



Singapore Healthcare Management 2017

# Optimising Pupillary Dilatation for Cataract Surgery at the Day Surgery Centre (DSC) with Combination-Regimen (Combo-R)

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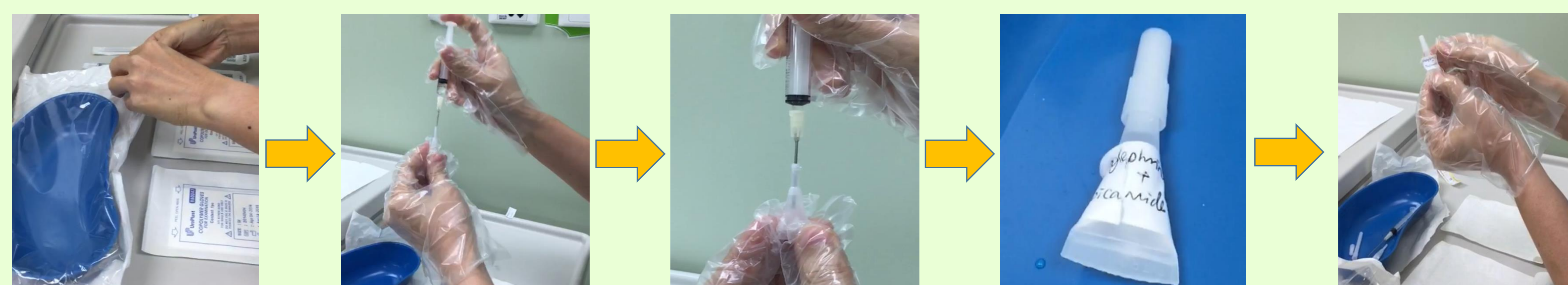


## BACKGROUND

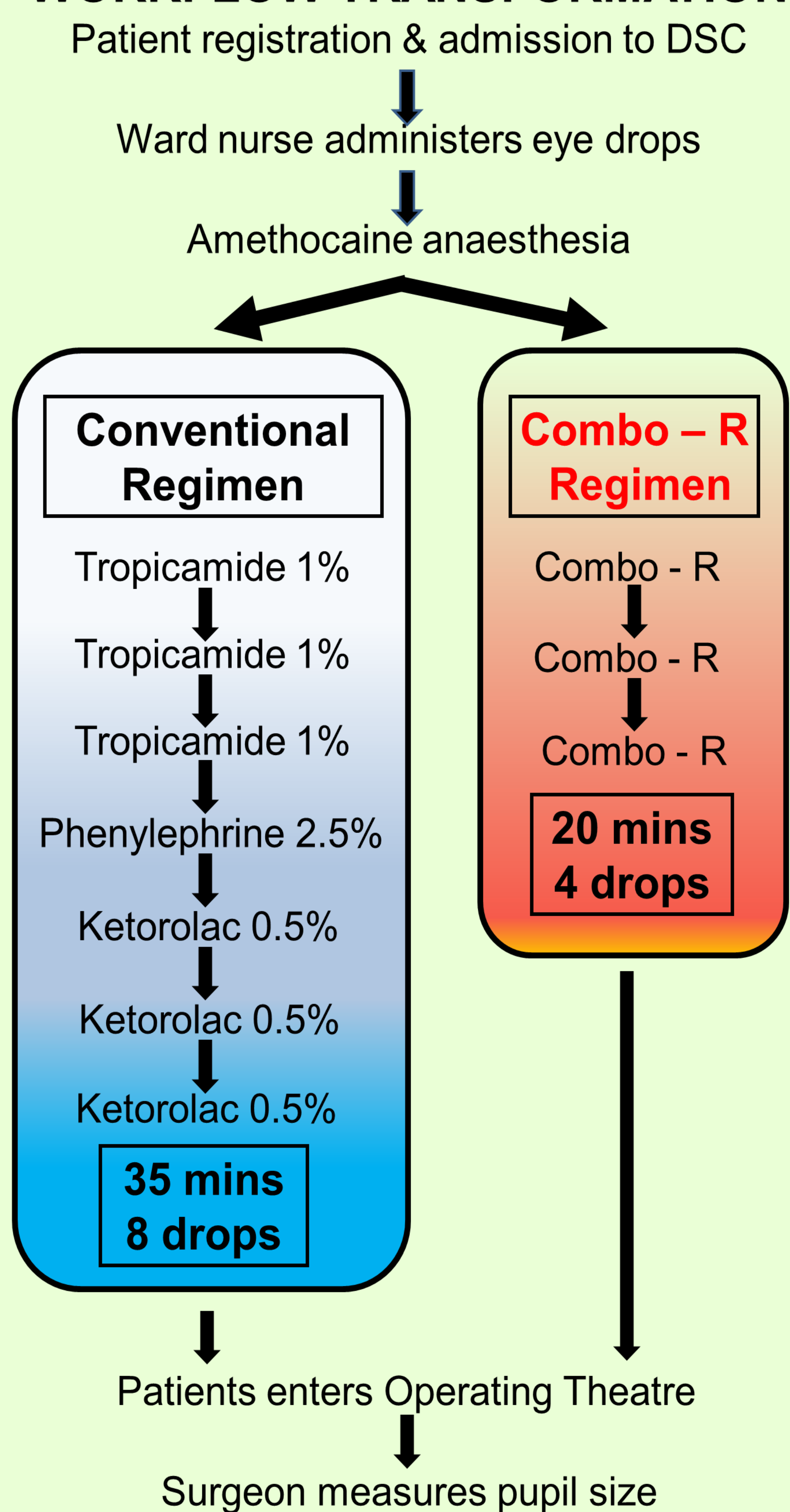
- Adequate pupillary dilatation is essential for safe cataract surgery
- A combination drop formula & regimen was proposed
- **Combo-R + Tropicamide 1% + Phenylephrine 2.5%**

## METHOD

- A **trans-disciplinary** collaboration between Ophthalmology, Nursing & Pharmacy Departments
- Combo-R was prepared under sterile conditions in Day Surgery Centre by designated OR nurses



## WORKFLOW TRANSFORMATION



## RESULTS

**Effective DILATATION**  
Average pupil size =  $7.74 \pm 0.91$  mm (n=246)

**Nil additional measures** required to enhance pupil dilatation during surgery (n=246)

**Fewer DROPS**  
Ketorolac omitted.  
Combination drop mixture.  
Diluted effective concentrations (Tropicamide 0.5%, Phenylephrine 0.25%)

**TIME Saved**  
15 minutes per patient.  
4 hrs/ day or 1000 hrs/year.

**Fewer PATIENT INTERRUPTIONS**  
Only 4X with Combo-R

**Patient Mean Satisfaction Score**

Week	Mean Satisfaction Score
Nov'16 4th Wk	3.33
Dec'16 1st Wk	4.33
Dec'16 2nd Wk	4.05
Dec'16 3rd Wk	4.00
Dec'16 4th Wk	4.17

## IMPACT

**INCREASED PRODUCTIVITY**  
Nurses freed to complete other tasks  
Better nurse - patient interaction enabled

**INCREASED PATIENT SAFETY**  
Minimized drug error potential  
Reduced ocular toxicity with dilution  
No Ketorolac side effects

**COST SAVINGS**  
\$419.12 / per (Ketorolac cost)

**High PATIENT SATISFACTION**  
Shorter **WAITING TIME** for surgery  
Less "hectic" **EXPERIENCE**

**SAFER surgery**  
Better visualisation of cataract

**FASTER surgery**

## SUSTAINABILITY

Combo-R will be implemented as a **Standard-of-Care** for pre-operative pupil dilatation in the KTPH DSC & AdMC.

## CONCLUSION

Combo-R is a **safe, efficient & cost-effective** method to dilate pupils with **high patient, staff & surgeon acceptance** as compared to the conventional regime.

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