



Adherence Towards Full ACS Treatment and Its Timeliness

Caryn Tsujean Lim^{1,2}, Yik Hon Ho^{1,2}, Samuel Chuter¹, Anusha Shah¹, Shireen Gamadia¹, Julna Karavdra¹, Matilda Hallett¹

1. Acute Medicine Department, Gloucestershire Hospitals NHS Foundation Trust

2. Cardiology Department, Gloucestershire Hospitals NHS Foundation Trust

Aim

To improve adherence towards full acute coronary syndrome (ACS) treatment as per European Society of Cardiology (ESC) guideline within 15 minutes of diagnosis by 20% over 6-month among all non-ST segment elevated acute coronary syndrome (NSTEMI-ACS) patients presented to or brought in to emergency department (ED) of Gloucestershire Hospitals NHS Foundation Trust.

Driver Diagram

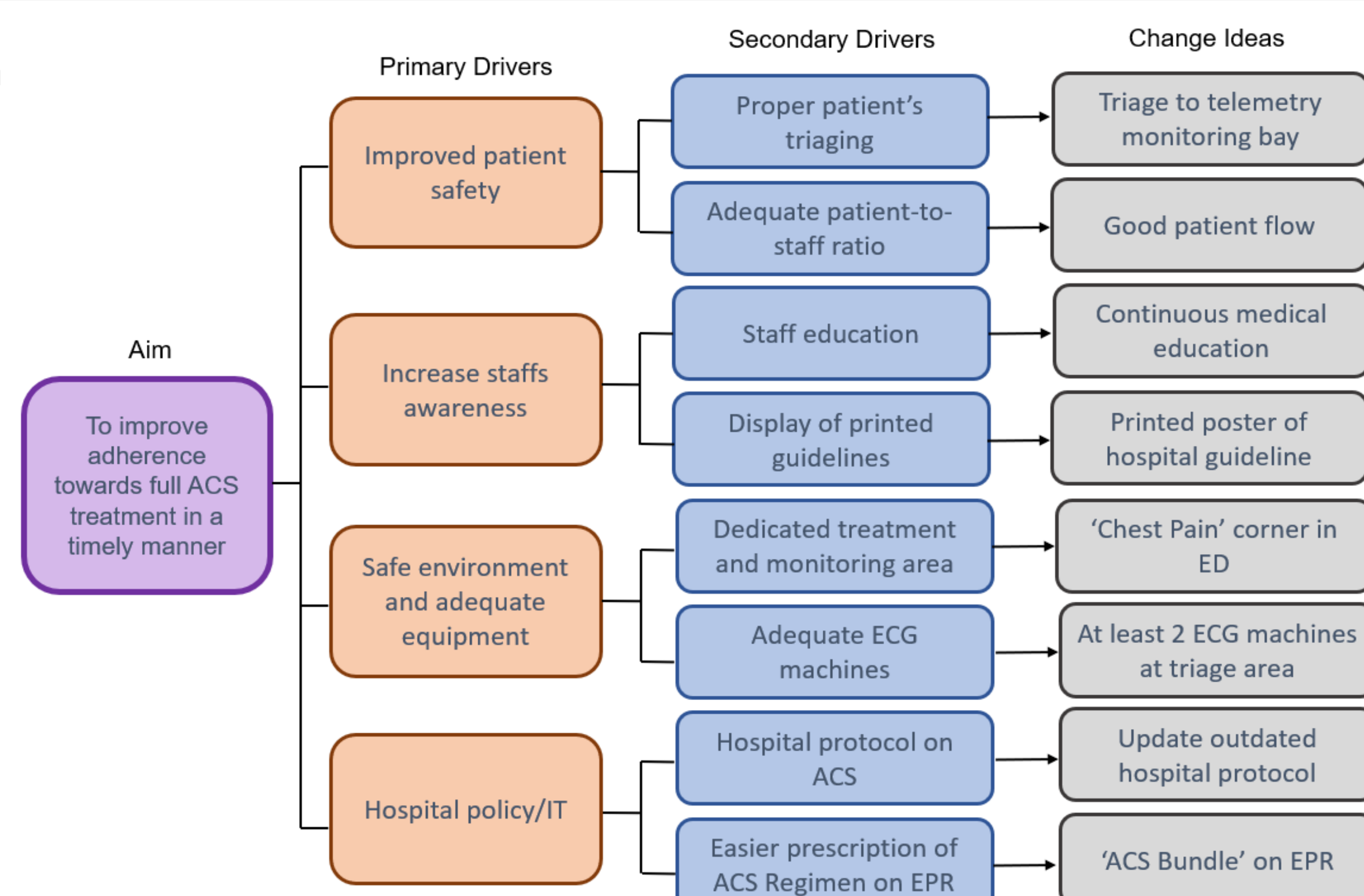


Figure 1. Driver diagram of ACS treatment including change ideas.

PDSA Cycle & Changes

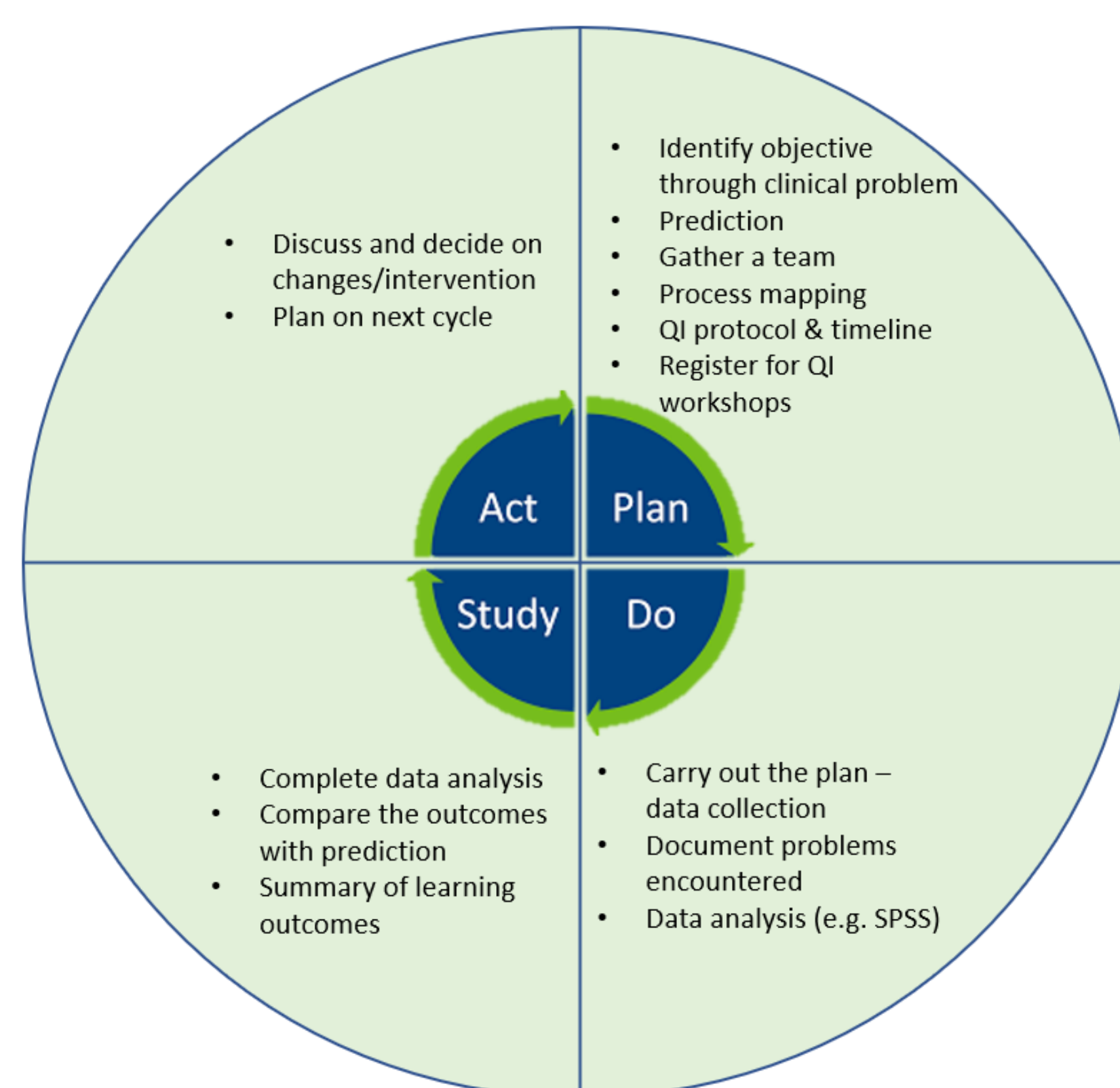


Figure 2. Plan, Do, Study, Act (PDSA) cycle and the changes implemented.

Changes Successfully Implemented

- Continuous medical educations (CMEs)
- Update pre-existing hospital protocol
- Working with Business Intelligence Team to create an 'ACS Bundle' on EPR for easier prescription

Next Tests

- Poster display on local Trust guideline at ED, medical ward and cardiology ward
- Liaising with the ED team on patients triaging and setting up of a dedicated 'chest pain corner'

Measures

- Outcome:** Improved timeliness and adherence towards full ACS treatment
- Process:** Administration of full loading dose of ACS treatment within 15 minutes of diagnosis
- Balancing:** Over-crowding of telemetry monitoring bays in ED by patients presenting with chest pain

Results

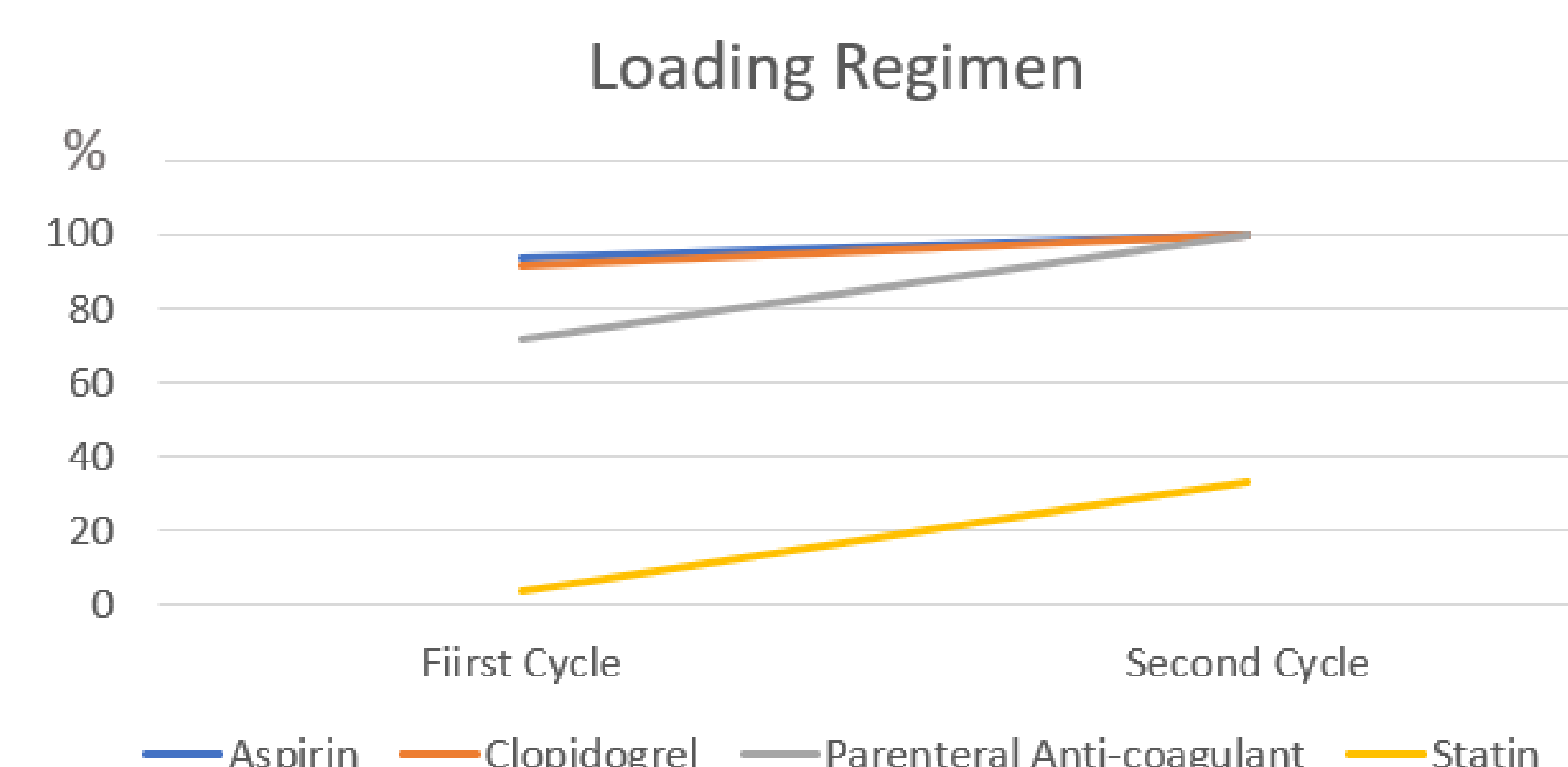


Figure 3. Percentage of adherence towards loading regimen of ACS treatment pre- and post-interventions (first cycle and second cycle respectively).

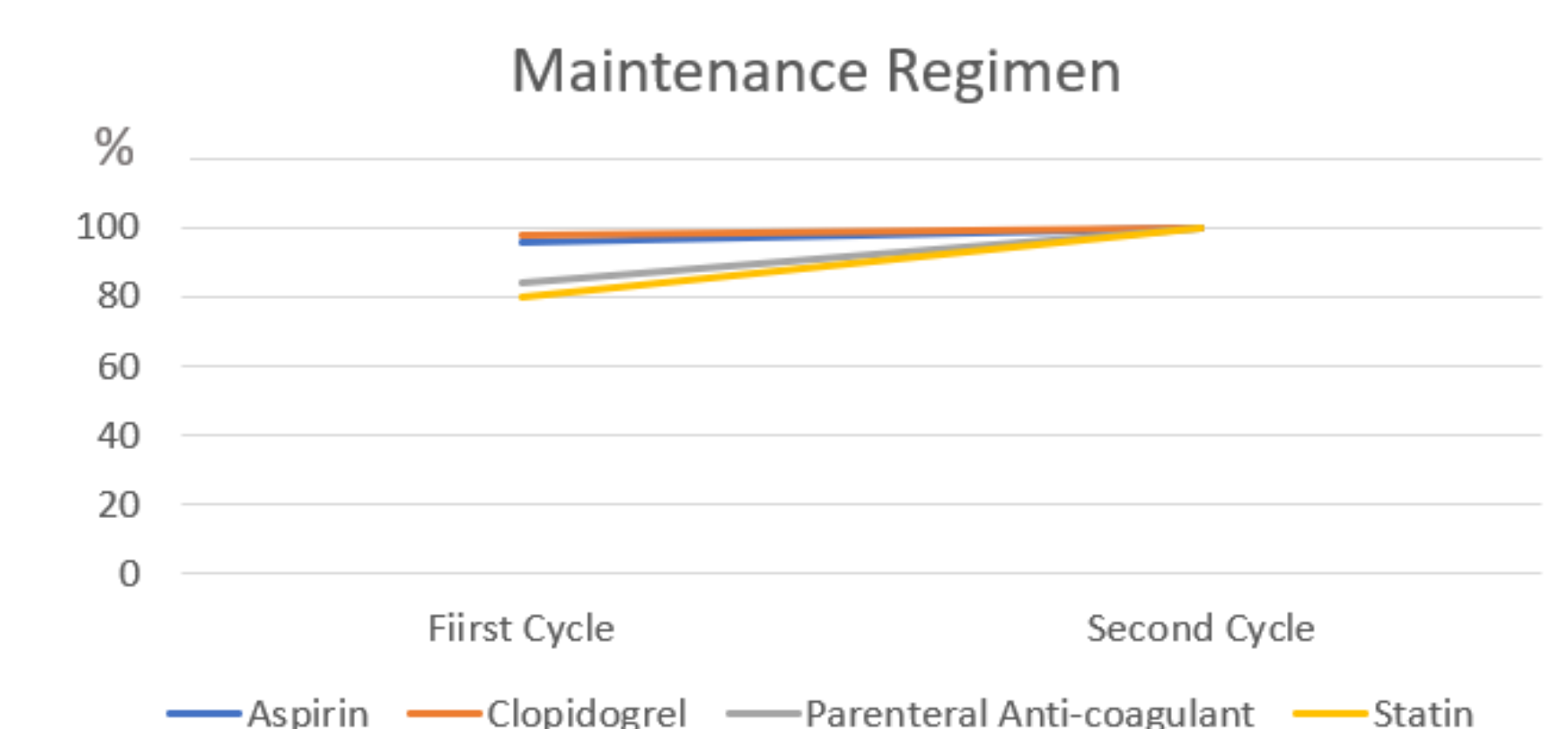


Figure 4. Percentage of adherence towards maintenance regimen of ACS treatment pre- and post-interventions (first cycle and second cycle respectively).

Table 1. ACS treatment and patient characteristic.

Characteristics	n (%) 1 st Cycle	n (%) 2 nd Cycle
Sex		
Male	31 (62.0)	2 (33.3)
Female	19 (38.0)	4 (66.7)
Loading dose of aspirin		
Yes	47 (94.0)	6 (100.0)
No	3 (6.0)	0 (0.0)
Loading dose of clopidogrel		
Yes	46 (92.0)	6 (100.0)
No	3 (6.0)	0 (0.0)
Loading dose of parenteral anticoagulant		
Yes	36 (72.0)	6 (100.0)
No	14 (28.0)	0 (0.0)
Loading dose of high dose statin		
Yes	2 (4.0)	2 (33.3)
No	48 (96.0)	4 (66.7)
Maintenance dose of aspirin		
Yes	48 (96.0)	6 (100.0)
No	2 (4.0)	0 (0.0)
Maintenance dose of clopidogrel		
Yes	49 (98.0)	6 (100.0)
No	1 (2.0)	0 (0.0)
Maintenance dose of parenteral anticoagulant		
Yes	42 (84.0)	6 (100.0)
No	8 (16.0)	0 (0.0)
Maintenance dose of high dose statin		
Yes	40 (80.0)	6 (100.0)
No	10 (20.0)	0 (0.0)
Loading ACS treatment adherence		
Yes	5 (10.0)	2 (33.3)
No	45 (90.0)	4 (66.7)
Points adhered for loading regimen		
One	3 (6.0)	0 (0.0)
Two	15 (30.0)	0 (0.0)
Three	27 (54.0)	4 (66.7)
Four	5 (10.0)	2 (33.3)

ACS: acute coronary syndrome.

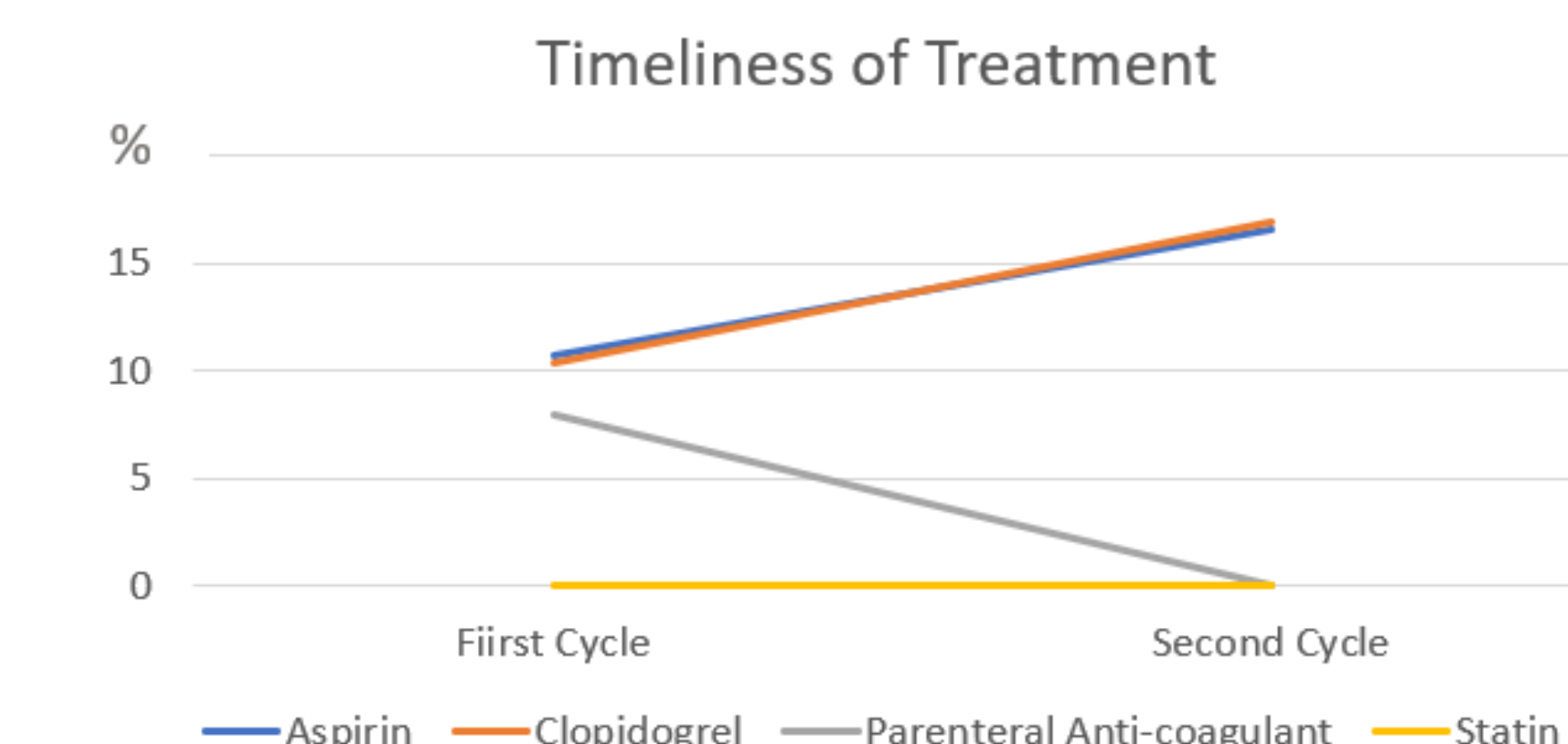


Figure 4. Percentage of patients received timely ACS treatment pre- and post-interventions (first cycle and second cycle respectively).

Conclusion

CMEs, a clear hospital protocol and easier prescription are effective in improving full ACS treatment adherence. However, more tests might be needed to result in more robust outcome especially for timeliness of treatment.