

## Mission Statement

"Within a 6-month period, to increase the proportion of patients who gets **flexible cystoscopy** within **21-days** of referral for **gross hematuria** to Urology clinic ("time-to-diagnosis") from a **baseline of 17.5% to 100%.**"

**Definition:**

"Time-to-diagnosis" = duration from referral to Urology clinic for gross hematuria to flexible cystoscopy

## Team Members

Name	Designation	Department	Role in this project
1. Dr Lau Weida	Consultant	Urology	Leader
2. Dr Dinesh Sirisena	Consultant	Orthopaedics	Co-Leader
3. Ms Lin Xiao Yan	Assistant Nurse Clinician	Urology clinic	Member
4. Ms Lim Hui Yee Esther	Senior Executive	Operations Admin	Member
5. Dr Marcus Chow	Chief Resident	Urology	Member
6. Ms Nilufer Banu Bte Aslam	Senior Triage Specialist	Customer Contact Centre	Member
7. Dr Loh Seow Siang	Sr Consultant	Emergency Medicine	Facilitator

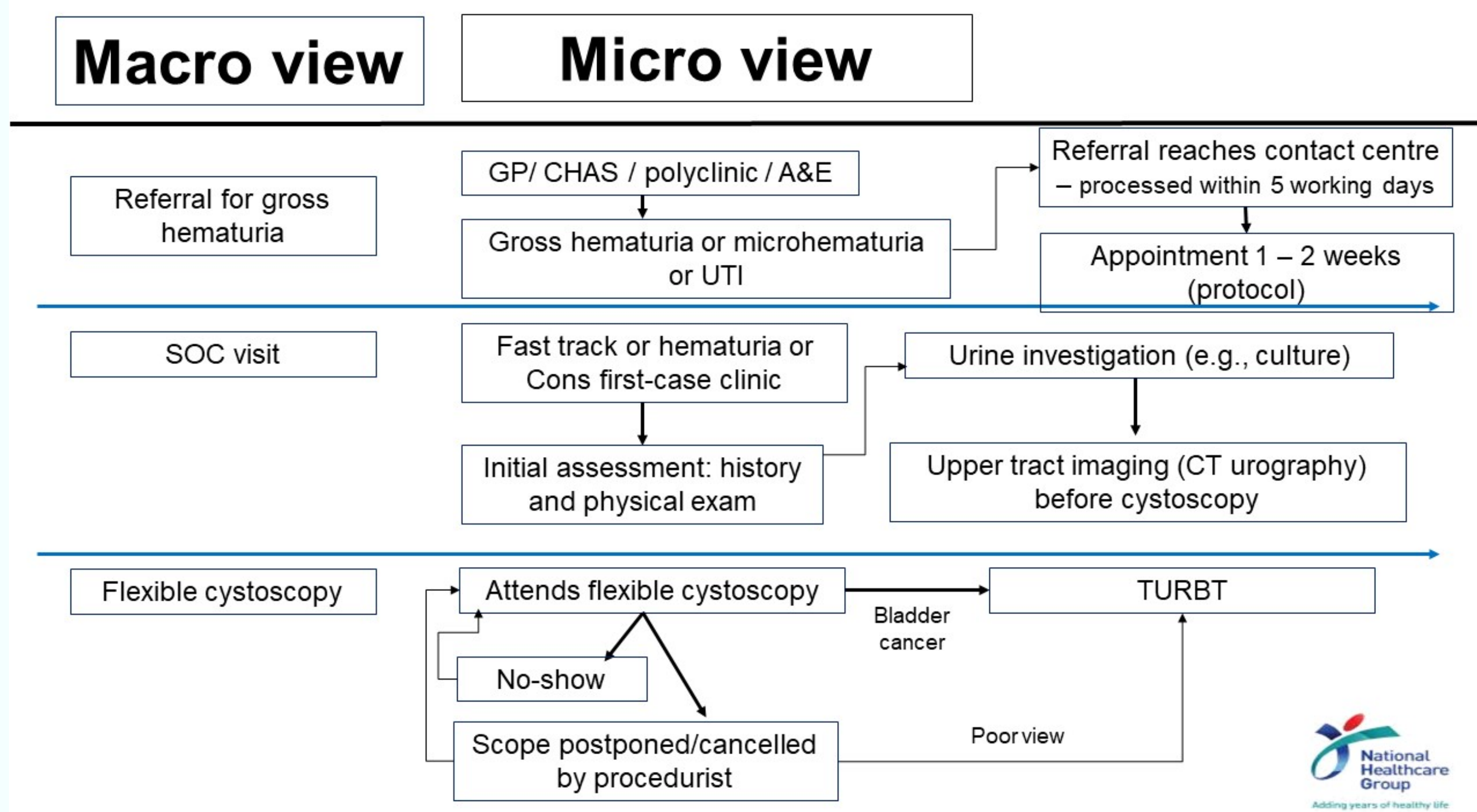
## Evidence for a Problem Worth Solving

- Gross hematuria is the most important presenting symptom for bladder cancer
- A delay in the diagnosis of bladder cancer increased the risk of death from disease independent or disease stage of tumor grade
- A delay between the onset of symptoms and patient presentation to the GP was associated with a poorer prognosis and higher stage bladder cancer (5).

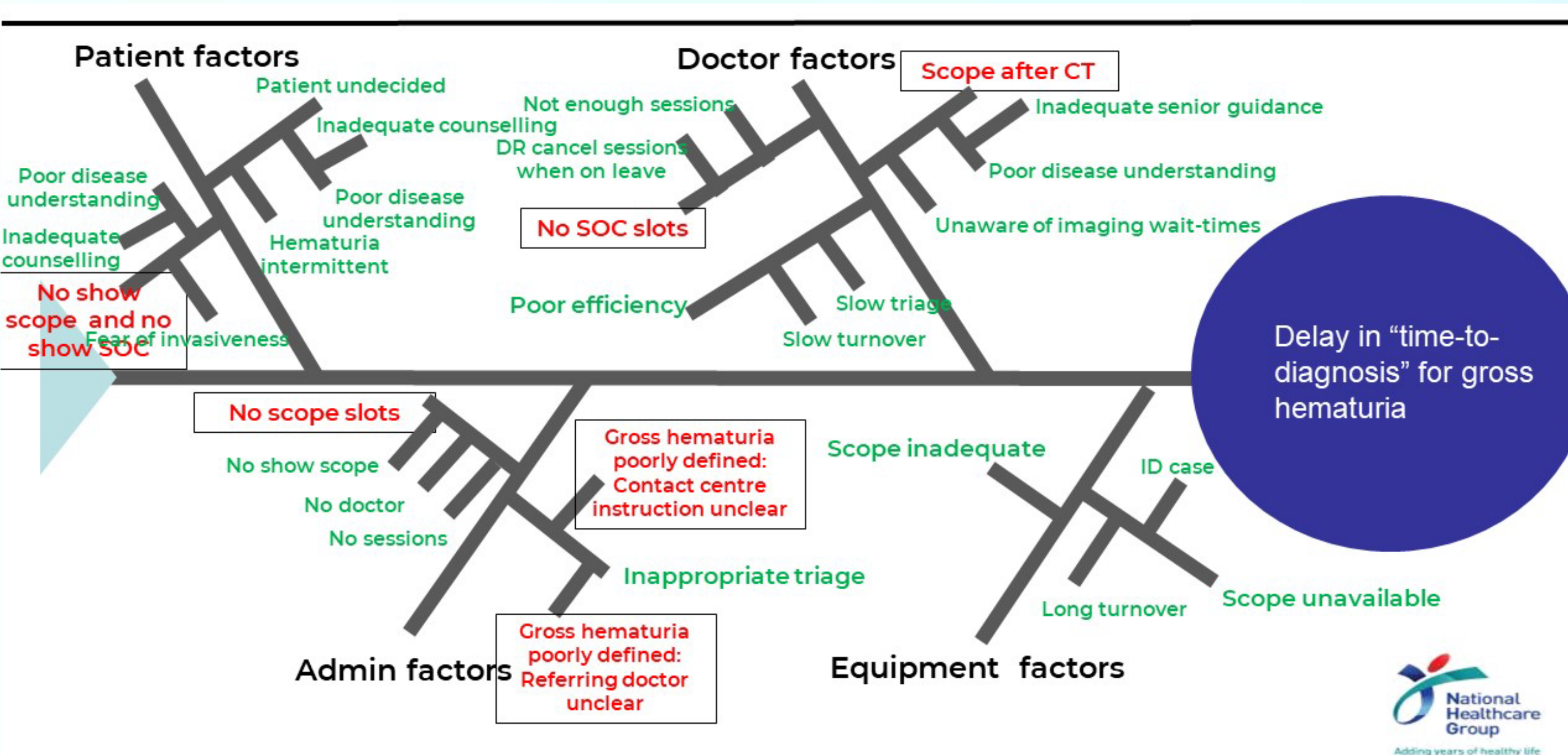
## Current Performance of a Process

	KTPH	NHS (UK)
"Time-to-diagnosis" (days)	58	21
"Time-to-treatment" (days)	72	43

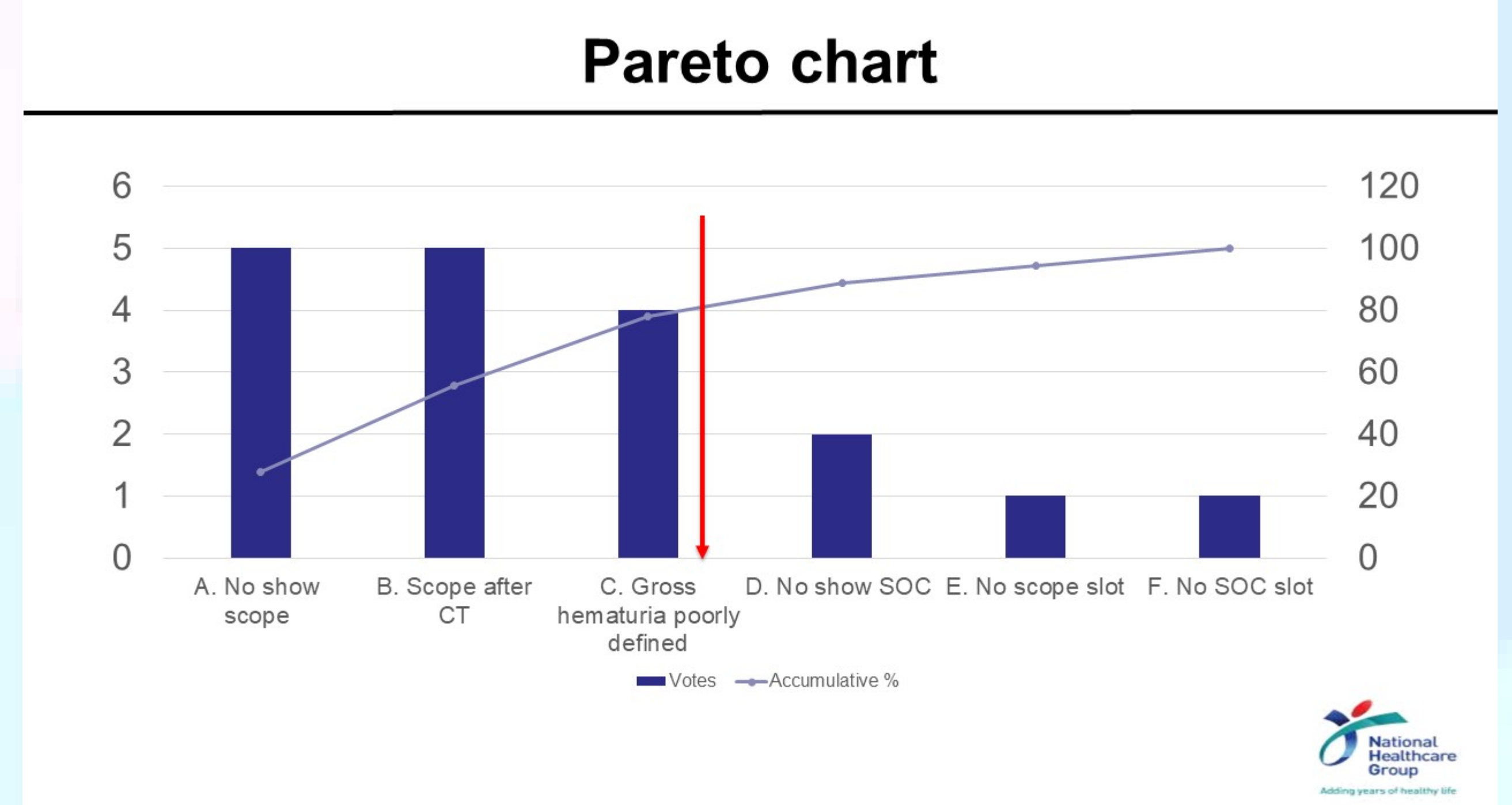
## Flow Chart of Process



## Cause and Effect Diagram



## Pareto Chart

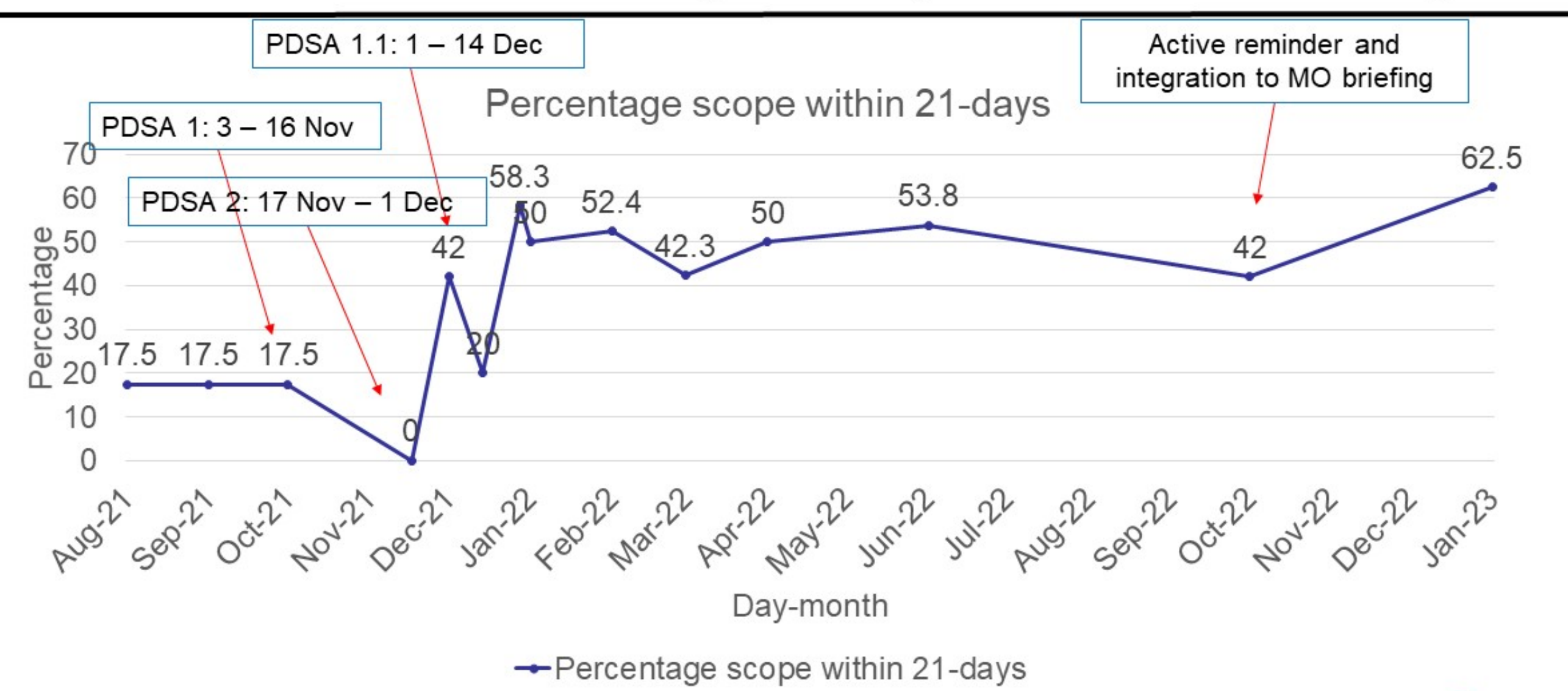


## Implementation

Problem	Intervention	Date of implementation
No show to scope room utilizing scope appts	Stopped rebooking "no-show" for low-yield conditions	3 Nov 2021
	Enhanced communication addressing no show reasons	1 Dec 2021
Prioritizing CT urography over flexible cystoscopy	Perform flexible cystoscopy prior to upper tract imaging	17 No 2021

## Results

### Run chart: Percentage scope within 21-days



## Cost Savings

	Before intervention	After intervention
No show rate	34.5%	16.9%
Number of slots gained per year	0	312

## Problems Encountered

Domain	Lessons learnt
Problem recognition	• Compare existing department outcomes with published MOH/International data
Problem solving	• Involve all stakeholders • Following the CPIP workflow: Process mapping (flowchart) / Ishikawa chart / Pareto
PDSA	• An apparent "patient-factor" problem, such as "no-show", may be due to an underlying physician / admin problem • Management protocol can be difficult to reverse
Outcome	• To analyze process measures, outcomes measures, and economic measures

## Strategies to Sustain

Strategy	Intervention	Activity
Sustaining	MO orientation programme	Incorporate gross hematuria topic into MO orientation and education programme, to be taught early in the posting
	Clinic re-organization	Fast-track clinic and hematuria clinic for protocolized management of hematuria as per guidelines and as per CPIP interventions
Spreading	Problem recognition	Regular audit and review of outcomes, and compare with local and international standards
	Problem solving	Encourage problem solving using the established tools of CPIP