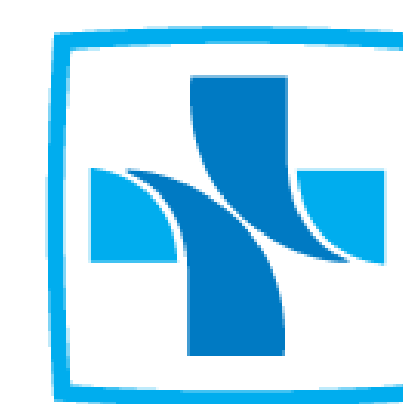# TRANSFORMATIVE CARE DELIVERY FROM PAPER RECORDS TO PAPER-LITE AND BEYOND

Singapore Healthcare Management 2018

Changi General Hospital — SingHealth

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Problem Description

* 100% relied on paper medical records.
  * New Medical Centre (MC) has limited space to cater casenotes' trolleys (each clinic needs to hold 3 to 4 trolleys which is equivalent to the size of one consult room).
 * Too costly to digitize all active patients' medical records within a short duration of less than a year.

Aims

* To attain nearly 90% appointments of new medical centre outpatient (OP) old notes to be scanned.
* To optimize the space for patient care.
* To improve productivity.
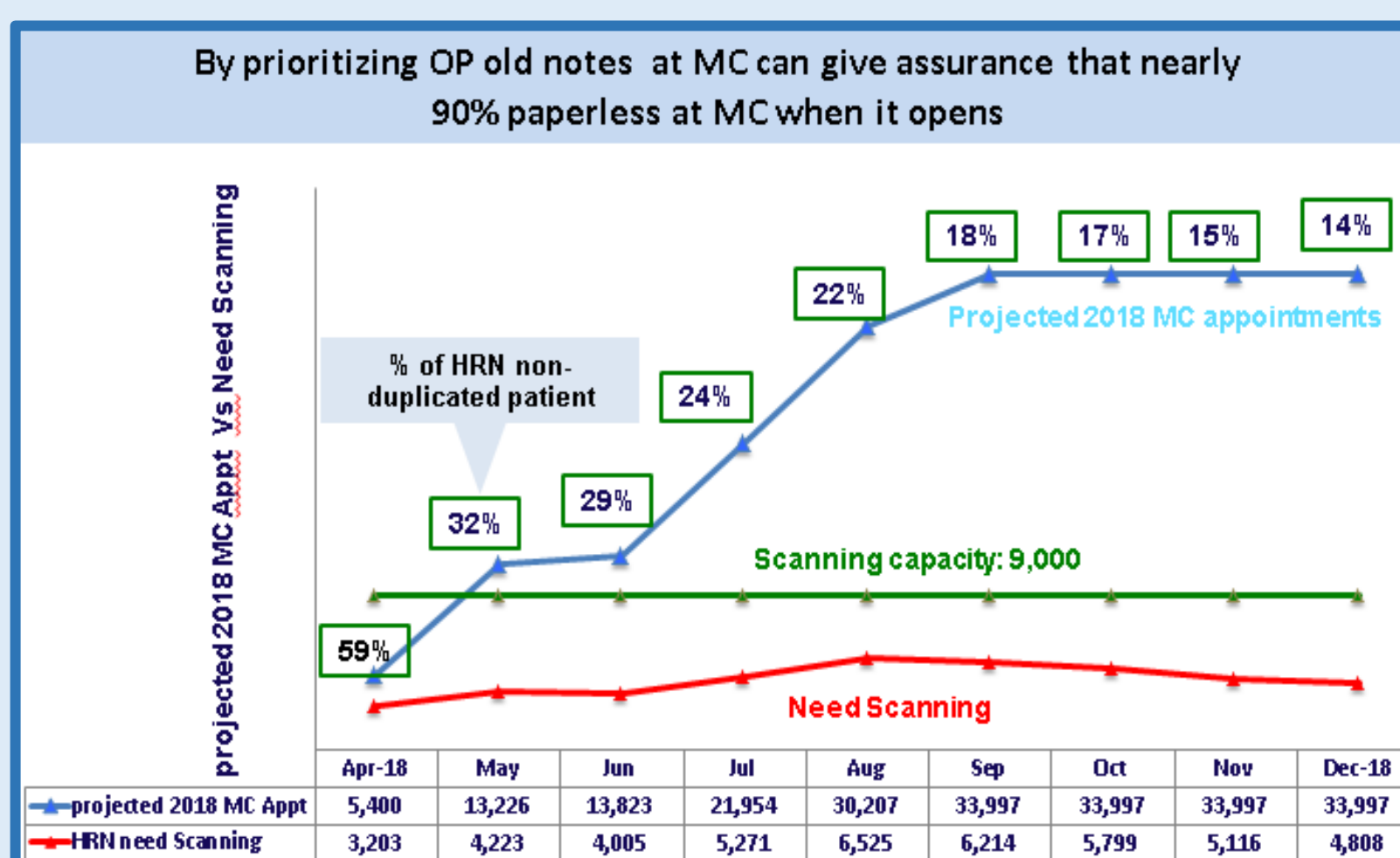* To improve efficiency of patient care.

Methodology

With the support from Senior management and effective change management:

* **Studied on historical data and made a projection.**
* **Maximized throughput based on the past and future projected**

Patient Appointment Trend vs unique non-duplicate HRN (2014 to 2015 data)
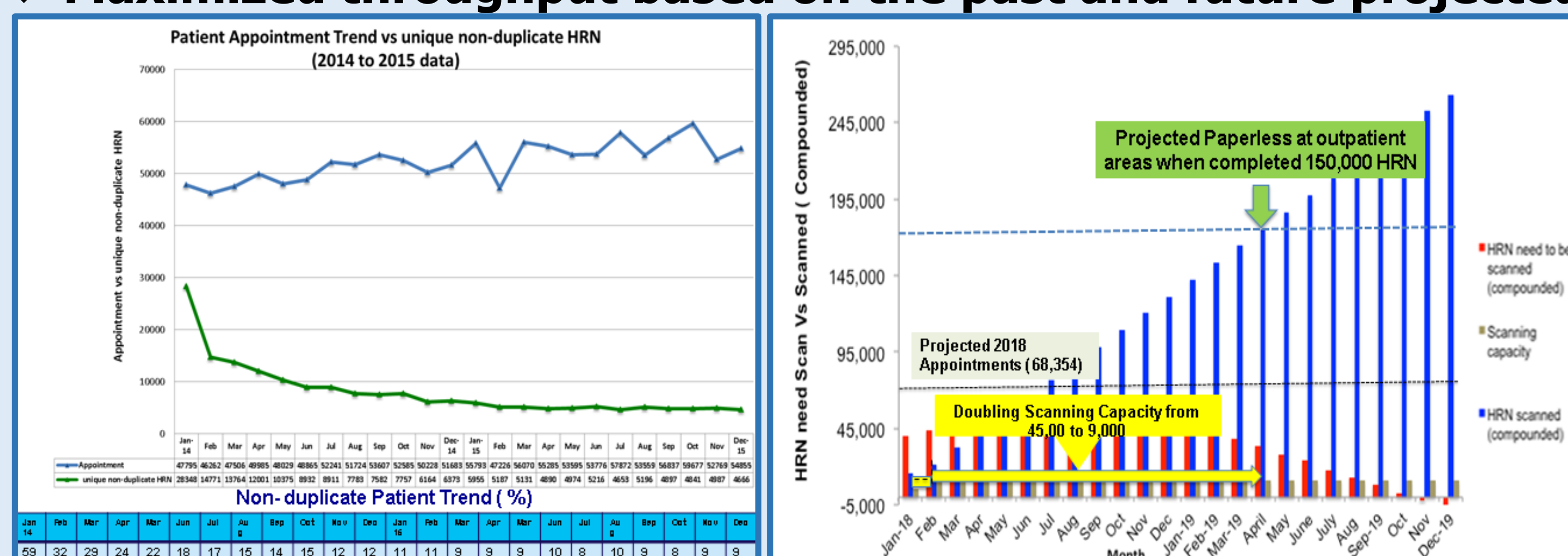

* **Eliminated ineffective processing and simplified the processes.**
* **Focused on higher workload areas.**

* ✓ Changed the scanning strategy from scanning both inpatient (IP) and outpatient (OP) appointment cases to higher workload OP cases.
* ✓ Two-pronged approach to select the cases for scanning.

By prioritizing OP old notes at MC can give assurance that nearly 90% paperless at MC when it opens
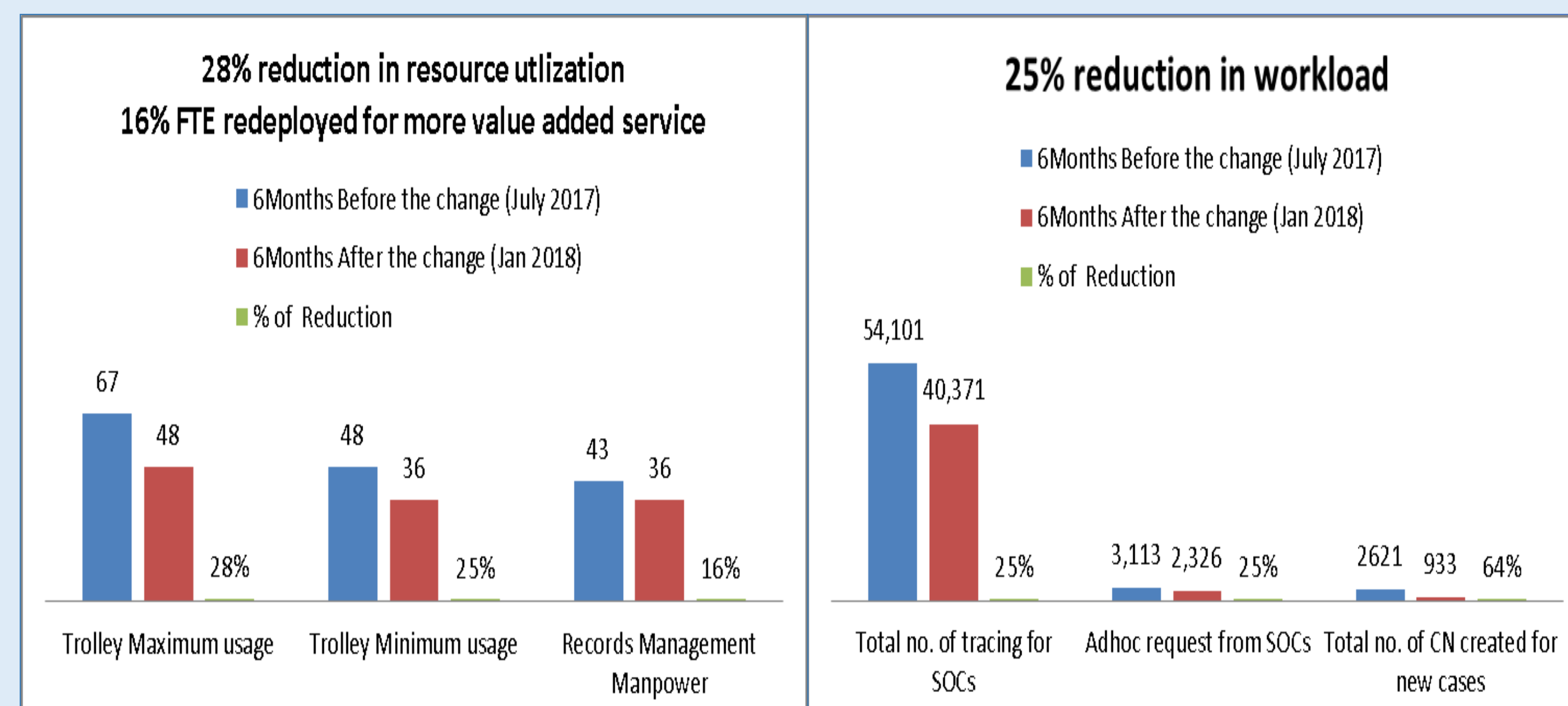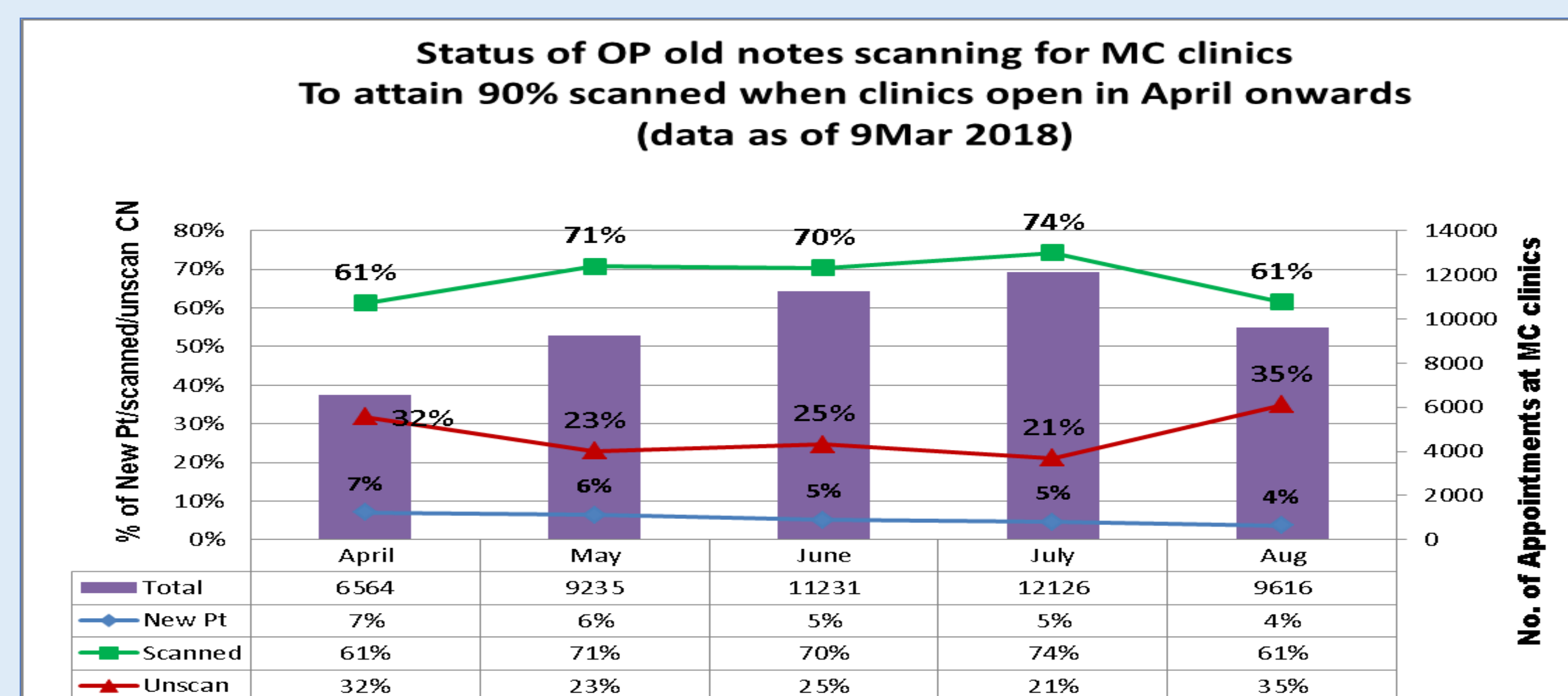
* **Optimized the system utilization.**

* ✓ Achieve clinicians buy-in to use outpatient clindoc, which reduce creation of new medical records.
* ✓ All new documents are scanned within 2 days after patients' appointments.

Out Patient ClinDoc Utilization as of Dec2017
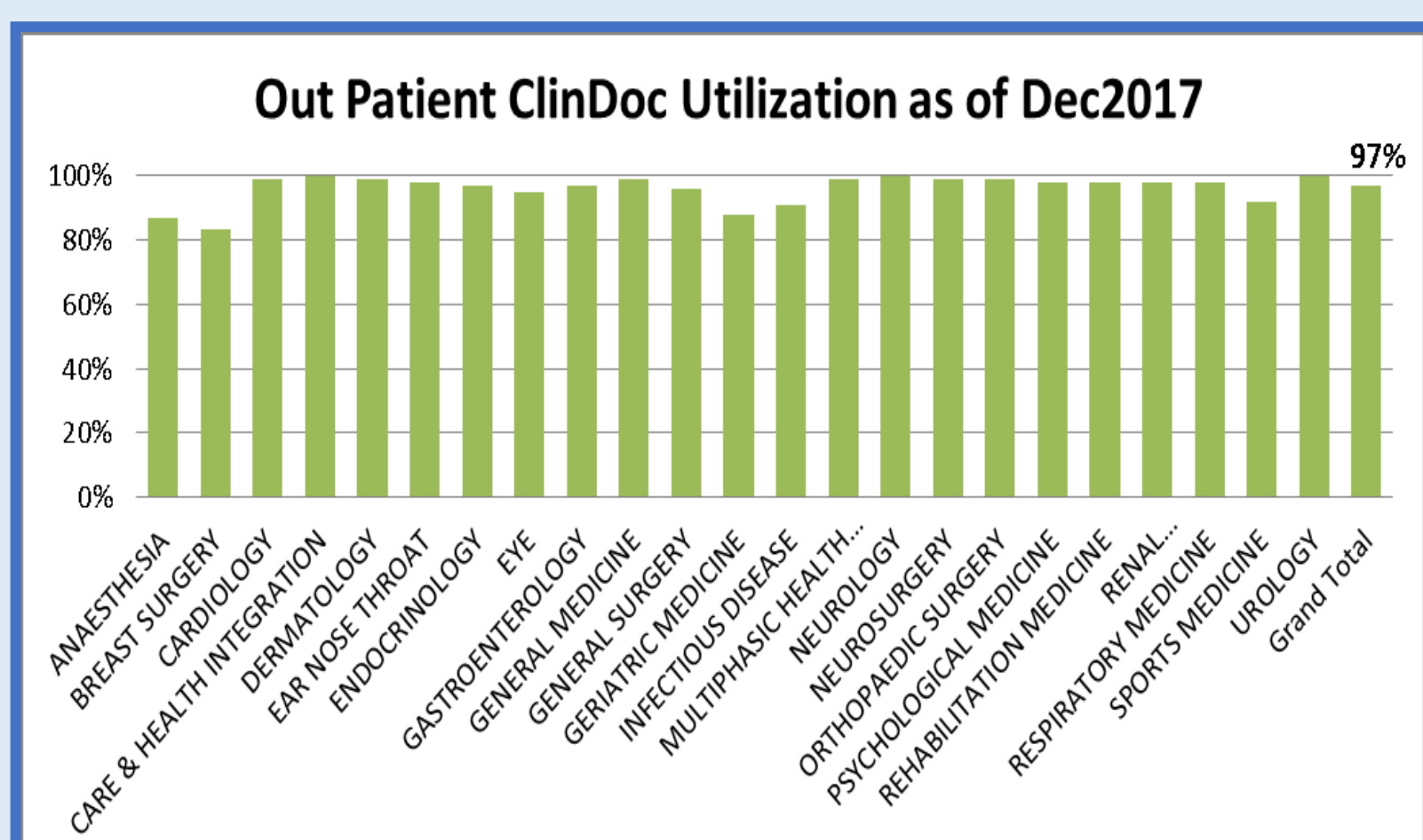
Results

Six-month before and Six-month after the change :
* 28% reduction in resource utilization.
* 25% reduction in workload.
* 16% of FTE redeployed for more value added services.
* Improved Productivity: productivity ratio from 13.91 to 16.38.
* Space optimization for new clinics (less casenotes' trolleys occupy at clinics and no consult rooms need to be closed to keep the casenotes' trolleys).

Status of OP old notes scanning for MC clinics
To attain 90% scanned when clinics open in April onwards
(data as of 9Mar 2018)

	April	May	June	July	Aug
Total	6564	9235	11231	12126	9616
New Pt	7%	6%	5%	5%	4%
Scanned	61%	71%	70%	74%	61%
Unscan	32%	23%	25%	21%	35%

28% reduction in resource utlization
16% FTE redeployed for more value added service

25% reduction in workload

Benefits of Transforming Care Delivery from Paper Records to Paper-lite :

* ✓ No additional space requires in the new medical centre to hold casenotes' trolleys.
* ✓ It saved the modification of existing 145 trolleys resulted cost savings of $160K.
* ✓ It improved productivity and staff were deployed to do unmet need for quality check and in-house scanning to become vendor independence in the near future.

Conclusion

As we strive to deliver beyond quality to value- based care, it is important to constantly improve the way we deliver care. The transformative care delivery from paper records to paper-lite and beyond represents a paradigm shift of the way we deliver care. Patient records can be accessed simultaneously among healthcare providers which improve patient safety with better communication and coordination of care.