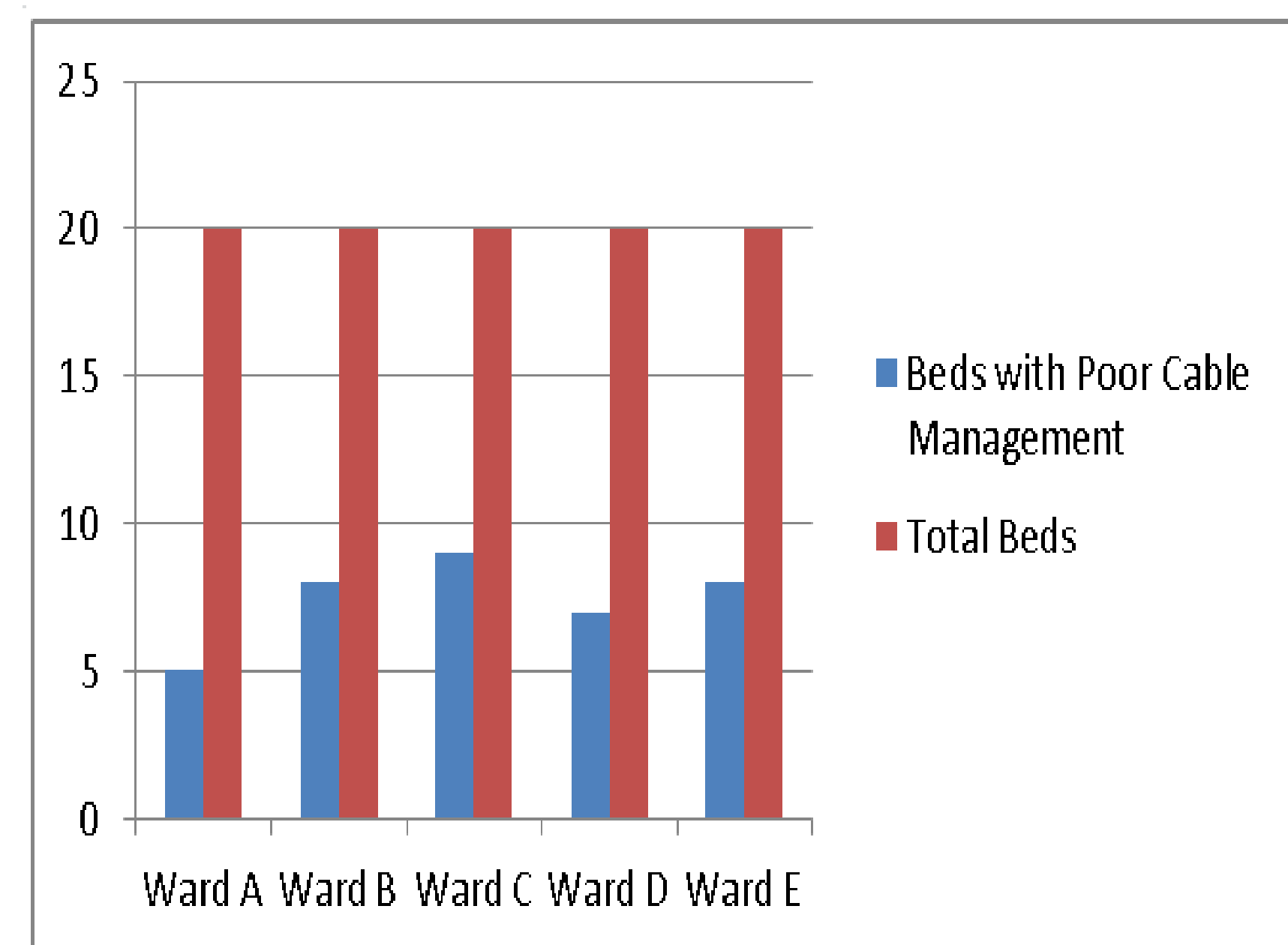
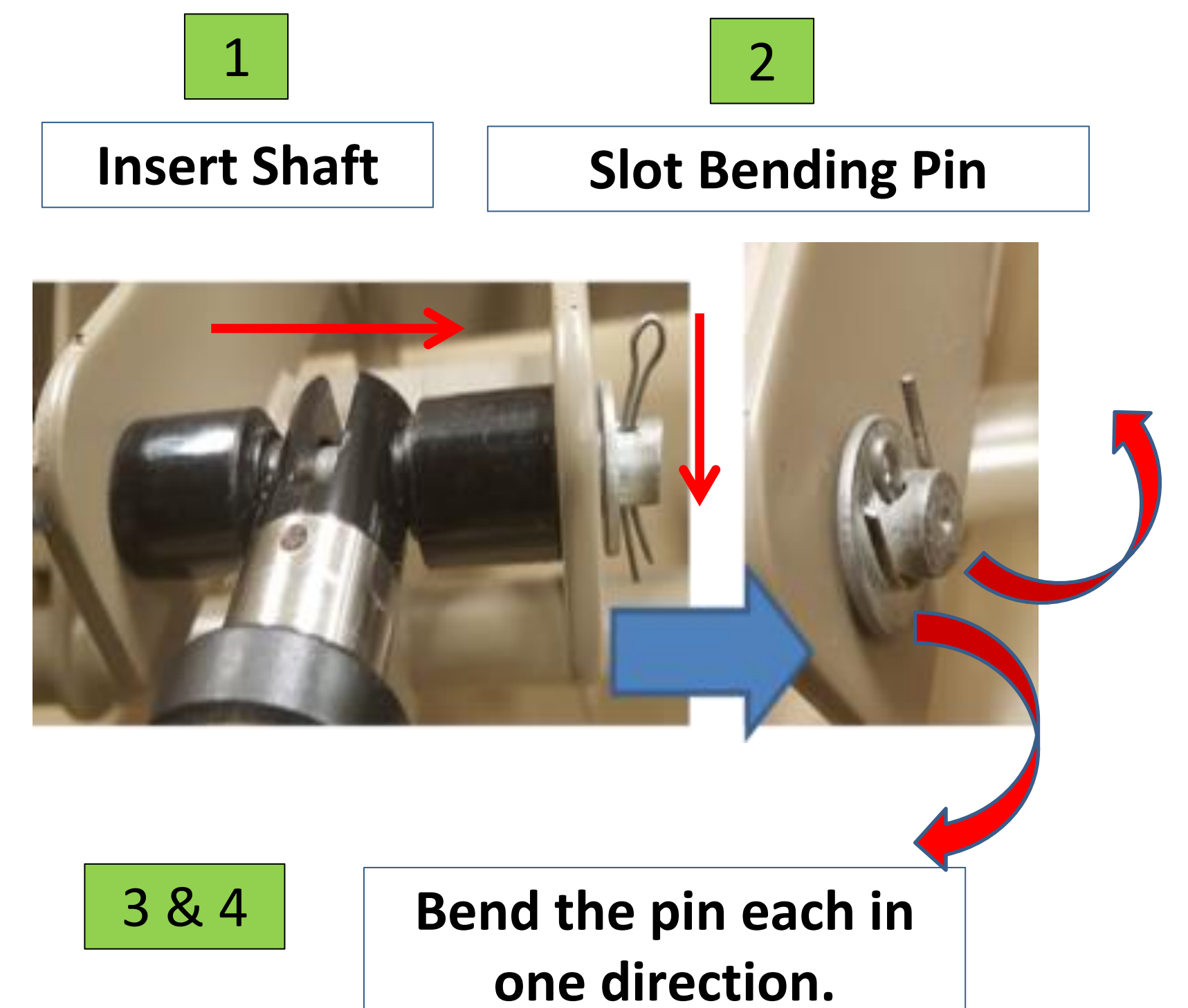
A AIMS

Enhancement of Safety when handling CGM beds by 3“R”s as follows :

- 1 To Reduce sharps injury and bruising during replacement of faulty actuators.
- 2 To Reduce potential fire and trips hazards of bed cables
- 3 To Reduce absconding and violence of high risks patients

M METHODOLOGIES

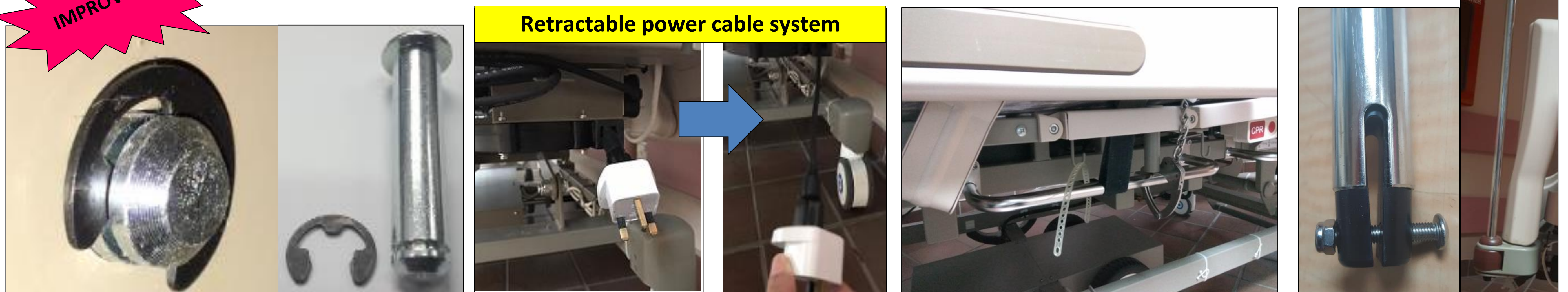
AIMS	GEMBA WALK	BRAINSTORMING WHAT / WHERE / WHY / WHEN / WHO / HOW	PDSA
1	To walk through the process and involve in hands-on with the technical team whom are facing the issue	Find out WHAT & WHY that causes the sharps injury and bruising. Find out HOW to Improve	Did a root cause analysis and derive possible lean solutions upon benchmarking the other bed models that do not pose such problems. To redesign the securing mechanism that is safe, simple/faster to assemble, and harmonization/ standardization with the other bed models(to reduce variety of methods).
2	An in-depth analysis done based on a site survey on the poor bed cable management in 5 wards	Find out HOW BAD is the current situation & WHY poor bed cable management. Find out HOW to Improve.	There are about 38% of non-compliance based on 100beds surveyed . We observe, listen and collect feedback from nursing which comprises of troublesome, inaccessible and not user-friendly design. To redesign a fool-proof, hassle-free and user-friendly on the related items to manage the cables effectively.
3	To walk through the current high risk wards and review the potential risks relating to beds.	Find out WHY there are potential risks from these patients. Find out HOW to Improve.	We observe, listen and collect feedback from security officers & nursing which comprises of current design constraints that is inadequate to ensure safety. To redesign practical, accessible, tough and safe design on items that allows such patients to have the opportunities to break-free or any means of violence.
1+2+3	To review through the collaborative plans and datelines	Find out WHO & WHEN to make this happen.	We have collaborated with the bed vendor CGM for design improvement to fulfil these AIMS by DEC 2017.



R RESULTS

All aims were achieved with the following results :

- safety compliance through change in design (from bending sharp pins to c-clips)
- improvement in process methodology (from bending pins to snap-in)
- Streamlining of processes from 3 steps to 1 step.
- Achieved trip-hazard-free design through better visualization retractable power cables.
- Achieved heightened security and improved staff protection with additional improvisations (2 metal bars for hand cuffs & IV Poles with bolted stopper).



C CONCLUSION

Through collaboration with internal and external stakeholders, we are able to implement a cost efficient and safe solution. We learnt to think beyond current possibilities and innovate for a win-win situation.