A mixed surgical ward case management platform to reduce hospital length of stay

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Department of Surgery
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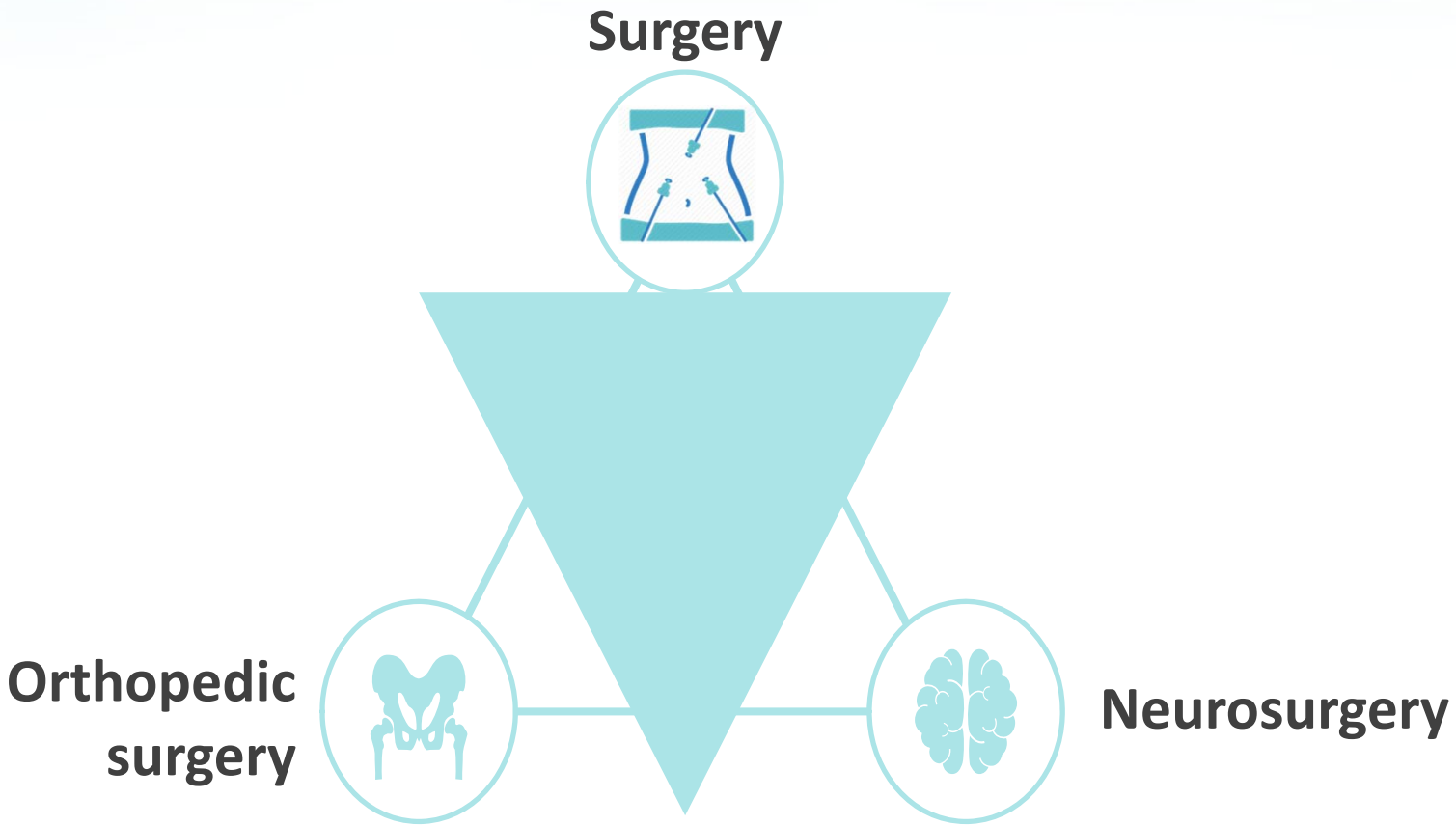
Background

The first mixed surgical ward in PMH (opened in NOV 2017)



Multi-specialty Environment

- Complex medical round
- Coordination of operation among specialties

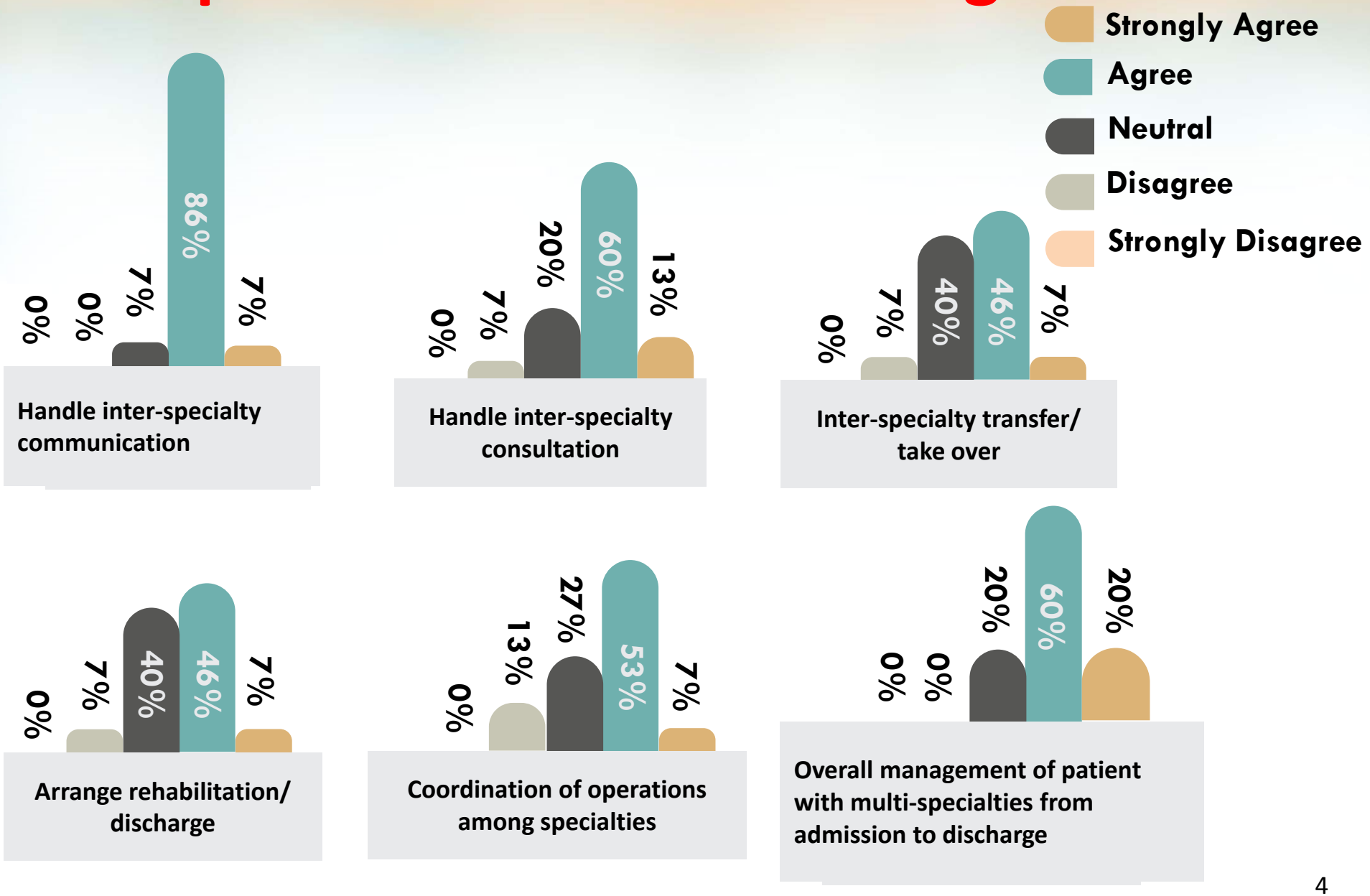
Multiple Consultations

- Inter-specialty consultation
- Transfer/ takeover

Communication

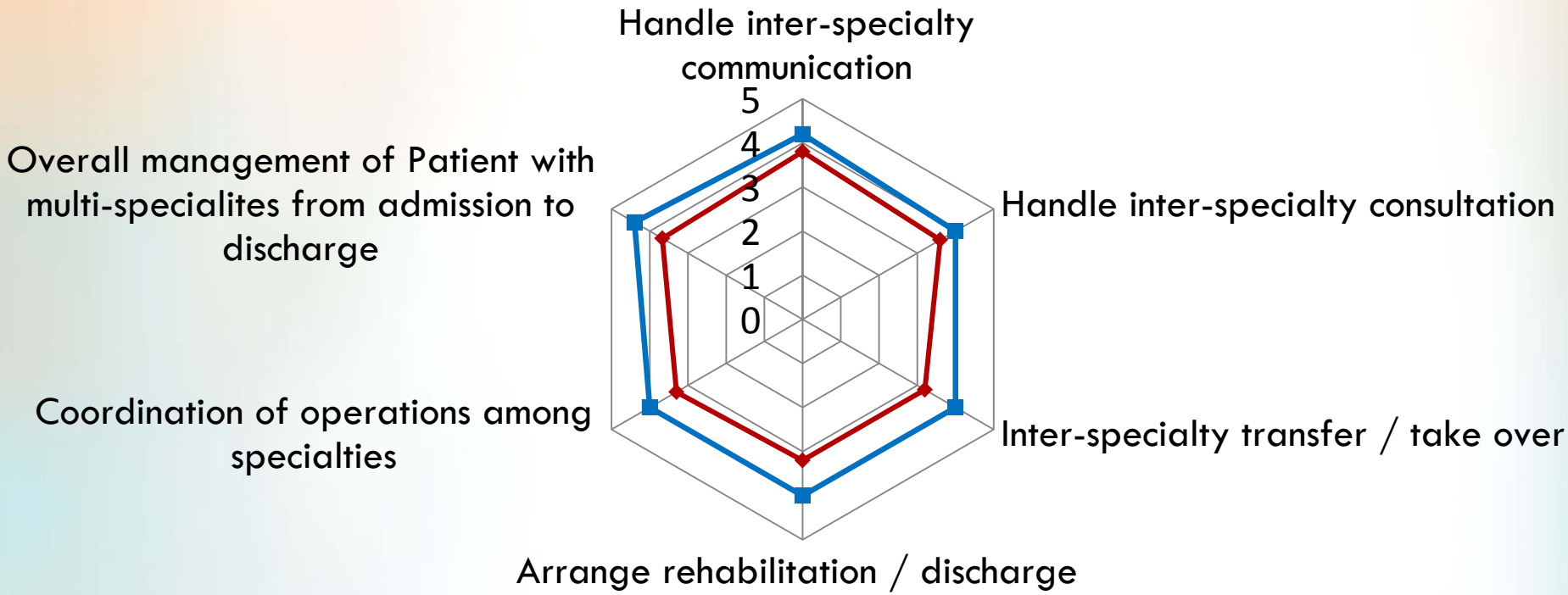
- Inter-specialty communication

Perception on Service Challenge

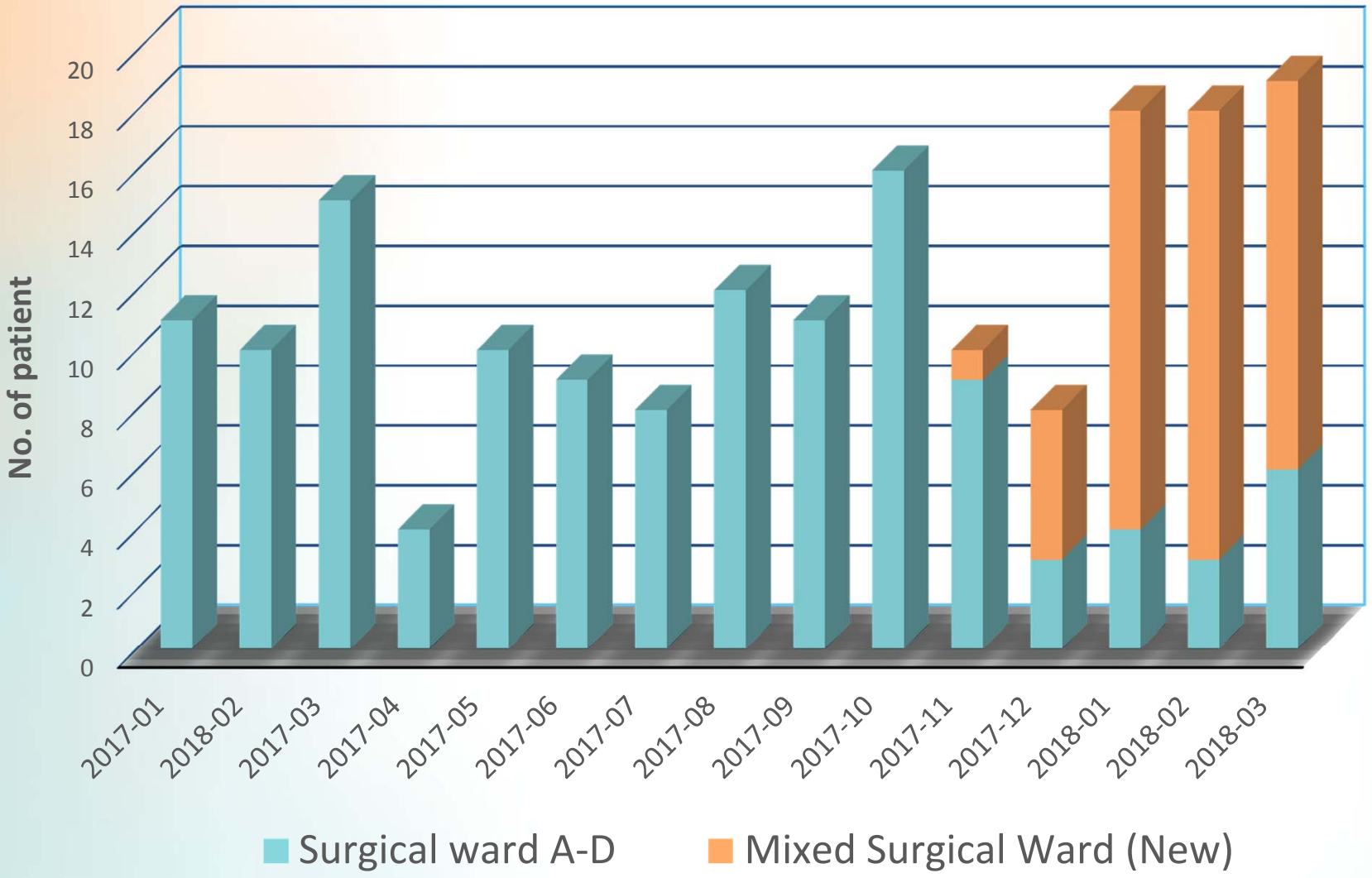


Perception on Service Challenge

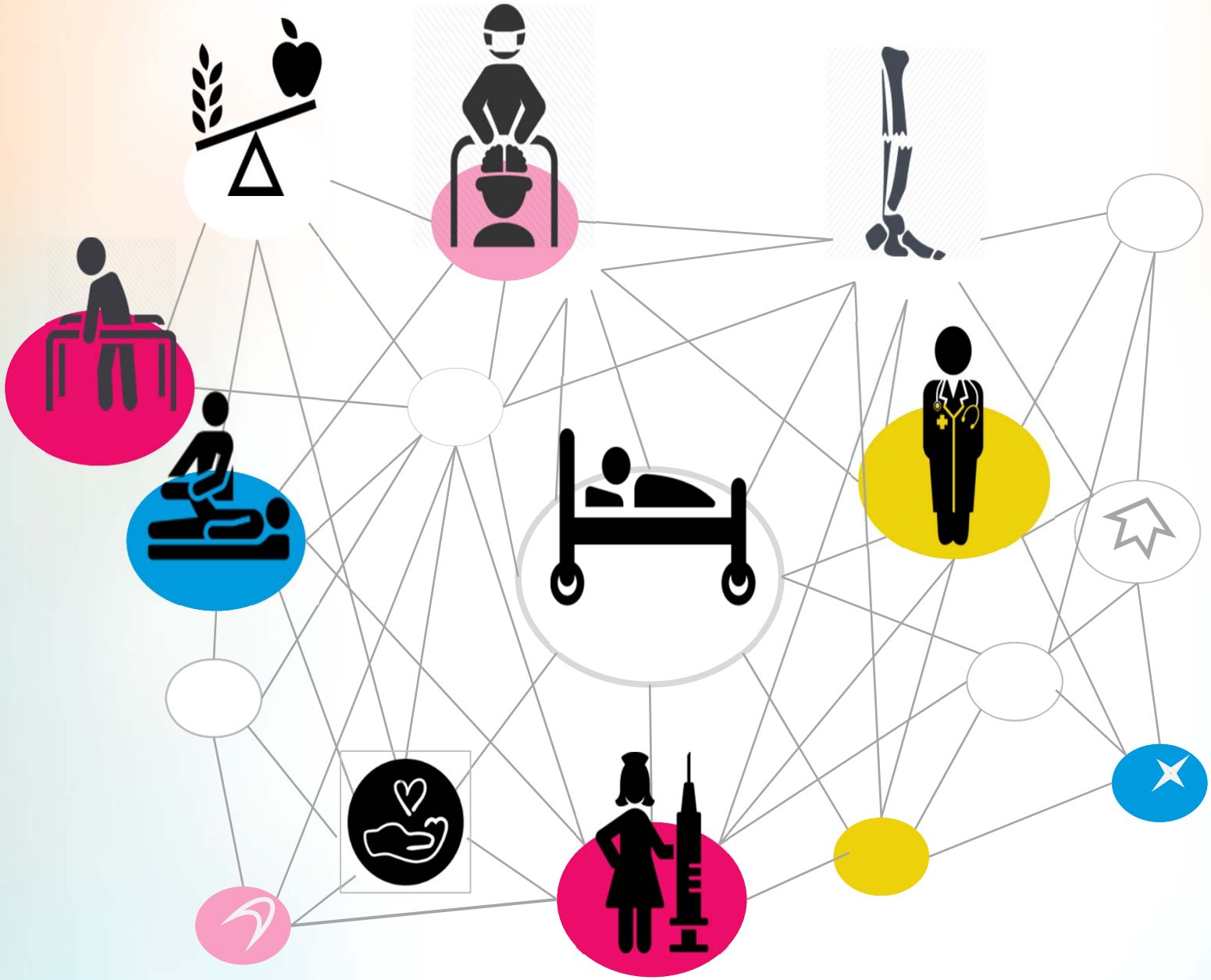
Scale: 1- Strongly Disagree to
5- Strongly Agree



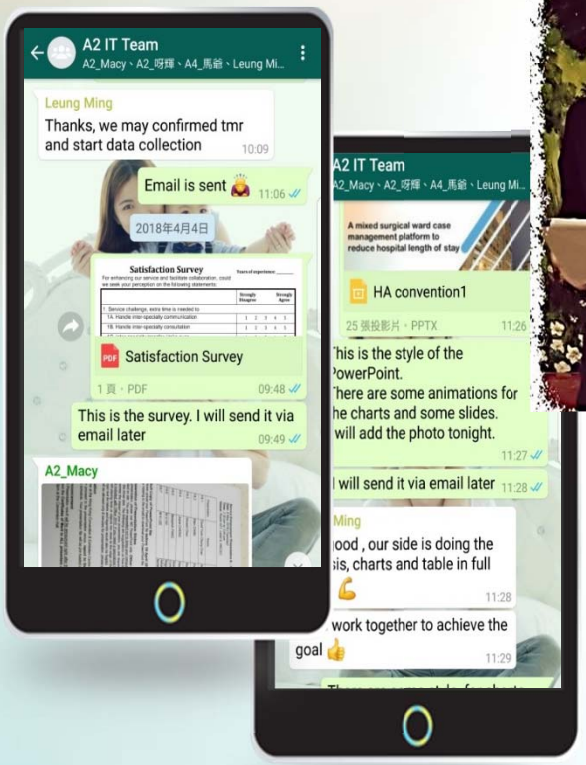
Traumatic Admission for General Surgery



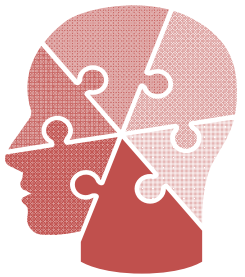
WHAT CAN WE DO MORE?



Our Team


A2 IT Team
A2_Macy、A2_呀輝、A4_馬爺、Leung Mi...
Leung Ming
Thanks, we may confirmed tmr and start data collection 10:09
Email is sent 11:06
2018年4月4日
Satisfaction Survey
Satisfaction Survey
1 頁 · PDF 09:48
This is the survey. I will send it via email later 09:49
A2_Macy
A2 IT Team
HA convention1
25 張投影片 · PPTX 11:26
This is the style of the PowerPoint.
There are some animations for the charts and some slides.
will add the photo tonight. 11:27
I will send it via email later 11:28
work together to achieve the goal 11:29


MILLENNIALS



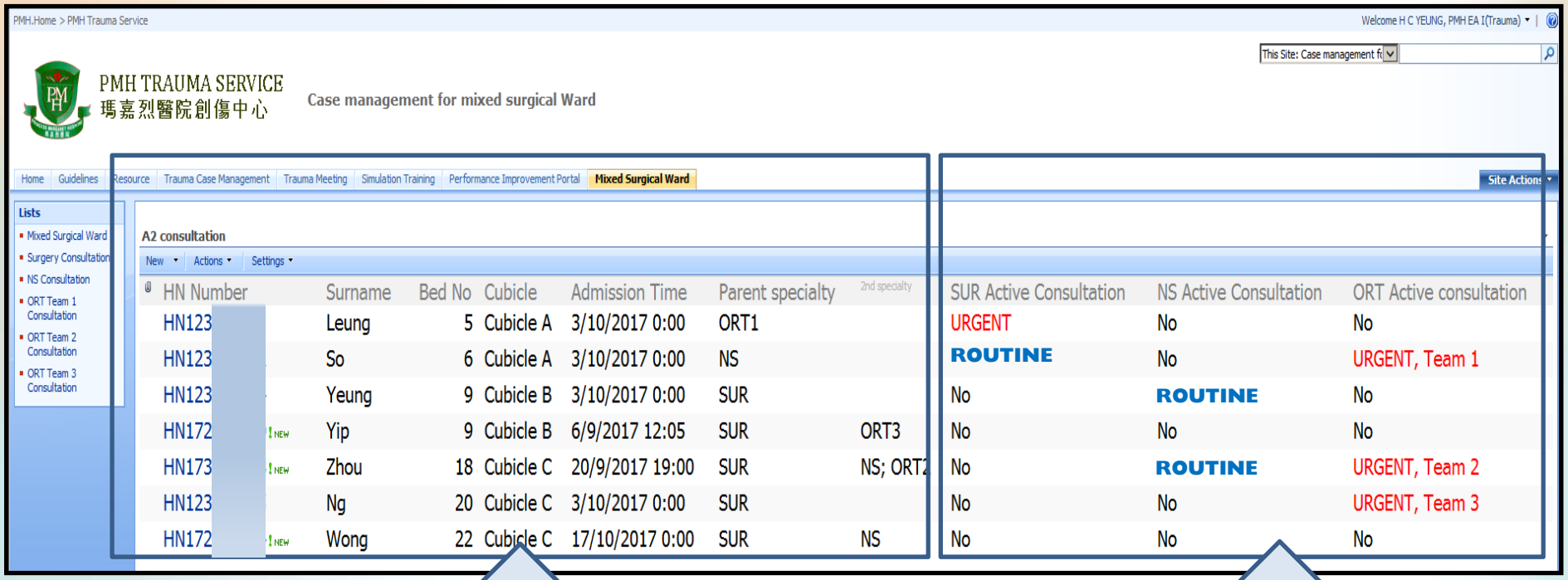
Objective

To setup an **electronic platform** with the capacity of **real time communication** on patient's parent specialties and status of consultations under the **multidisciplinary Environment**.

Aimed at **reducing hospital length of stay**.

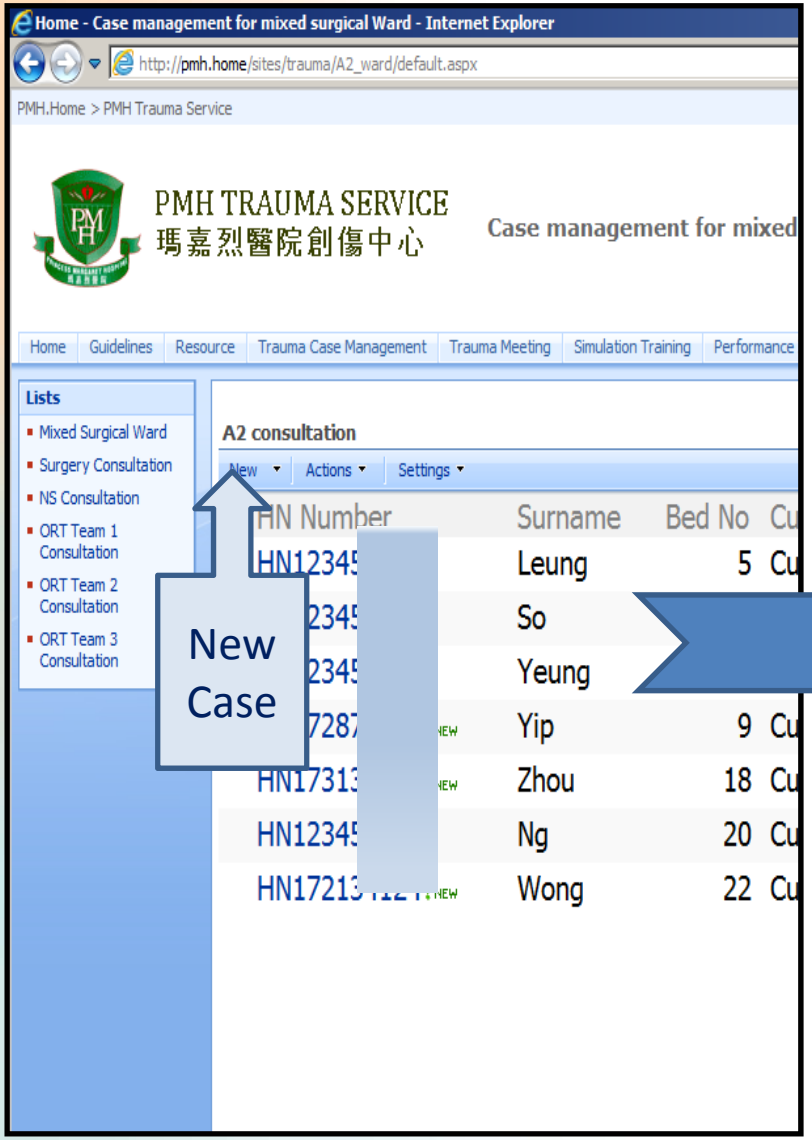
Case Management System

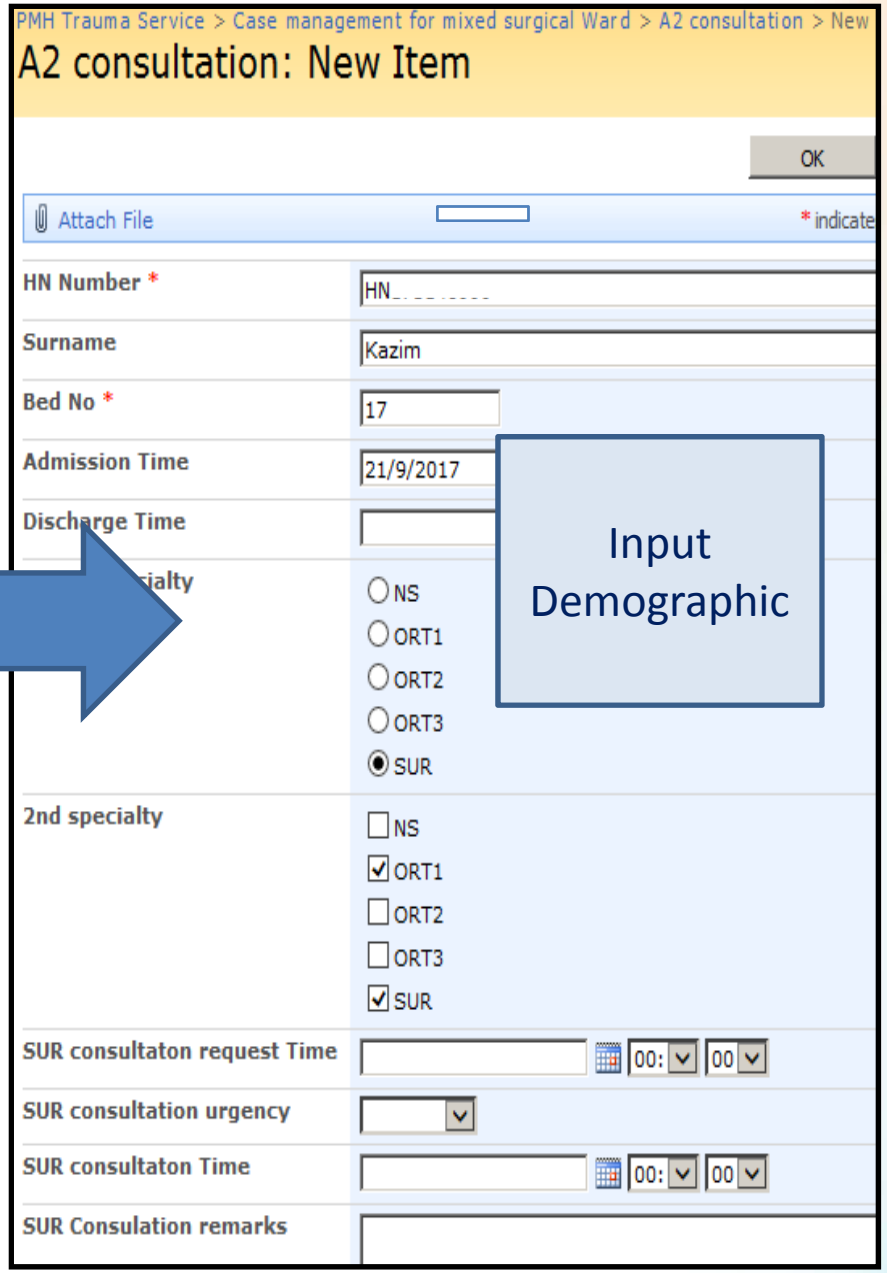
- Real time electronic communication platform
- Web-based and accessible on HA network



Patient Demographic

Active Consultation Status


Home - Case management for mixed surgical Ward - Internet Explorer
http://pmh.home/sites/trauma/A2_ward/default.aspx
PMH.Home > PMH Trauma Service
PMH TRAUMA SERVICE
瑪嘉烈醫院創傷中心
Case management for mixed
Home
Guidelines
Resource
Trauma Case Management
Trauma Meeting
Simulation Training
Performance
Lists
Mixed Surgical Ward
Surgery Consultation
NS Consultation
ORT Team 1 Consultation
ORT Team 2 Consultation
ORT Team 3 Consultation
A2 consultation
New
Actions
Settings
HN Number
Surname
Bed No
Leung 5
So
Yeung
Yip 9
Zhou 18
Ng 20
Wong 22
New Case

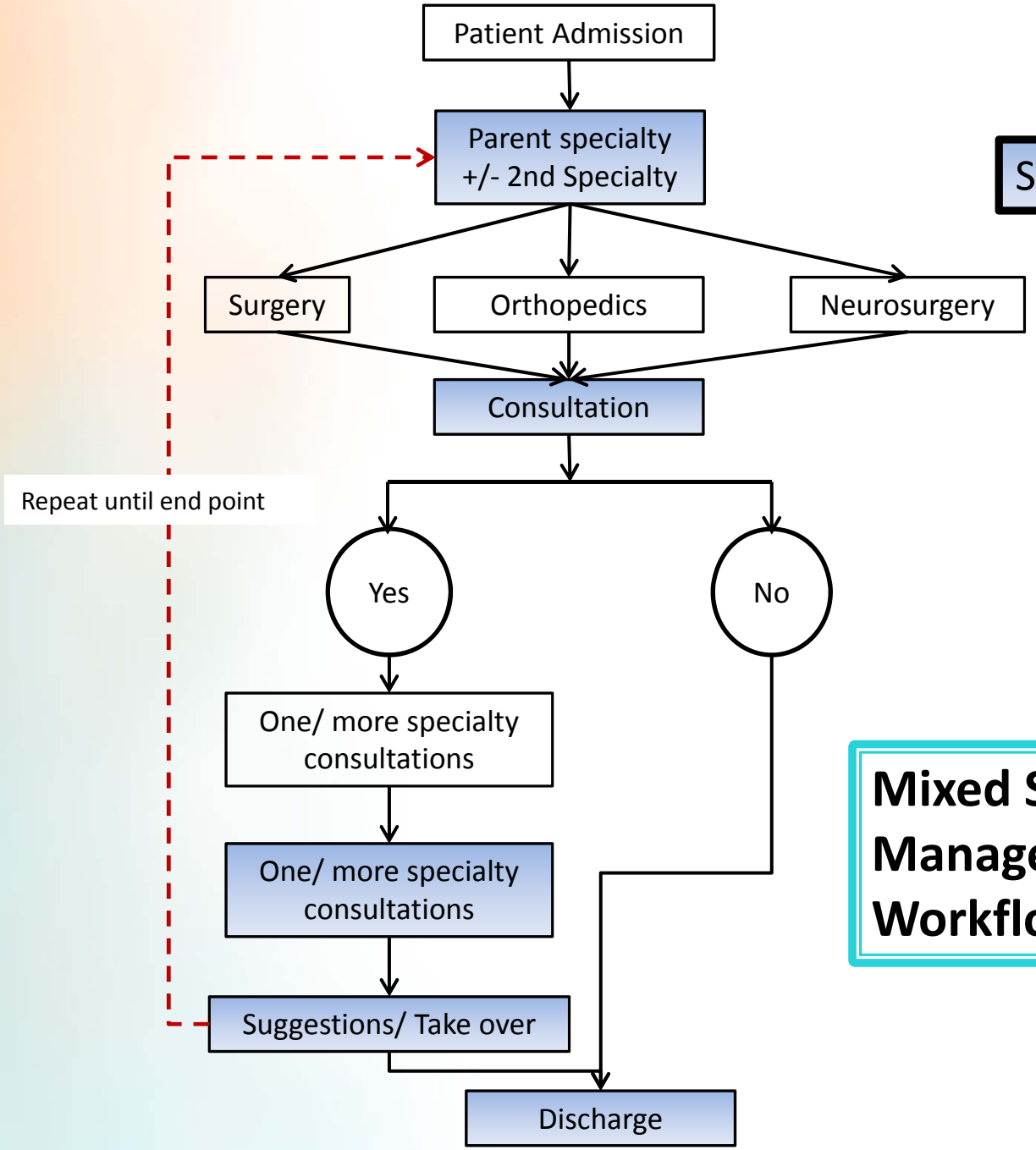

PMH Trauma Service > Case management for mixed surgical Ward > A2 consultation > New
A2 consultation: New Item
OK
Attach File
* indicate
HN Number *
Surname
Kazim
Bed No *
17
Admission Time
21/9/2017
Discharge Time
NS
ORT1
ORT2
ORT3
SUR
2nd specialty
NS
ORT1
ORT2
ORT3
SUR
SUR consultaton request Time
SUR consultation urgency
SUR consultaton Time
SUR Consulation remarks
Input Demographic

A2 consultation

New ▾ | Actions ▾ | Settings ▾

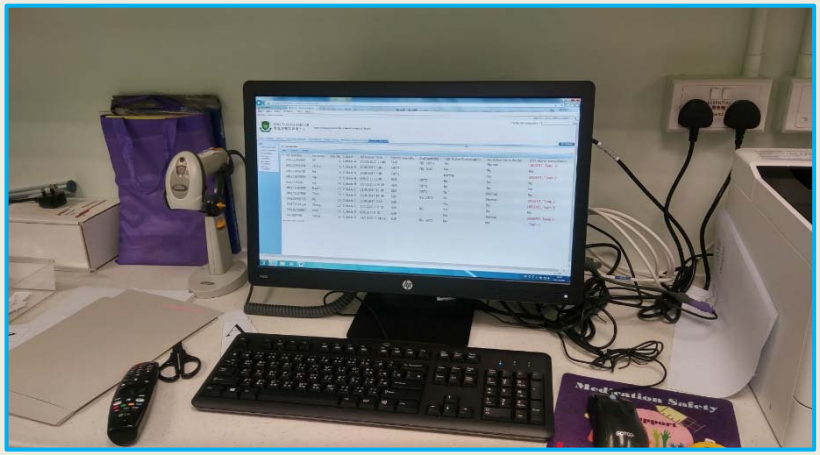
HN Number	Surname	Bed No	Cubicle	Admission Time	Parent specialty	2nd specialty	SUR Active Consultation	NS Active Consultation	ORT Active consult
HN12	Leung	5	Cubicle A	3/10/2017 0:00	ORT1		URGENT	No	No
HN12	So	6	Cubicle A	3/10/2017 0:00	NS		ROUTINE	No	URGENT, Team 2
HN12	Yeung	9	Cubicle B	3/10/2017 0:00	SUR		No	ROUTINE	No
HN17 ! NEW	Yip	9	Cubicle B	6/9/2017 12:05	SUR	ORT3	No	No	No
HN17 ! NEW	Kazim	17	Cubicle C	21/9/2017 13:45	SUR	ORT1; SUR	No	ROUTINE	URGENT, Team 2
HN17 ! NEW	Zhou	18	Cubicle C	20/9/2017 19:00	SUR	NS; ORT2	No	ROUTINE	URGENT, Team 2
HN12	Ng	20	Cubicle C	3/10/2017 0:00	SUR		No	No	GENT, Team 2
HN17 ! NEW	Wong	22	Cubicle C	17/10/2017 0:00	SUR	NS	No		

NS, ORT consultation update, urgent marked with red



System entry/ update

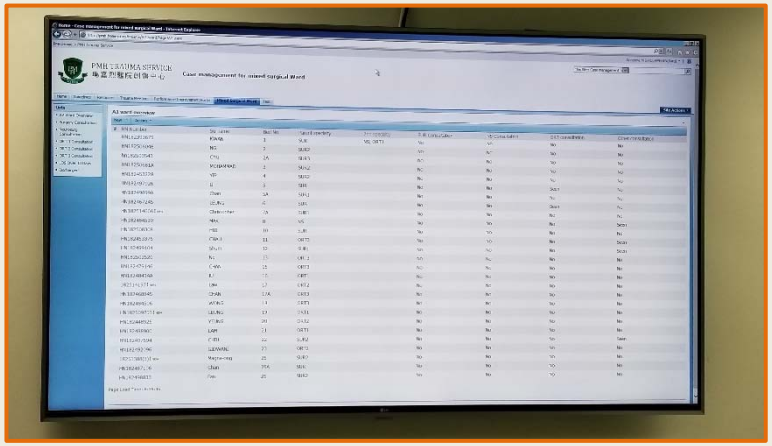
Mixed Surgical Case Management System Workflow

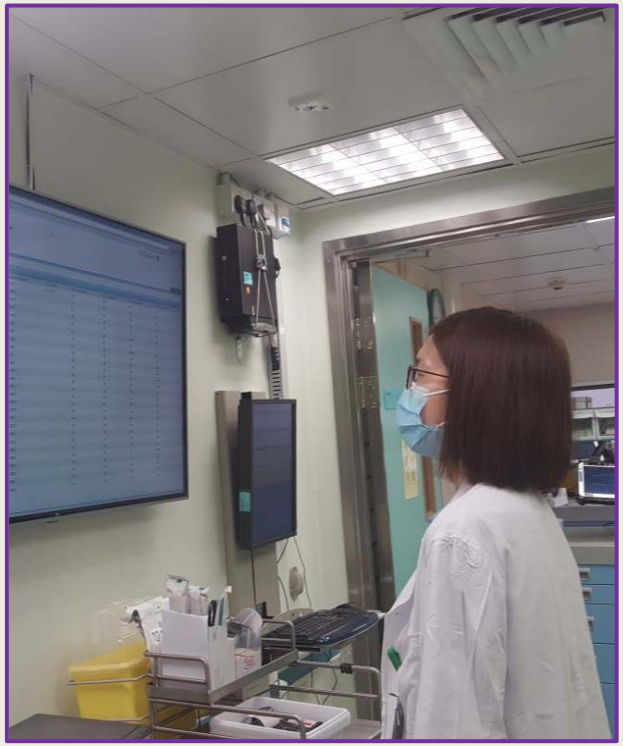


Accessibility

HA network

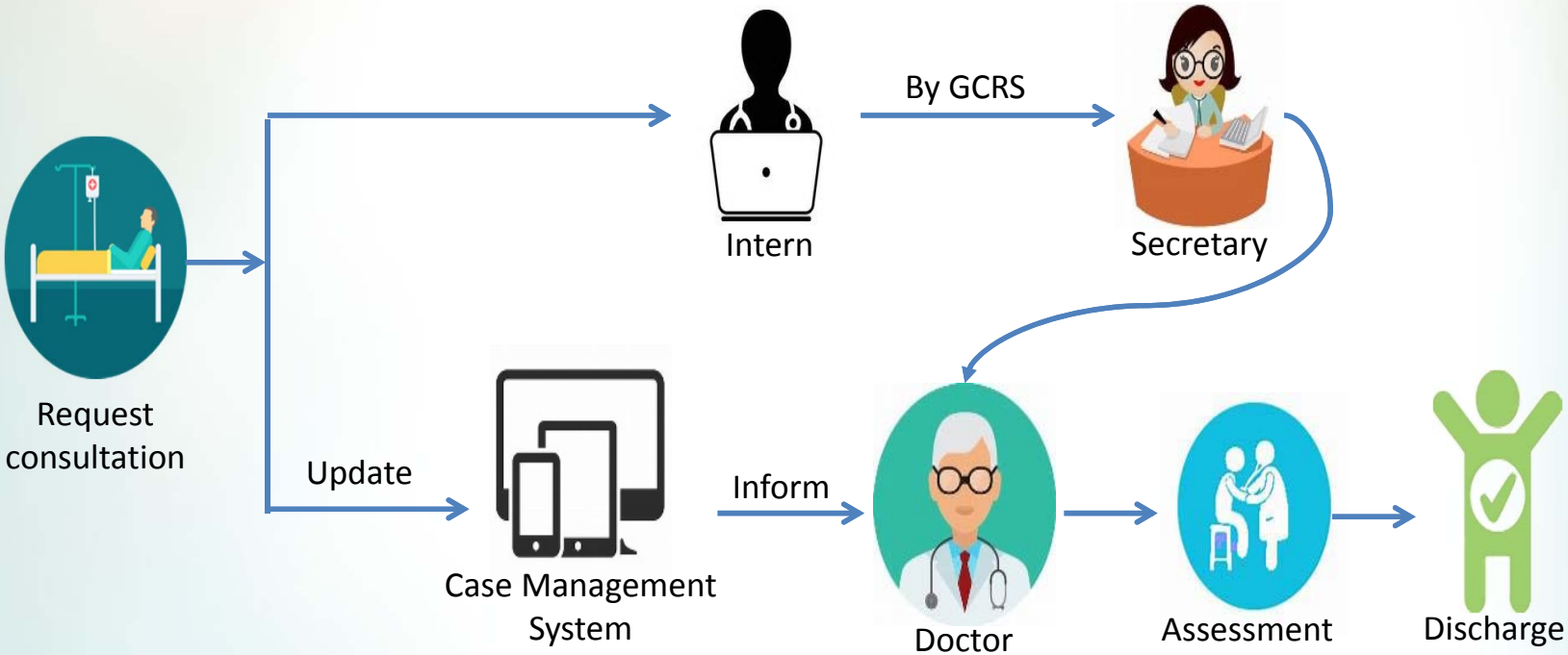
Authorized person





Existing

Enhanced Workflow



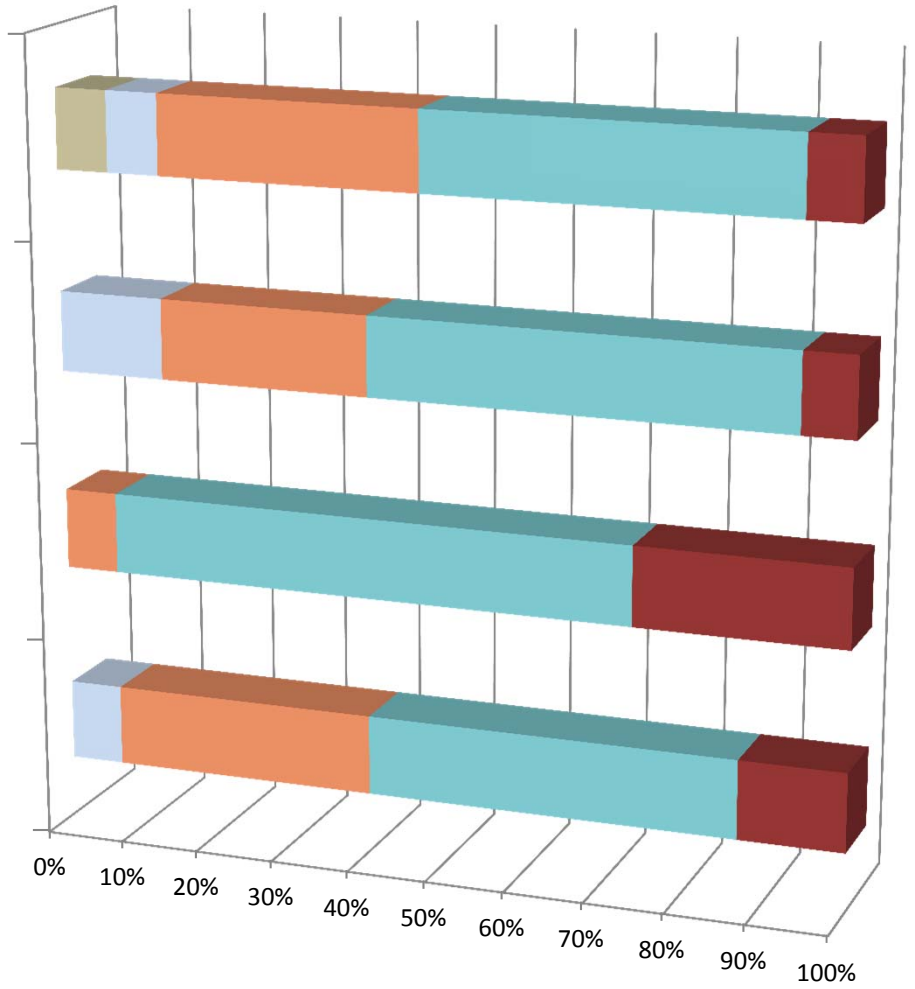
Colleague's Perception

Easy to access by authorized staff

The information in case management system is accurate and current

The information is useful for doctor

Overall, the System is helpful



The System is Helpful ? How ?

The information in case management system in accurate and current

Facilitate the handover between staff

Easy to access by authorized staff

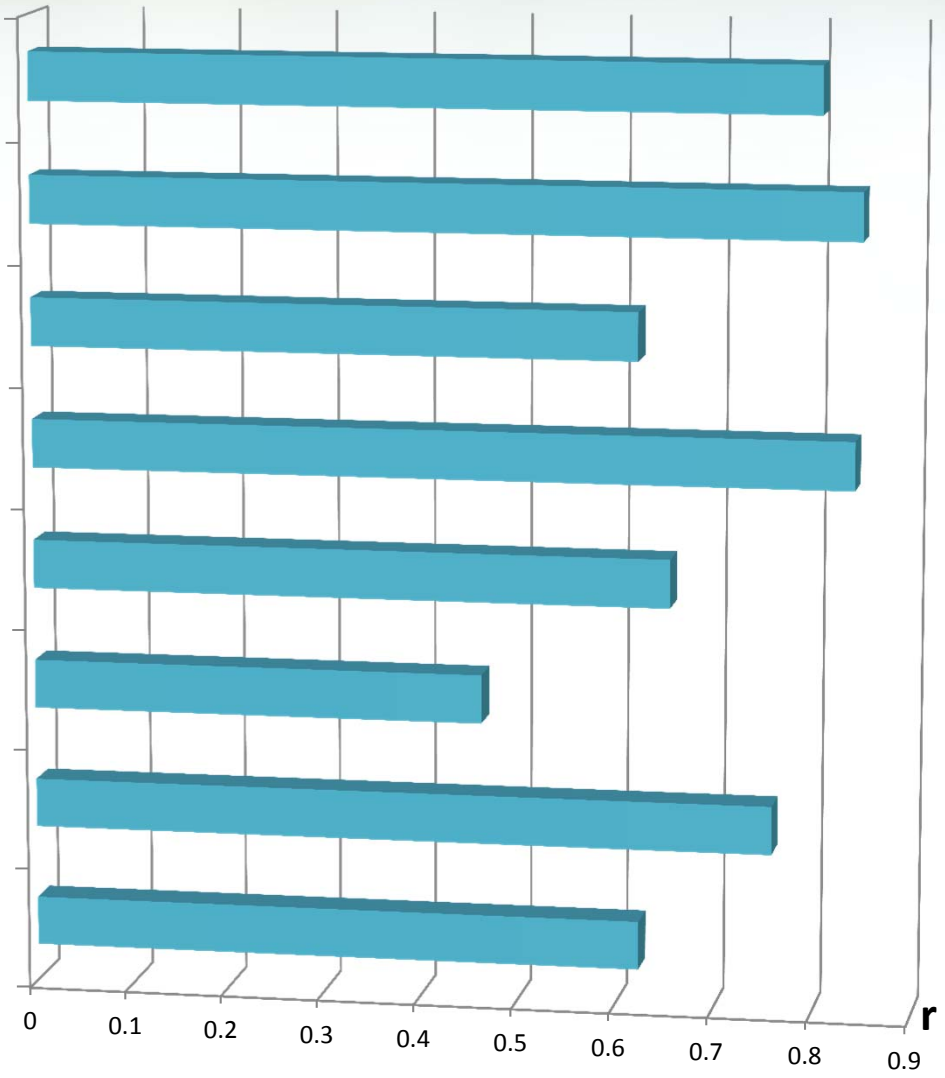
Easy to reach the consultation information of patients

System layout is clear and systematic

Easy to learn how to use

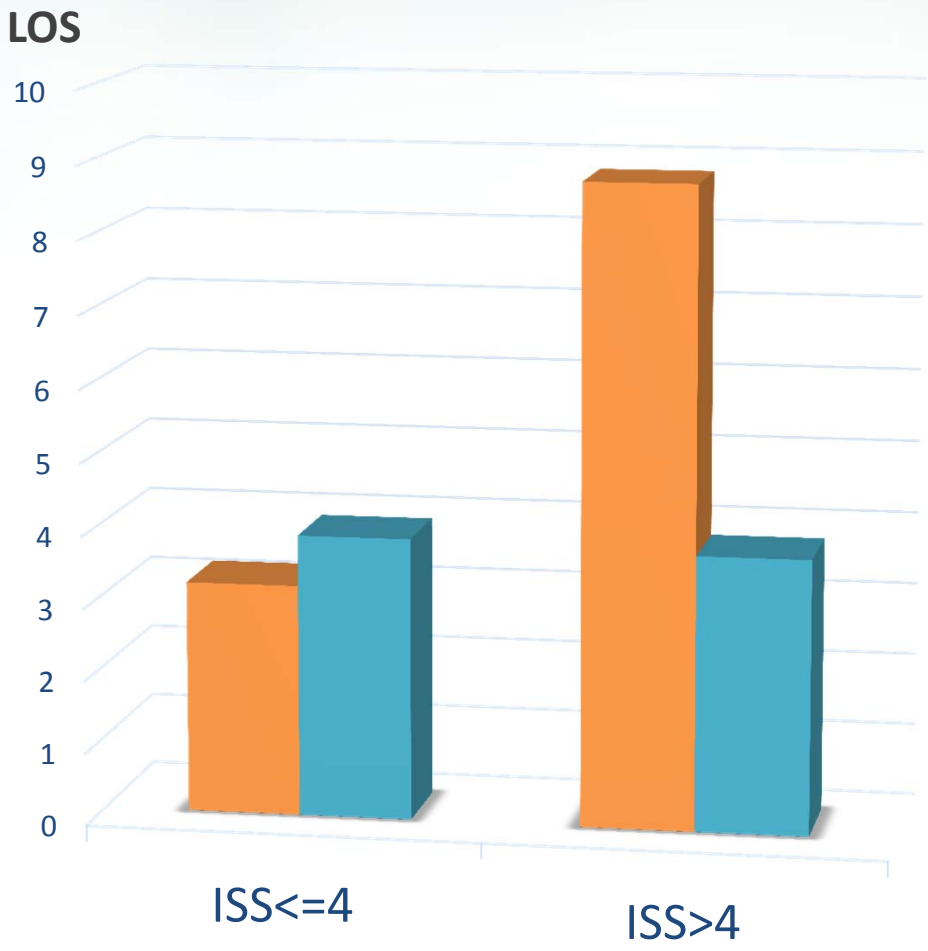
User friendly in data entry

The information is useful for doctor



$$r = \frac{\sum_{i=1}^{n}(x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum_{i=1}^{n}(x_i - \bar{x})^2}\sqrt{\sum_{i=1}^{n}(y_i - \bar{y})^2}}$$

Length of Stay



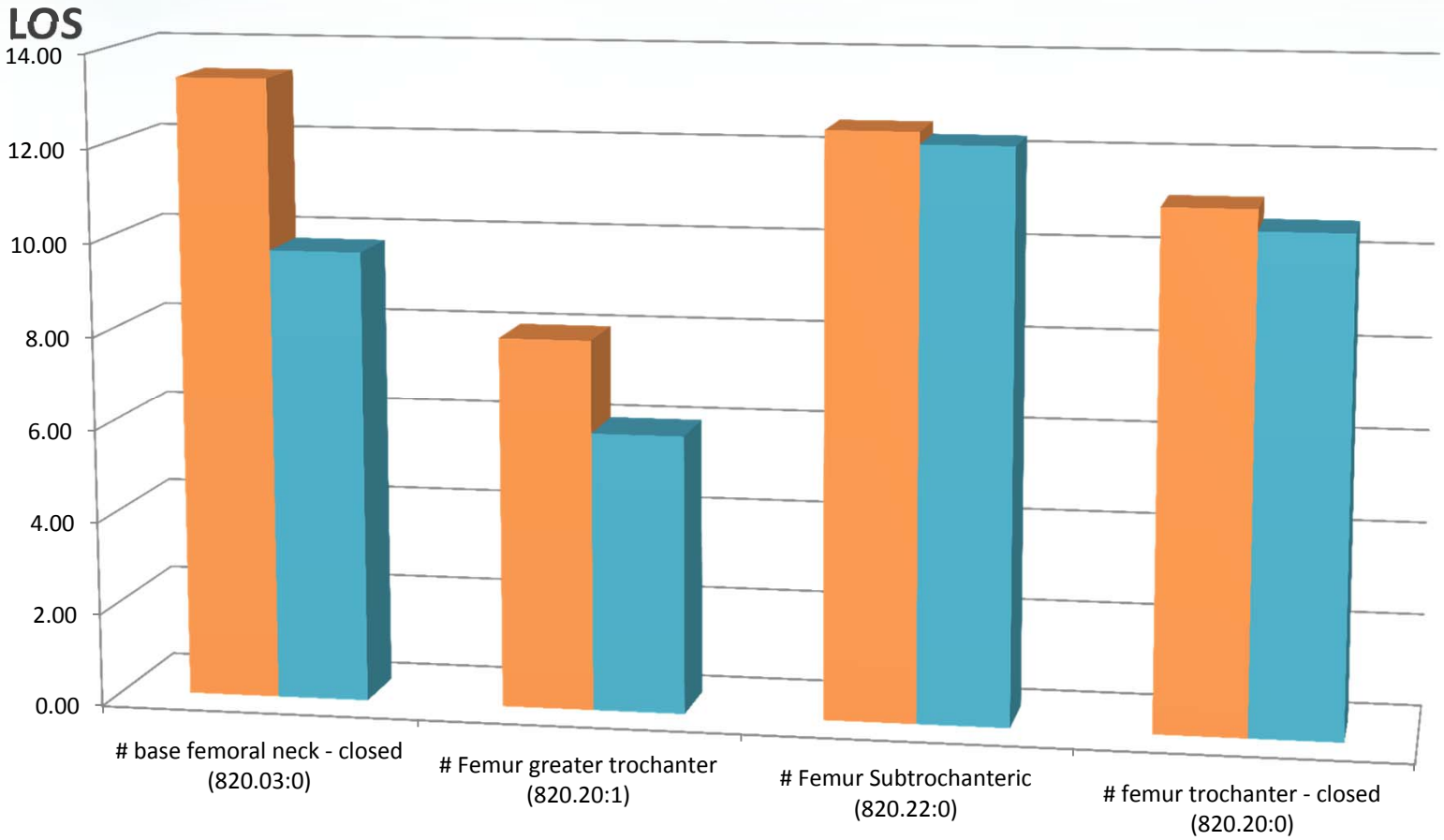
Injury severity score (ISS)

ISS<=4	N	Mean	Std. Dev.	P-value
Non mixed surgical ward admission	121	3.2	4.8	0.7687
Mixed surgical ward admission	43	3.9	6.5	
ISS>4				
Non mixed surgical ward admission	8	8.8	6.0	0.071
Mixed surgical ward admission	4	3.8	1.9	

$$T = \frac{Mean_{A2} - Mean_{Non\ A2}}{\sqrt{\frac{(SD_{A2})^2}{N_{A2}} + \frac{(SD_{Non\ A2})^2}{N_{Non\ A2}}}}$$

Length of Stay

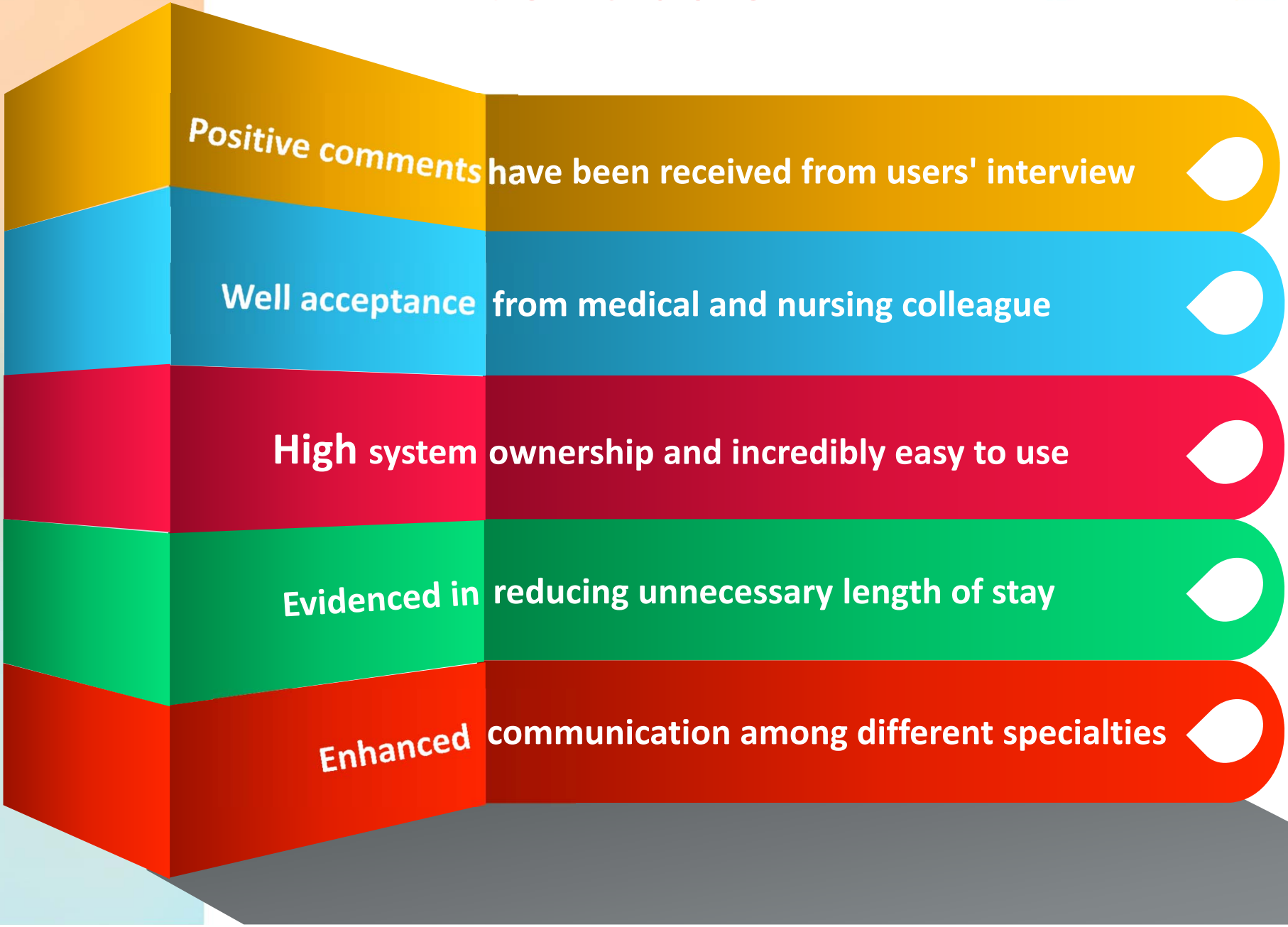
Comparison of mixed surgical and general orthpaedics ward
By principal diagnosis



Non mixed surgical ward admission

Mixed surgical ward admission

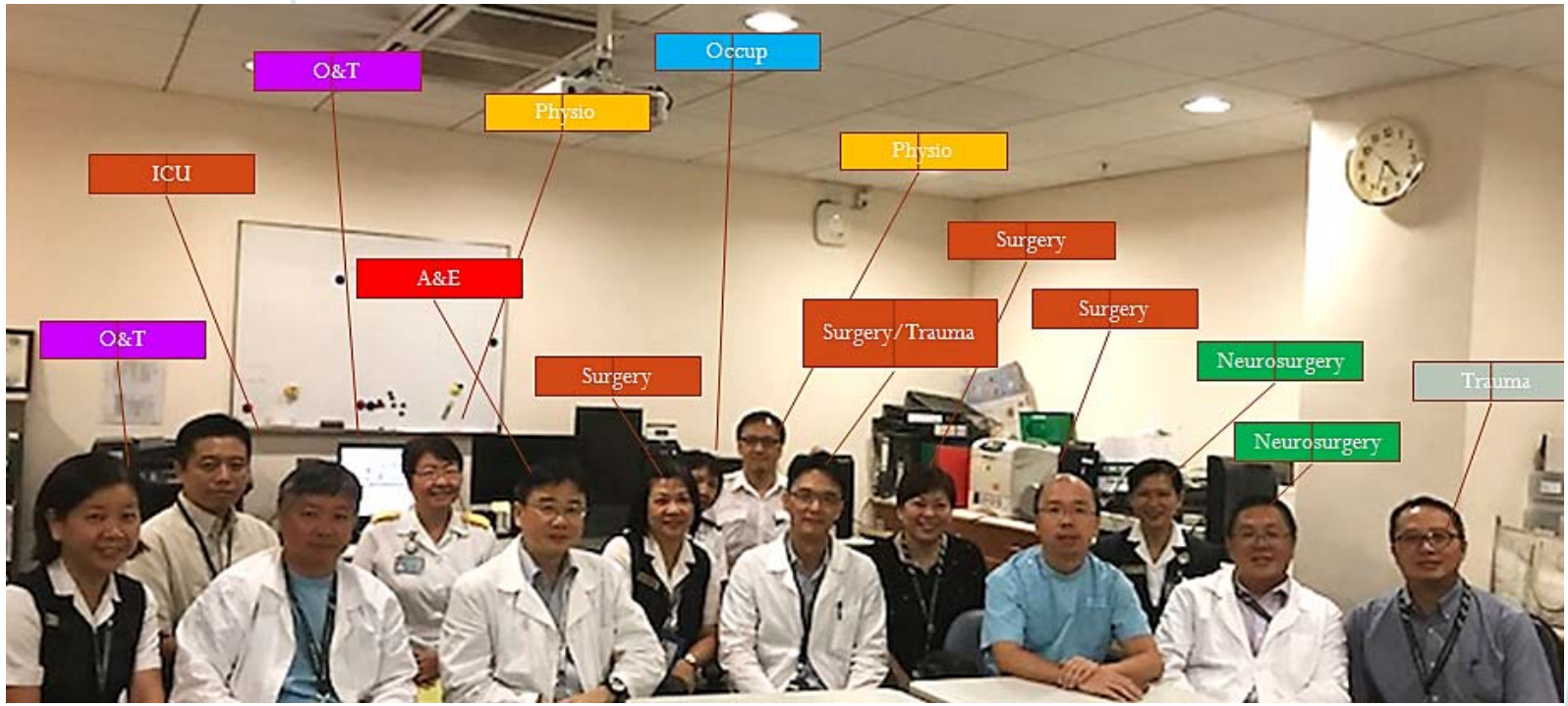
Conclusion


Positive comments have been received from users' interview
Well acceptance from medical and nursing colleague
High system ownership and incredibly easy to use
Evidenced in reducing unnecessary length of stay
Enhanced communication among different specialties

FUTURE PLANNING

1. Customized display for different specialties
2. Link up with nursing activities
3. Integrated information for nursing handover
   e.g. out-standing consultation
4. Longitudinal evaluation

ACKNOWLEDGEMENT



Multidisciplinary mixed surgical ward task group

"Coming together is a beginning.
Keeping together is progress.
Working together is success."
Henry Ford

Thank you

Mixed Surgical Ward, PMH

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Appendix

Satisfaction Survey

Years of experience: _____

For enhancing our service and facilitate collaboration, could we seek your perception on the following statements:

	Strongly Disagree				Strongly Agree
1. Service challenge, extra time is needed to					
1A. Handle inter-specialty communication	1	2	3	4	5
1B. Handle inter-specialty consultation	1	2	3	4	5
1C. Inter-specialty transfer / take over	1	2	3	4	5
1D. Arrange rehabilitation / discharge	1	2	3	4	5
1E. Coordination of operations among specialties	1	2	3	4	5
1F. Overall management of patient with multi-specialties from admission to discharge	1	2	3	4	5
2. Following the case management platform, could we seek your perception:					
2A. User-friendly in data entry	1	2	3	4	5
2B. Easy to learn how to use	1	2	3	4	5
2C. System layout is clear and systematic	1	2	3	4	5
2D. Easy to reach the consultation information of patients	1	2	3	4	5
2E. Easy to access by authorized staff	1	2	3	4	5
2F. Facilitate the handover between staff	1	2	3	4	5
2G. The information in case management system is accurate and current	1	2	3	4	5
2H. The information is useful for doctor	1	2	3	4	5
2I. Overall, the system is helpful	1	2	3	4	5
2J. For further development, would you have interest to join the development team	1	2	3	4	5
3. Would you believe the case management system could facilitate:					
3A. Inter-specialty communication	1	2	3	4	5
3B. Inter-specialty consultation	1	2	3	4	5
3C. Inter-specialty transfer / take over	1	2	3	4	5
3D. Rehabilitation / discharge	1	2	3	4	5
3E. Coordination of operations among specialties	1	2	3	4	5
3F. Overall management of patient with multi-specialties from admission to discharge	1	2	3	4	5
3G. Also helpful for allied health staff such as physio, occup, clinical psy	1	2	3	4	5
3H. Helpful for reducing LOS	1	2	3	4	5

Other Suggestions:

_____

_____

_____