

Project Title

Improving care of patients with trigger finger and increasing the productivity of doctors

Project Lead and Members

Project lead: Dr Renita Sirisena

Project members: Rahimah Bahri, Rahidayati Binte Rahmat, Zhi Yan, May Lim, Farazeela Malek, Teo Siew Ling, Tan Lay Lay

Organisation(s) Involved

Hand and Reconstructive Microsurgery Centre, National University Hospital;
NUP Polyclinics

Project Period

Start date: 04-2018

Completed date: 05-2019

Aims

The aim of this project is to integrate care across the NUHS system (Primary and Tertiary Centres) by devising a system which allows trigger finger patients to discuss the various management options for their condition with a trained nurse and still receive the necessary counselling and treatment required.

Outcome measurements are:

- A. Increase the conversion rate of patients seen by doctors to treatments requiring a doctor's input from 45% to 80%
- B. Reduce the number of nil interventions from current 16% to 5%
- C. Reduce the cost for patients who do not require specialist attention

Background

Trigger Finger (TF) is the most commonly encountered condition in an elective outpatient setting at our Hand & Reconstructive Microsurgery Centre. It is a condition where the patient feels pain or discomfort when bending or extending the finger. Analysing the new trigger referrals from Primary Centres between April – June 2018, we found that 45% of the patients would choose surgery or H&L injection while the remaining would choose hand therapy, splint, analgesia or no intervention. We felt that the 55% of patients who decided on the latter treatments did not require review by a specialist and could be assessed by a trained nurse with a standardized protocol. This would then relieve the burden placed on the specialist and allow them more time for more urgent and complex cases.

Methods

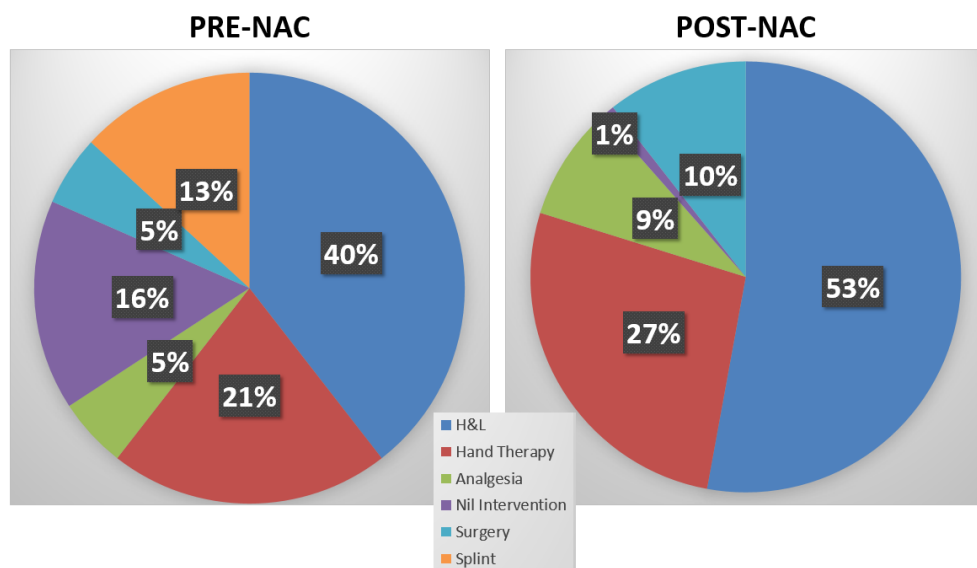
We identified 4 staff nurses in our Hand and Reconstructive Microsurgery Centre whom would be trained to assess and counsel trigger finger patients. Didactic teaching sessions were arranged and these nurses also sat in for our clinic trigger finger consults to have hands on training. An inclusion and exclusion criteria was created to ensure that the trigger finger cases reviewed by the nurses were not recurrent and did not have any other complaints that required assessment. As this was a change in the practice, we created pamphlets on this new protocol in 4 different languages for distribution to the polyclinic patients. After a period of nursing assessment done with doctor supervision, we allowed the nurses to run these Nurse Assessment Clinics (NAC) independently.

Results

NAC started in July 2018 and these results are from a 9 month period of data collection.

1. After intervention, **100%** of patients seen by a doctor chose H&L or surgery vs **45%** (17/38) patients pre-intervention.

- Increasing the conversion rate of patients seen by doctors to treatments requiring a doctor's input.
2. Pre intervention, **16%** of patients chose nil intervention versus **1%** post intervention.
- Patients could have had more time to consider treatment options in the NAC clinic and thereby chose treatment based on what they were comfortable with.



Lessons Learnt

1. Initially we were concerned that patients would be unhappy that they did not see a doctor, however this was never the case. Over our 9 months' period of NAC running, no patients expressed such displeasure. Most patients found the nursing assessment and education to be detailed and professional.
2. A clear and simple inclusion and exclusion criteria helped to properly filter patient to the NAC. This allowed for the nurse assessment and education to have the most impact.
3. A standardised template for documentation helped the nurses in their documentation and also allowed for a standardised set of risks to be explained to the patients for some of the interventions. This template also made data collection easier as well.

4. By standardising the way our nurses counsel patients with trigger finger on the management options, this maintains the high standard of care that is expected of by our patients as well as the treatment team.
5. By having NAC run alongside a doctor's clinic, it allows for the nurses to easily communicate with doctors and ask for assistance as required. This open communication also aids in the nurses' learning and confidence in assessing patients. Cases that the nurses have difficulties managing will be screened to a doctor's clinic as a first visit instead.

Conclusion

NAC for trigger finger has been successful in the Hand and reconstructive microsurgery centre at NUH. We are hoping to increase our NAC both in NUH as well as across the cluster. Furthermore, we are looking into increasing the number of conditions which can be assessed at NAC. By changing the way our nurses can contribute to patient care, it will free up resources for other more emergent cases to be reviewed by our doctors in clinic while still maintaining a high standard of patient care.

Project Category

Clinical Improvement, Process Improvement, Workforce Redesign

Keywords

Clinical Improvement, Process Improvement, Workforce Redesign, Fishbone Diagram, Quality Improvement Tool, Nursing, National University Hospital, Trigger Finger, Hand And Reconstructive Microsurgery Centre, Nurse Assessment Centre

Name and Email of Project Contact Person(s)

Name: Dr Renita Sirisena

Email: renita_sirisena@nuhs.edu.sg

Quality Improvement Award: Project (Process/Service) /CPIP Category

Report by : Teo Siew Ling

Start Date: Apr 18

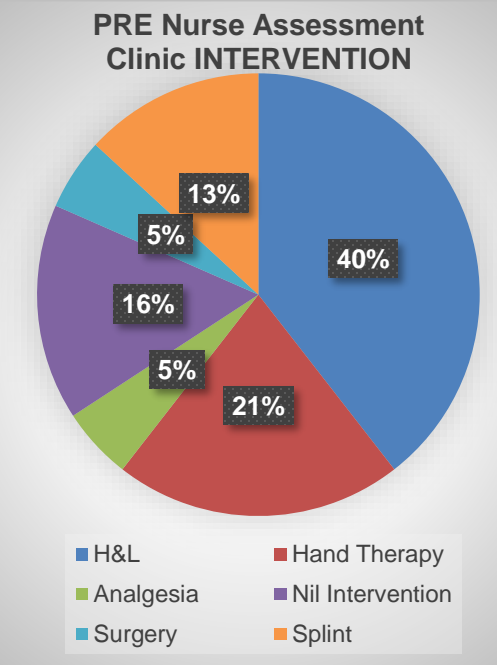
End Date: Mar 19

Project Title 7	Improving care of patients with trigger finger and increasing the productivity of doctors				
Department	HRM	Duration	10 months	Sponsor / Facilitator	A/Prof Alphonsus Chong / Teo Siew Ling
Team Leaders	Dr Renita Sirisena	Team Members	Rahimah Bahri, Rahidayati Binte Rahmat, Zhi Yan, May Lim, Farazeela Malek, Teo Siew Ling, Tan Lay Lay		

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INTERVENTIONS & ACTION PLAN

No	Task	Action by	Date
1	Set up workgroup committee and facilitate discussion between NUP and NUH-HRM	Dr Renita Sirisena	Nov-17 to Dec-17
2	Create triaging workflow for patients from NUP to HRM Centre	Whole team	Nov-17 to Feb-17
3	Creation of information leaflet in 4 languages (for NUP Drs) to accompany the referral form	Dr Renita Sirisena Teo Siew Ling	Mar-18 to May-18
4	Discuss with NUH Hand OTs and workout the number of appointment slots to be provided to NUP referrals and inform Call Centre to direct all NUP TF referrals to Nurse Assessment clinic.	Sr Rahimah Tan Lay Lay	Jan-18 to Mar-18
5	To develop inclusion and exclusion criteria into standardized CDOC template for nurses	Dr Renita Sirisena Zhi Yan & Rahidah	Apr-18 to May-18
6	To provide training to HRM Nurses on how to triage TF cases and provide follow-up phone calls at 6 weeks	Dr Renita Sirisena, Zhi Yan & Rahidah	Mar-18 to Jun-18
7	To create phone communicate script for SA to call patient before actual visit	May Lim Farazeela	May-18
8	Disseminate new practice to HRM doctors and staff	Dr Renita & Rahimah	Apr-18 to May-18
9	Monitoring of indicators for project. Overall workflow, Value Stream Mapping. Reporting of project for QIP award.	Dr Renita Sirisena Teo Siew Ling	Jul-18 to Mar-19

AIMS

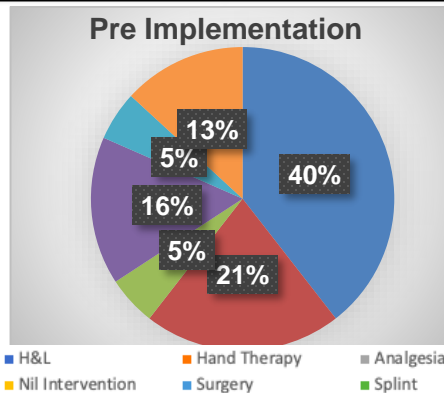
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Outcome measurements:

- Increase the conversion rate of patients seen by doctors to treatments requiring a doctor's input from **45% to 80%**
- Reduce the number of nil interventions from current **16% to 5%**
- Reduce the cost for patients who do not require specialist attention

BENEFITS AND RESULT

- After intervention, **100%** of patients seen by a doctor chose H&L or surgery vs **45%** (17/38) patients pre-intervention.
 - Increasing the conversion rate of patients seen by doctors to treatments requiring a doctor's input.
- Pre intervention, **16%** of patients chose nil intervention versus **1%** post intervention.
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COST SAVINGS FOR PATIENTS

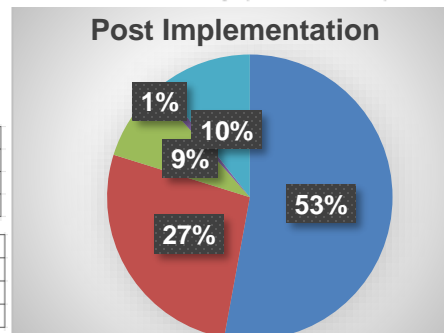
In the new workflow, patient who decides to opt for hand therapy, splint, analgesia or no intervention after being assessed by the trained nurse would need to pay a Nurse Assessment Fee.

BEFORE Implementation			
1. Patient presents with Trigger Finger	2. Patient assessed by doctor	3. Patients opt for Hand Therapy, Splint, Analgesia or no Intervention	4. Patient pays doctor consult Fee.
			Pte : \$123.05 Sub : \$37.00

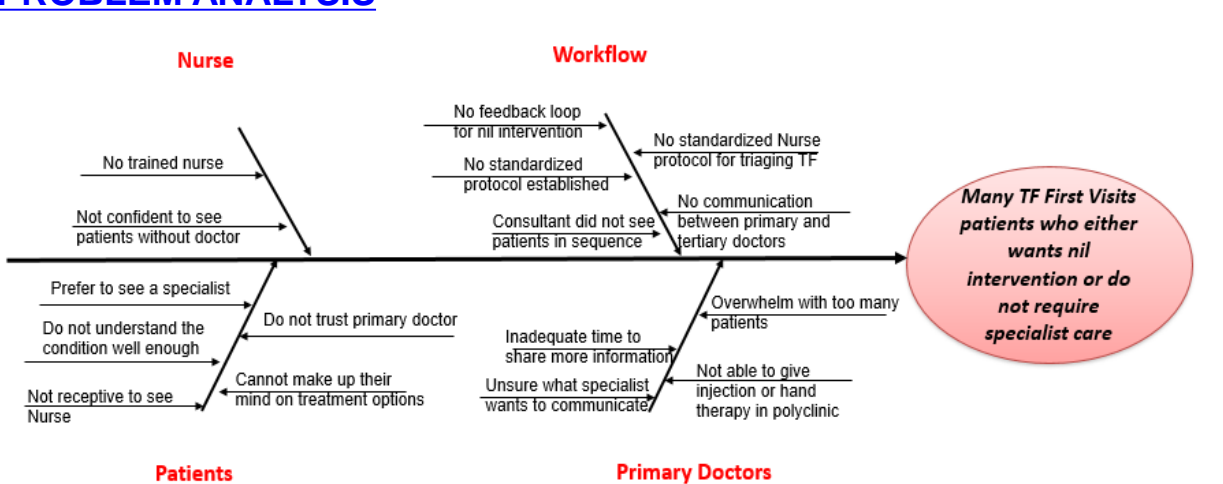
Nurse Assessment Fee			
Patient Class	WO GST	W GST	
Private	\$115.00	\$123.05	
Subsidised	\$37.00	\$37.00	

AFTER Implementation			
1. Patient presents with Trigger Finger	2. Patient assessed by trained Nurse	3. Patients opt for Hand Therapy, Splint, Analgesia or no Intervention	4. Patient pays Nurse Assessment Fee
			Pte : \$26.75 Sub : \$12.50

Nurse Assessment Fee			
Patient Class	WO GST	W GST	
Private	\$25.00	\$26.75	
Subsidised	\$12.50	\$12.50	



PROBLEM ANALYSIS



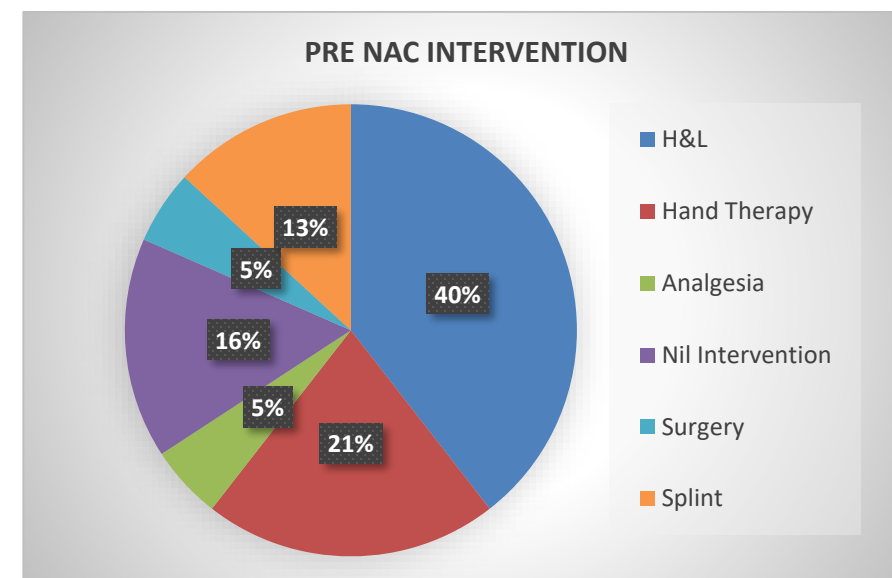
STRATEGY FOR SPREADING/SUSTAINING

- Currently the NAC trigger clinics are opened 2x/week in 2 consultant run clinics. We will be slowly increasing the number of NAC clinics open to 1 clinic per day.
 - ✓ We are working on training more nurses to be able to run NAC
 - ✓ Nurses to run NACs for other conditions like DeQuervain tenosynovitis and carpal tunnel syndrome
 - ✓ We are working on a credentialing program for our nurses
- As our HRM doctors run service in clinics in JMC and NTFGH, we plan to integrate this program at our other NUHS sites.

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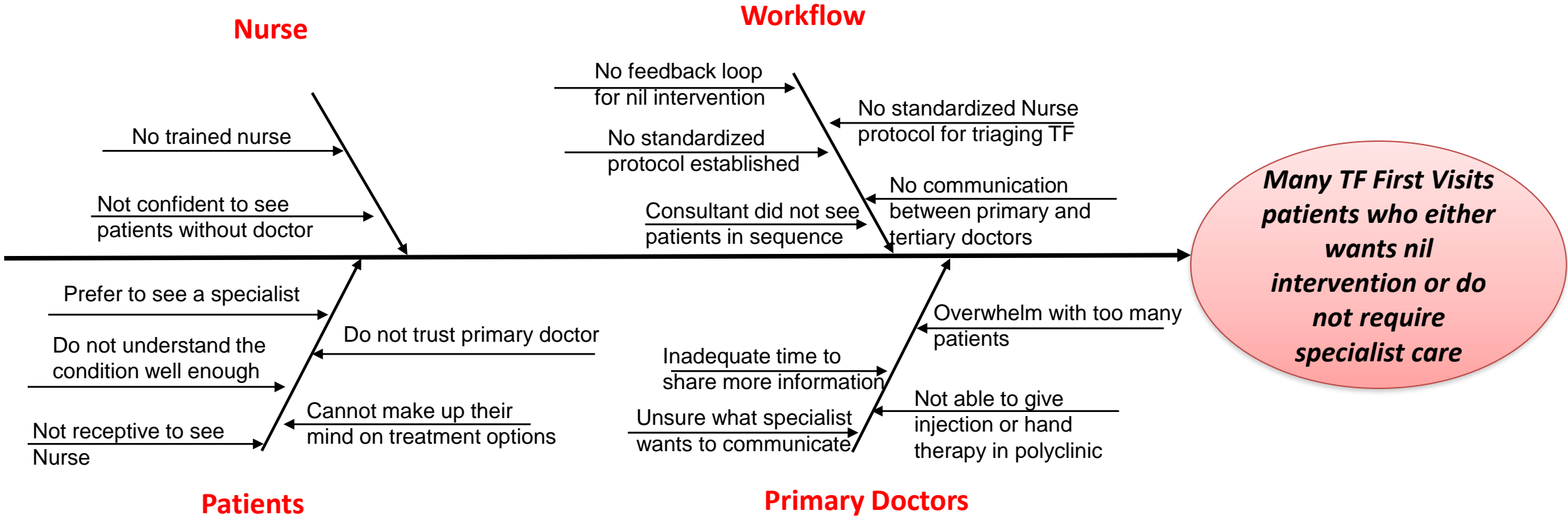
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INTERVENTIONS IMPLEMENTED

S/N	Interventions Implemented												
2.	<p data-bbox="247 292 2553 433">Developed inclusion and exclusion criteria and trained the nurses to triage patients in Nurse Assessment Clinic alongside with Consultant Clinic.</p> <div data-bbox="268 443 1553 1743" style="border: 1px solid black; padding: 10px;"><p data-bbox="309 635 913 725">NUP-HRM TRIGGER INITIATIVE Patient Screening Form</p><div data-bbox="309 796 913 1108" style="border: 1px solid black; padding: 5px;"><p data-bbox="322 897 537 927">Patient's sticker</p><p data-bbox="322 937 416 967">Name: _____</p><p data-bbox="322 977 403 1008">NRIC: _____</p></div><p data-bbox="309 1169 900 1199">Hand Dominance: R L</p><p data-bbox="309 1249 1061 1290">Occupation: _____</p><p data-bbox="309 1340 1061 1380">Finger(s) Affected: _____</p><table data-bbox="309 1421 1505 1723"><tbody><tr><td data-bbox="309 1421 1142 1461">Locking currently present?</td><td data-bbox="1155 1421 1249 1461">YES</td><td data-bbox="1438 1421 1505 1461">NO</td></tr><tr><td data-bbox="309 1501 1142 1542">First time having locking?</td><td data-bbox="1155 1501 1249 1542">YES</td><td data-bbox="1438 1501 1505 1542">NO</td></tr><tr><td data-bbox="309 1582 1142 1622">Previous treatment?</td><td data-bbox="1155 1582 1249 1622">YES</td><td data-bbox="1438 1582 1505 1622">NO</td></tr><tr><td data-bbox="309 1663 1142 1703">Other symptoms? E.g. hand numbness, joint pain</td><td data-bbox="1155 1663 1249 1703">YES</td><td data-bbox="1438 1663 1505 1703">NO</td></tr></tbody></table></div>	Locking currently present?	YES	NO	First time having locking?	YES	NO	Previous treatment?	YES	NO	Other symptoms? E.g. hand numbness, joint pain	YES	NO
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INTERVENTIONS IMPLEMENTED

S/N	Interventions Implemented																
3.	<p>Created communication script and charging mechanism for patients.</p> <div data-bbox="263 459 1473 1393" style="border: 1px solid black; padding: 10px;"><p>Script for NUP-HRM Trigger Finger patient call before HRMC appointment</p><p>Good morning / afternoon <u>Mr / Ms/ Mdm</u> _____</p><p>I am calling about your appointment with NUH Hand and Reconstructive Microsurgery Centre (HRM Centre).</p><p>You have a recent visit to Polyclinic and have been referred to us.</p><p>Your appointment is on Date at Time.</p><p>As part of our plan of treatment, you will need to fill out a questionnaire on your condition.</p><p>You will then be assessed by a trained nurse. The nurse will discuss with you on the treatment options available.</p><p>Thank you <u>Mr / Ms/ Mdm</u>.</p><p>If you have further enquiries, you may call HRM Centre at 6772 5599. Goodbye!</p></div> <table border="1" data-bbox="1596 465 2451 788"><thead><tr><th>S/N</th><th>Options</th><th>Consult Charge</th><th>Nurse Assessment Fee</th></tr></thead><tbody><tr><td>1</td><td>Hand Therapy</td><td>No</td><td>Yes</td></tr><tr><td>2</td><td>Refer to Doctor</td><td>Yes</td><td>No</td></tr><tr><td>3</td><td>Nil Intervention</td><td>No</td><td>Yes</td></tr></tbody></table>	S/N	Options	Consult Charge	Nurse Assessment Fee	1	Hand Therapy	No	Yes	2	Refer to Doctor	Yes	No	3	Nil Intervention	No	Yes
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INTERVENTIONS IMPLEMENTED

S/N Interventions Implemented

4. Created a template for nursing documentation after reviewing a patient.

HRMC NAC – TRIGGER FINGER

Seen by:

Age:

Hand Dominance:

Occupation

PMHx:

TRIGGER FINGERS:

+

RIGHT	THUMB	IF	MF	RF	LF
Duration					
Grade					
Vas					
Previous H&L (NIL,1,2)					
Time since H&L					

LEFT	THUMB	IF	MF	RF	LF
Duration					
Grade					
Vas					
Previous H&L (NIL,1,2)					
Time since H&L					

Options of management:

- 1. Therapy, analgesia**
 - Takes time for effect to be seen
 - Involves wearing a splint, therapy, exercises
 - Analgesia – topical / oral
- 2. H&L**
 - 70% resolution, 30% recurrence
 - Maximum 2 injections per finger except LF (1x only)
 - Risk: infection, bleeding, recurrence, hypopigmentation, NV injury, tendon rupture, fat atrophy
- 3. Surgical release under LA**
 - 99% effective
 - Risk:
 - o LA: allergy
 - o Op: infection, bleeding, 2 week uncomplicated wound healing, need for post op therapy, NV injury

Option chosen:

Plan:

DATA COMPARISON

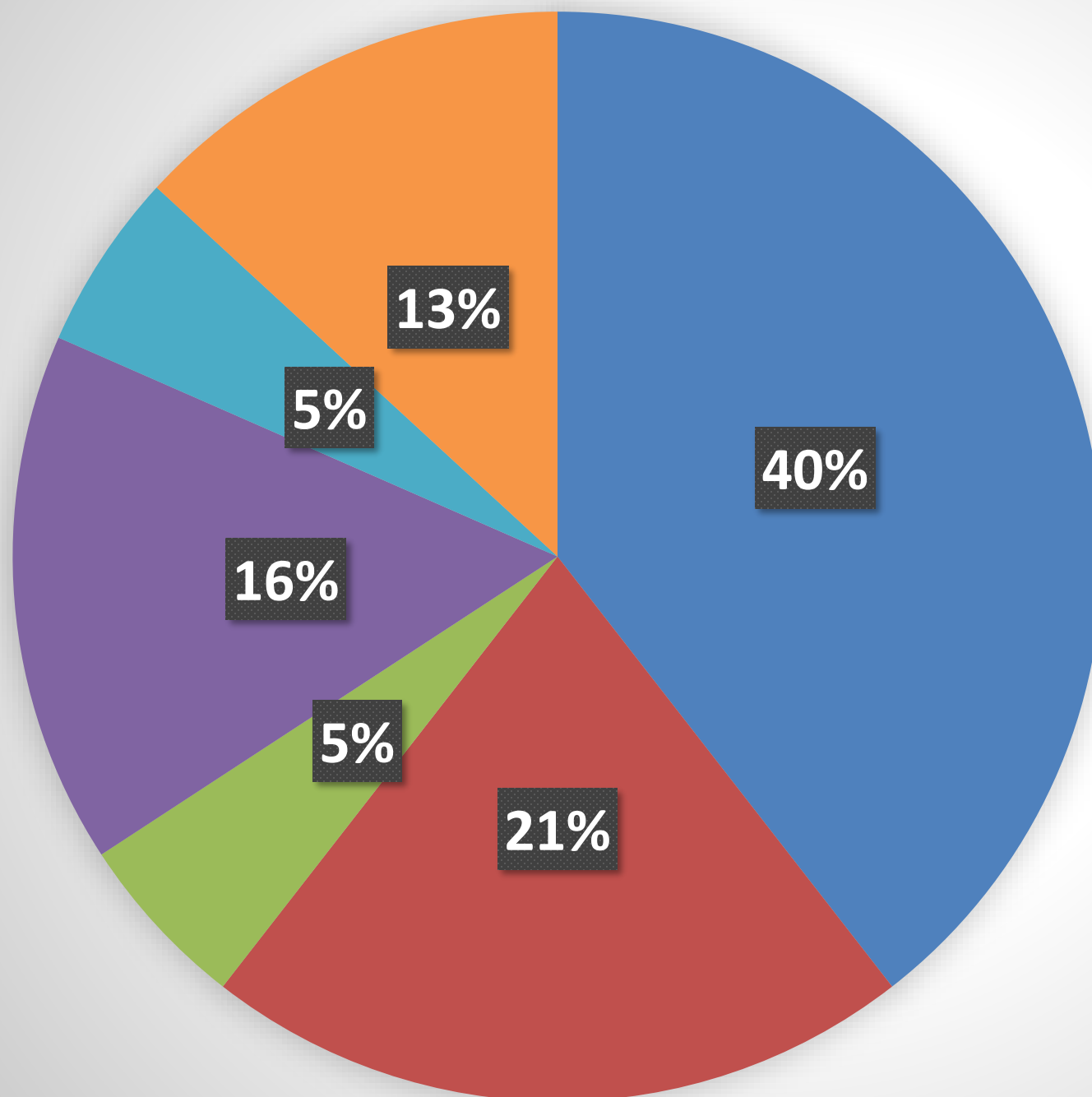
NUP HRMC TRIGGER INITIATIVE

PRE NAC INTERVENTION DATA

April 2018 – June 2018 (3 MONTHS)

- Total of 38 patients FV patients seen for trigger finger
 - Based on cases seen by 2 consultants
- 16% (6/38) of patients chose no intervention
- 40% (15/38) chose H&L
- Only 44.7% (17/38) of patients reviewed by a doctor chose an intervention that required a doctor's input

PRE NAC INTERVENTION



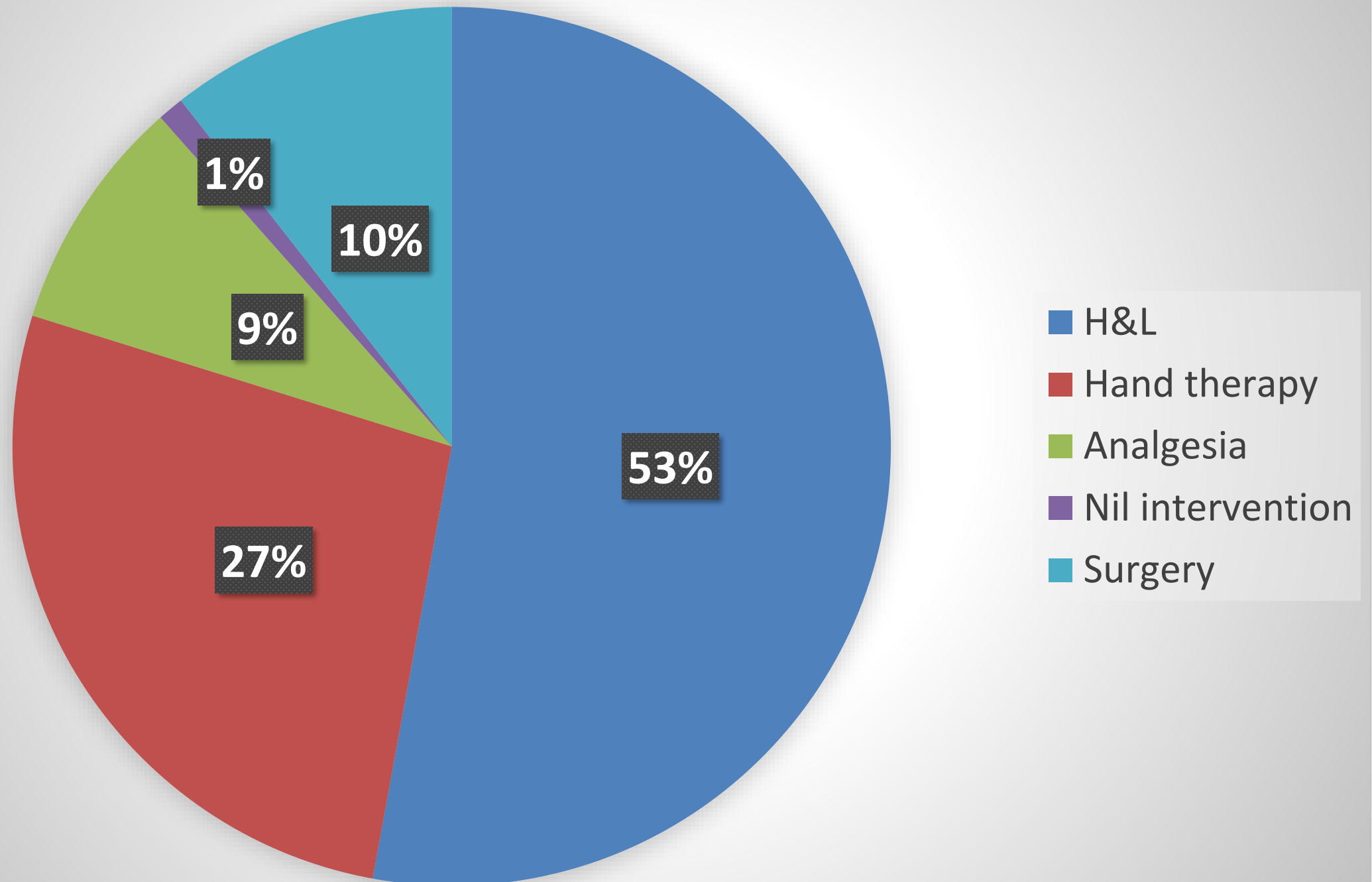
- H&L
- Hand Therapy
- Analgesia
- Nil Intervention
- Surgery
- Splint

DATA SINCE INTERVENTION

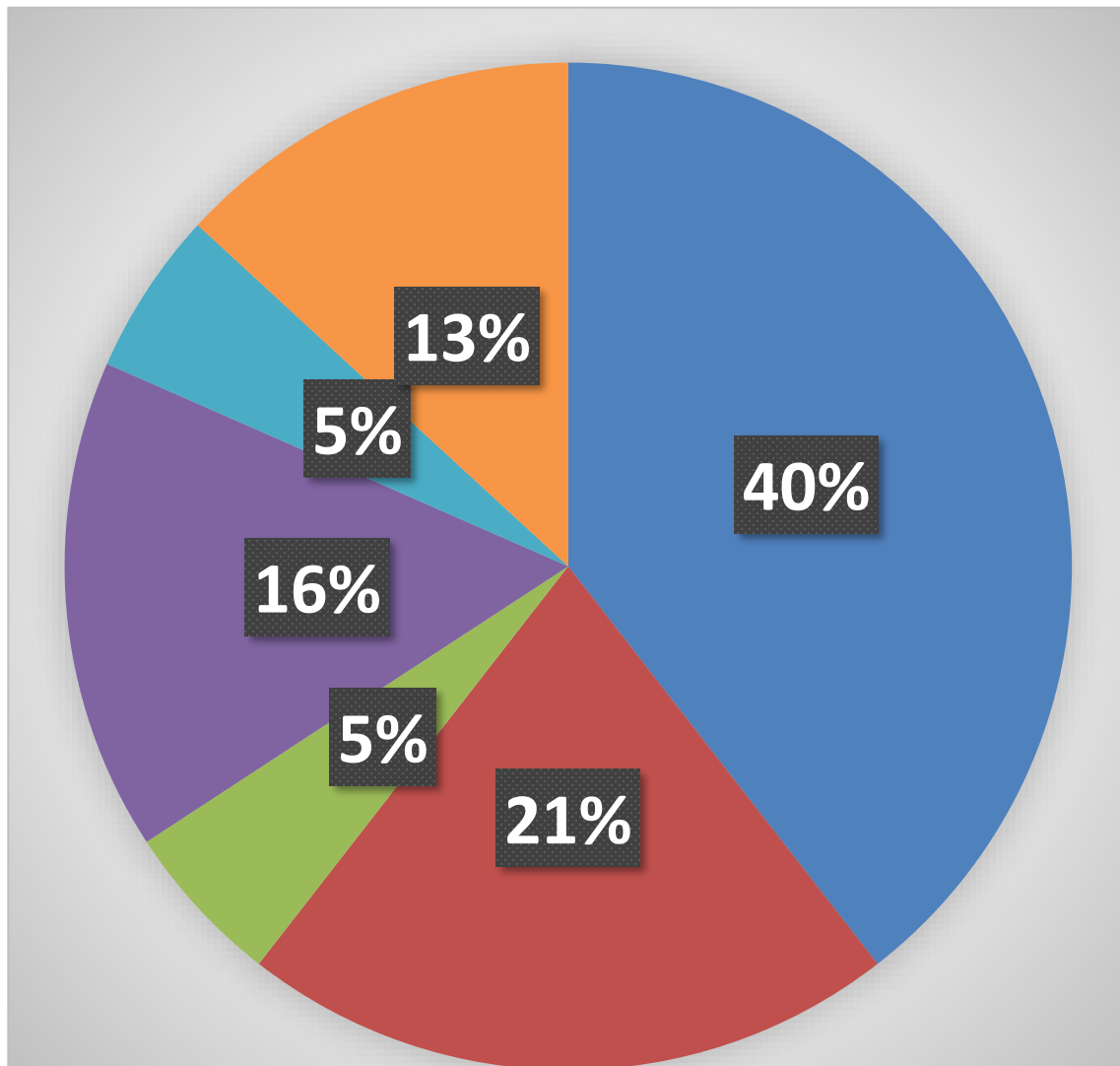
JULY 2018 TO MARCH 2019 (9 MONTHS)

- 131 patients referred from NUP
- 104 patients screened by our nurses
 - 27 patients converted straight to FVs
 - did not meet the screening criteria
 - No SN available during the appointment
- 7.63% (10/131)- nil pre appointment phone call
- 3.82% (5/131) – requested to be reviewed by a doctor
- Pure NAC review 20/104 (19.23%)

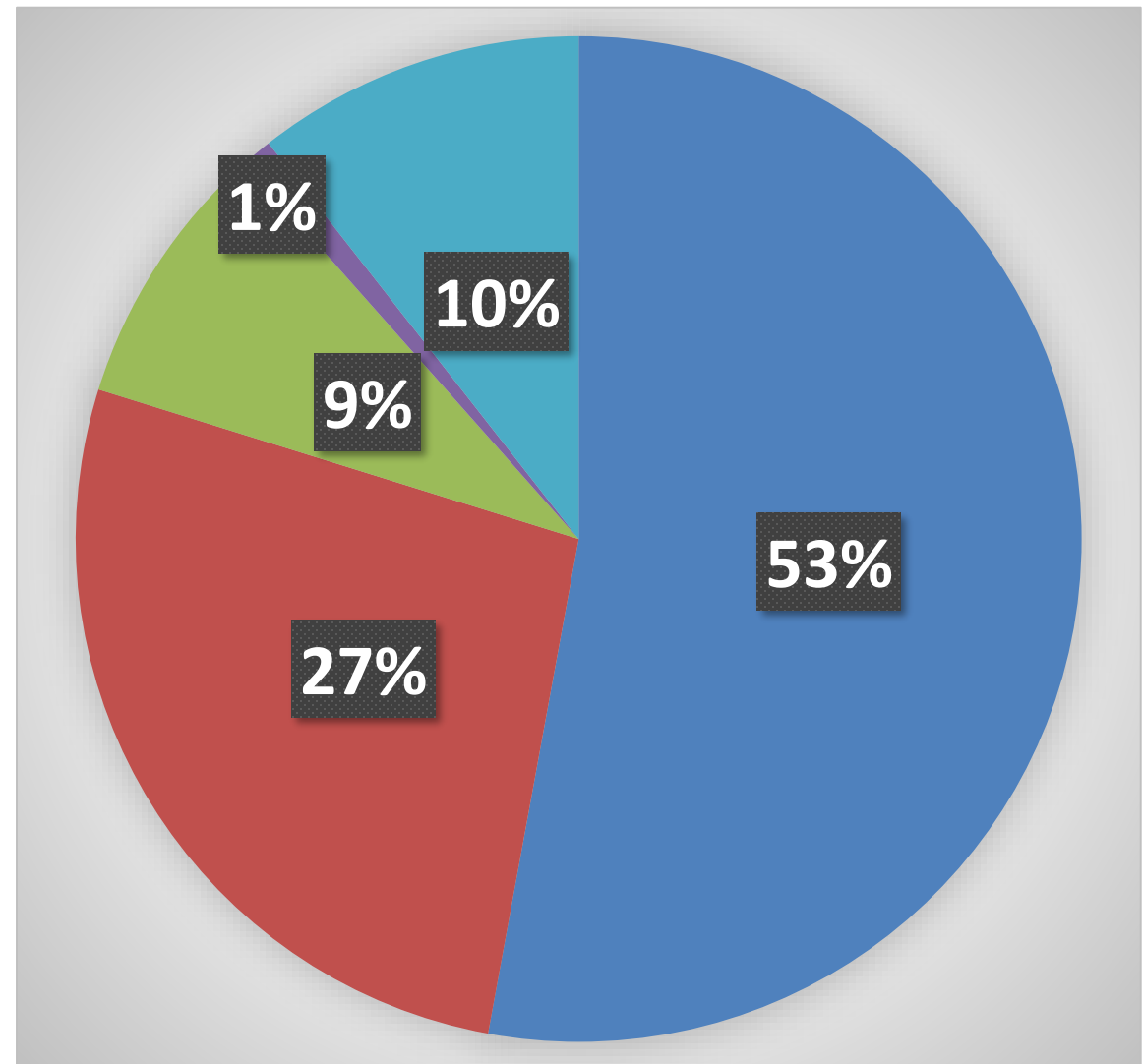
POST NAC INTERVENTION



PRE-NAC



POST-NAC



■ H&L

■ Hand Therapy

■ Analgesia

■ Nil Intervention

■ Surgery

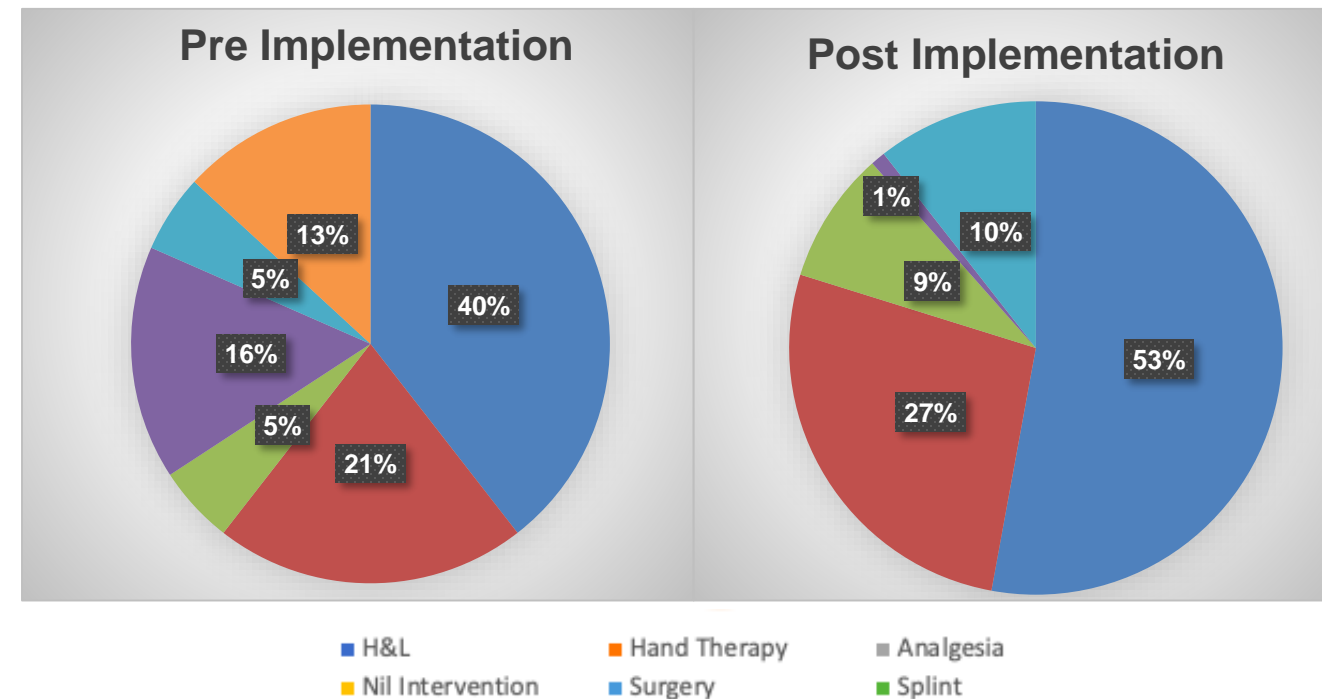
■ Splint

Changes seen post intervention

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BENEFITS & RESULTS

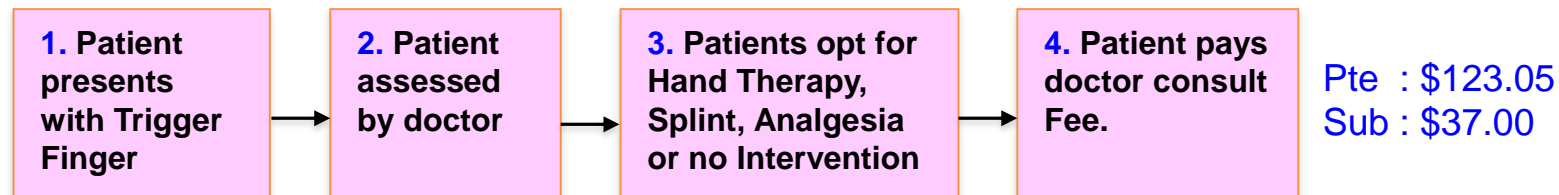
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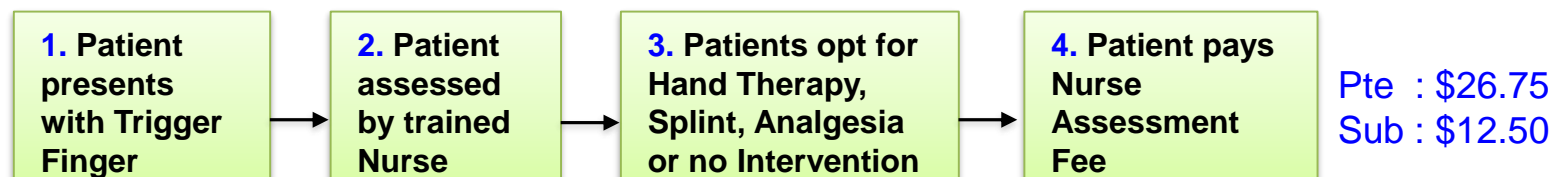
Cost Savings for Patients

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BEFORE Implementation



AFTER Implementation



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