Using Data to Create Change in the Acute health Care Setting

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South West Healthcare

SOUTH WEST HEALTHCARE

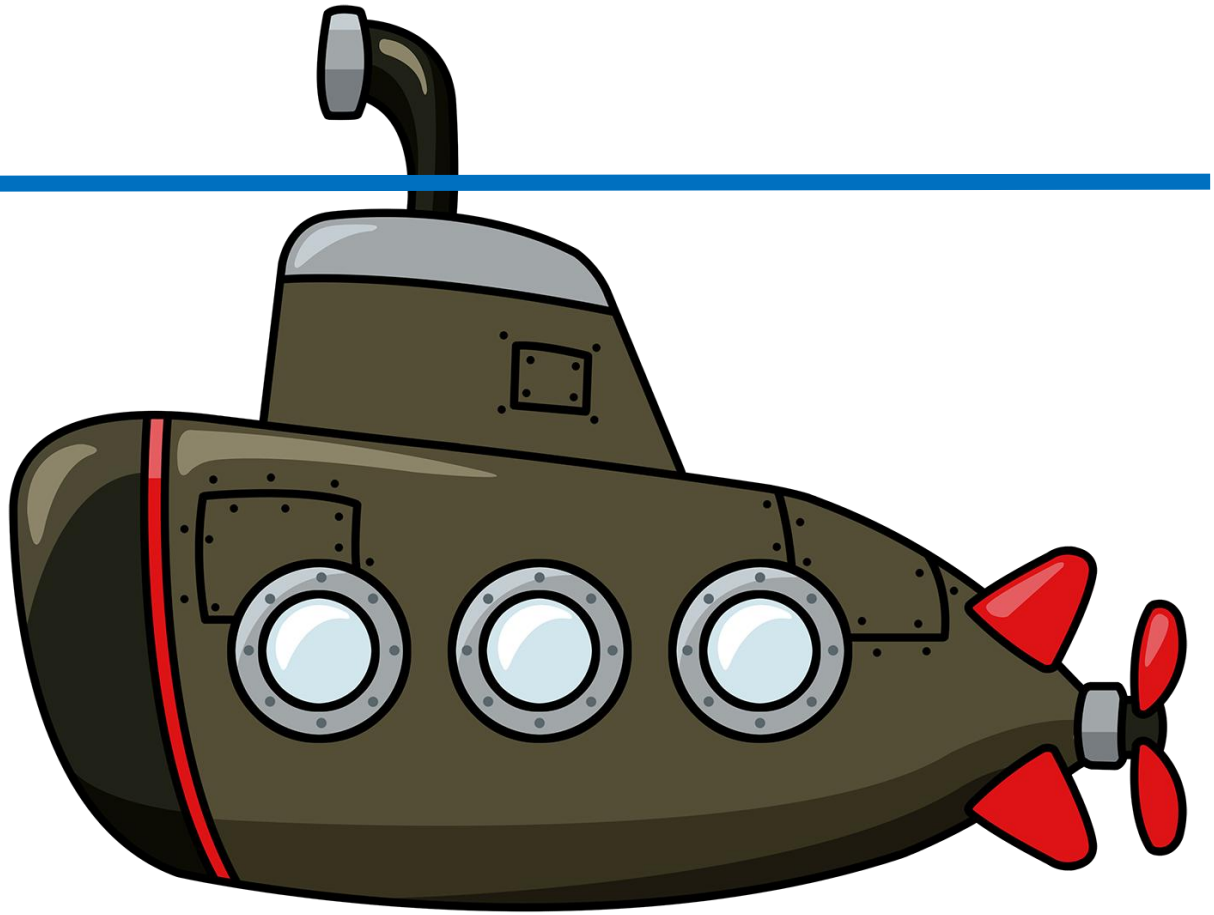
- Located in south west Vic
- ~3.5 hrs from Melbourne
- Warrnambool population ~34,000
- Regional catchment > 110,000 (reaches across the SA border)
- Main campus at Warrnambool, with some smaller campuses, community health centres and mental health services across the region

Using data to drive improvement - who sees it?

Upper Management (periscope view)

Middle Management

Coal Face



Ways to get around this

- Effective reporting at committee level
- Knowing How We are Doing Boards (KHWD) part of lean concept of making data visible.
- Data must be relevant to the area
- Beware of creating ‘pretty wall paper’ and not bringing meaning to anyone
- Weekly ‘board walks’ to discuss data, trends & progress on improvement work
- Success relies on good leader

A KPI may give a sign – but most of the issues / causes still unknown

Discovering truth

Beware the instincts of health professionals

- Bandaids can just create ‘work arounds’ and not address the root cause of an issue
- May need to ‘hold them back a bit’ to do drill down for truth

“What you want are facts, not opinions” – Florence Nightingale

Engaging people in the improvement work

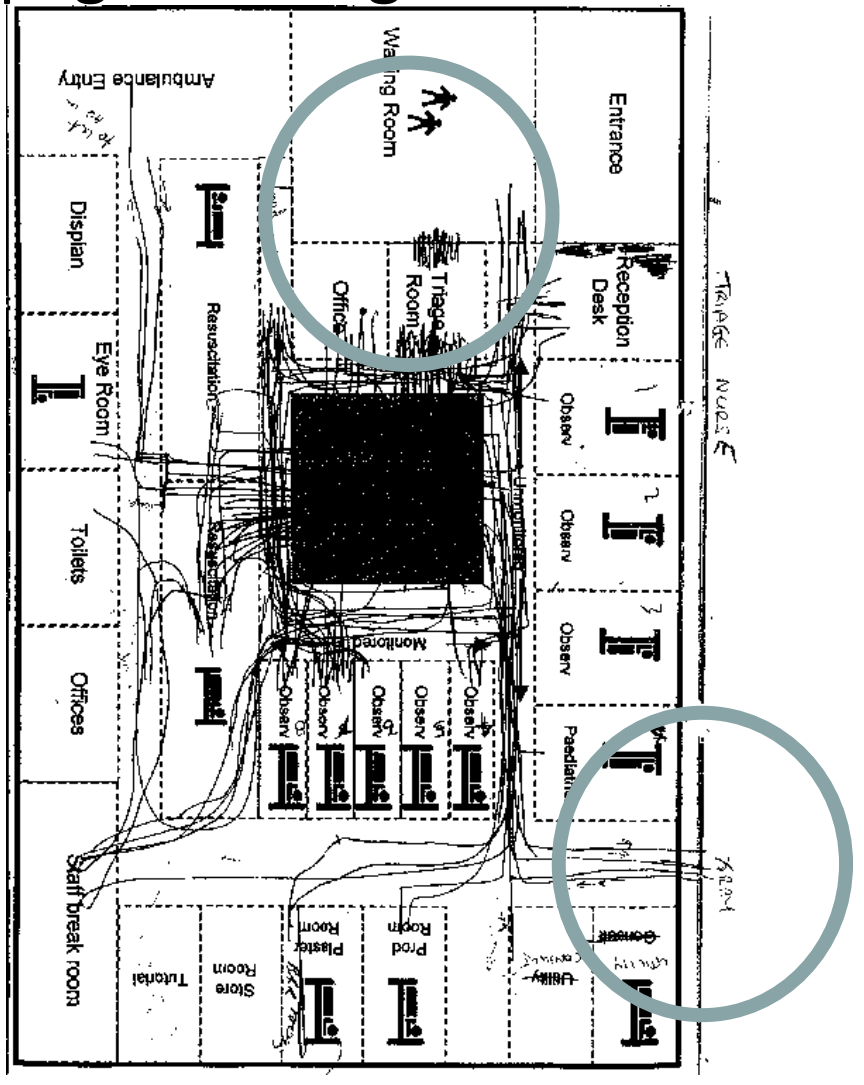
Our Challenges

- Lots of siloes in health care
- Not all staff know (or really care) if a problem elsewhere unless it directly impacts on them

Must make it real – visual is good

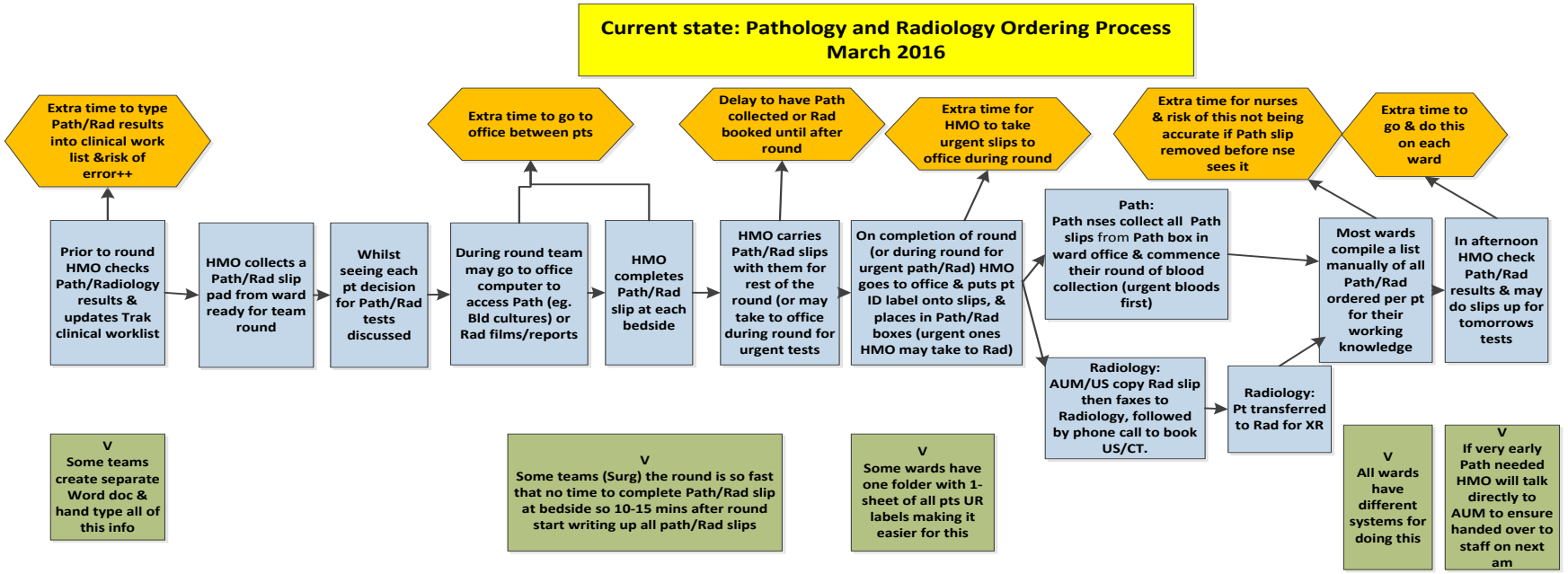
- **Earlier ED work – wait time for triage**
- Data from patient feedback indicated an issue
- Data collected on timing which showed wide variation felt by staff to not represent reality as only rare occurrences
- A spaghetti diagram of triage nurse movements helped bring on a light bulb moment to acknowledge & improve the processes
- < 5 mins wait time to triage

- Spaghetti Diagram



Process Mapping – can illuminate complexity & waste

- We are moving toward an electronic health record and felt a process map of current manual pathology & radiology ordering would assist in plans to go forward **and** provide some useful data for evaluation



List of Current Issues:

- **HMOs typing Path and Radiology results into clinical work list = risk of error**
- **Interruptions to team rounds to go to office to access & review Path/ Rad = time waste**
- **Delays to Path collection and Rad orders going in as HMO often has all slips until round completed = delayed Path/Rad tests commenced**
- **Manual & variable way list of Path/Rad ordered kept by nurses in ward = time waste + risk of errors**
- **Risk of forgetting some Path/Rad to be ordered when slips written after round completed = risk of error**
- **Ring Path between 1/ day to 1/week to chase results = time waste**

Process Mapping can help get staff on board & improvements going

Periop Ortho work

Periop Non-Catalogue Items Orders

Order = 7 or 8 touch points (either way order done)

- Nse checks red books during clinic time
- Nse staff check other non catalogue stock
- Nse staff write request into exercise book in US office
- US checks labels & exercise book daily & writes order into Order Book
- US takes Order Book for signing (Tony, Ricky, Chris)
- Signed order faxed to company
- US enters Order Book data into Lotus database
- During op Nse puts pt UR label in red book (x1 in each theatre)
- During op Nse takes labels from stock used & puts in red book
- Nse then takes extra copy of all labels to US
- Nse (ortho) writes all order in book to record all ortho orders

Issues:
- x 10 nses involved across all specialities
- Time for nses to check speciality stock/equip adhoc
- Multiple manual books & orders with repeated writing out of complex orders
- No prices on orders
- Lotus database is stand alone so no link to finance electronic record of invoice
- Supply do not have record of order
- Audit: ~30% items currently ordered via manual system could be processed via Oracle system (not orders directly related to pts), which would reduce the manual checks, would come through the Supply system & streamline invoicing

Delivery = 7 or 8 touch points

- Goods arrive Supply
- Supply check delivery slip
- Supply deliver to Perop
- CSSD tells US arrived
- US checks against picking slip
- US delivers stock to theatre passage or Ortho room
- Nse puts stock away
- Nse (Ortho) checks & updates her book

Issues:
- No record of order in Supply so they take an educated guess where to deliver Periop (stock labelled OT has gone to Occup Therapy, CDown theatre)
- different staff managing catalogue & non catalogue
- stock can sit for days in theatre passage waiting for specialist clinic nse to put away (most Periop staff part-time)
- sometimes stock put away by other nse & one who ordered it out asking US if it has arrived

Order & Deliv

Invoice/ Payment = 19 - 21 touch points

- Invoice with stock
- US inputs invoice details into Lotus database
- US batches invoices & does weekly/fortnightly check against Lotus database info
- If invoice complete, paper invoice US stamped, initial, date
- Batch goes for sign off & codes added (cost centre, subjective) by Tony, Ricky or Chris
- US takes signed batch to Finance (fortnightly)
- Fin sort into supplier
- Scanner label attached to each
- Invoice scanned
- Invoice code info keyed into Oracle
- Report of list of batch (batch header)
- List & invoices sent to staff on Switch
- Switch check invoices off against list
- Sent back to Finance
- Finance validate each batch on system
- Payment run on Friday
- Finance do monthly check accounts payable by company
- Finance access Oracle & open each listed invoice & check
- Finance accrue outstanding cost journal
- Invoice sent to Finance
- Invoice sent to US Periop

Issues:
- numerous manual steps
- motion++ for batches invoices going from dept to dept
- No itemised reports available via Powerbudget for all non-catalogue orders done via this manual system (not IPROC) – they are all group as other
- An audit of 3 months: 260 orders placed for total of 272 items (54% items Ortho). ~30% not direct pt related so could have been via IPROC/Oracle
- Note invoices in IPROC more efficient as the invoice info is in the Oracle system & if the company is set up electronically, there is no paper processing

Invoice

Monthly Activity to Finalise Private Patient Billing /Rebate Claims & Prosthesis Reporting = 7 – 8 touch points if private or prosthesis = 14 if both

- Periop US checks red books in x 3 theatres
- US writes down list of major prosthesis (date, pt name, surgeon, prosthesis type) from red book
- US does search of Lotus database for list of prosthesis
- US copies data from Lotus into an Excel sheet
- US copies & keys in data from this Excel sheet into Prosthesis Report Excel database
- US emails Prosthesis Report Excel database to Finance
- Finance Prosthesis Report Excel database with YTD data
- Finance distributes Prosthesis Report to DMS, DON, Periop, Finance
- US lists private pts
- US looks up all private pts on Trak pt system & checks admission (private or public)
- US prepares Excel spreadsheet of private pts prosthesis used monthly
- US emails Excel file to Finance
- Finance paste each item into Vlook up table to obtain correct rebate code
- Finance manually raise each private invoice into Oracle for billing health funds

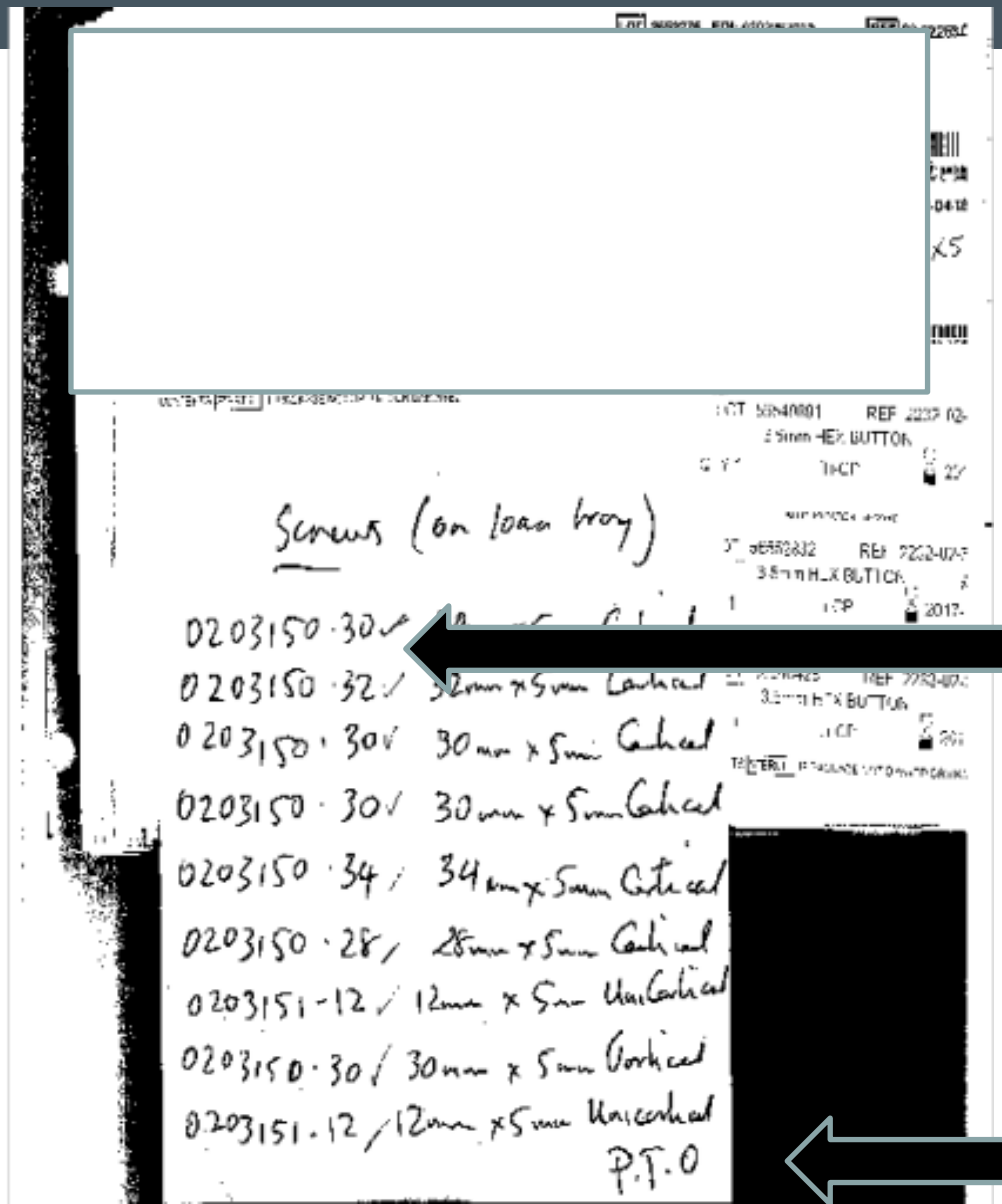
Issues:
- numerous manual steps
- Duplication of data into different stand alone datasbases/spreadsheets

Rebates

TOTAL Touch Points for Non-Catalogue Order
= 33 minimum
= 51 maximum (prosthesis + private)
= ~ 27 hrs per week (0.7 EFT)

Surely we can reduce this & release staff across multiple areas for other duties

Photos can provide good data



Multiple 9 digit numbers for screws in Ortho surgery transcribed manually for ordering

Note the PTO

From this - acceptance we had an issue and changes were made

- Addition of majority of the non catalogue orders into Oracle our electronic Supply ordering system – reduce manual orders
- This reduced losing orders and also the duplication in invoicing system
- More visual layout to identify non catalogue stock

Measure	Baseline	Post Intervention
Number of touch points in order process	51	31
% Non stock orders done manually (~1200/yr)	100%	16%
No. hrs Unit Secretary spent on non catalogue orders /week	9 hrs	4 hrs
No. hrs Periop Manager spent on non catalogue orders / week	16 hrs	5 hrs

- Halved the number of clinical incidents
- Remaining ones related to clinical staff responsibilities in checking non catalogue stock levels
- This data then used for a successful business case to appoint a part time stock & inventory person to reduce the reliance on clinical staff

Some of the Lessons Learnt

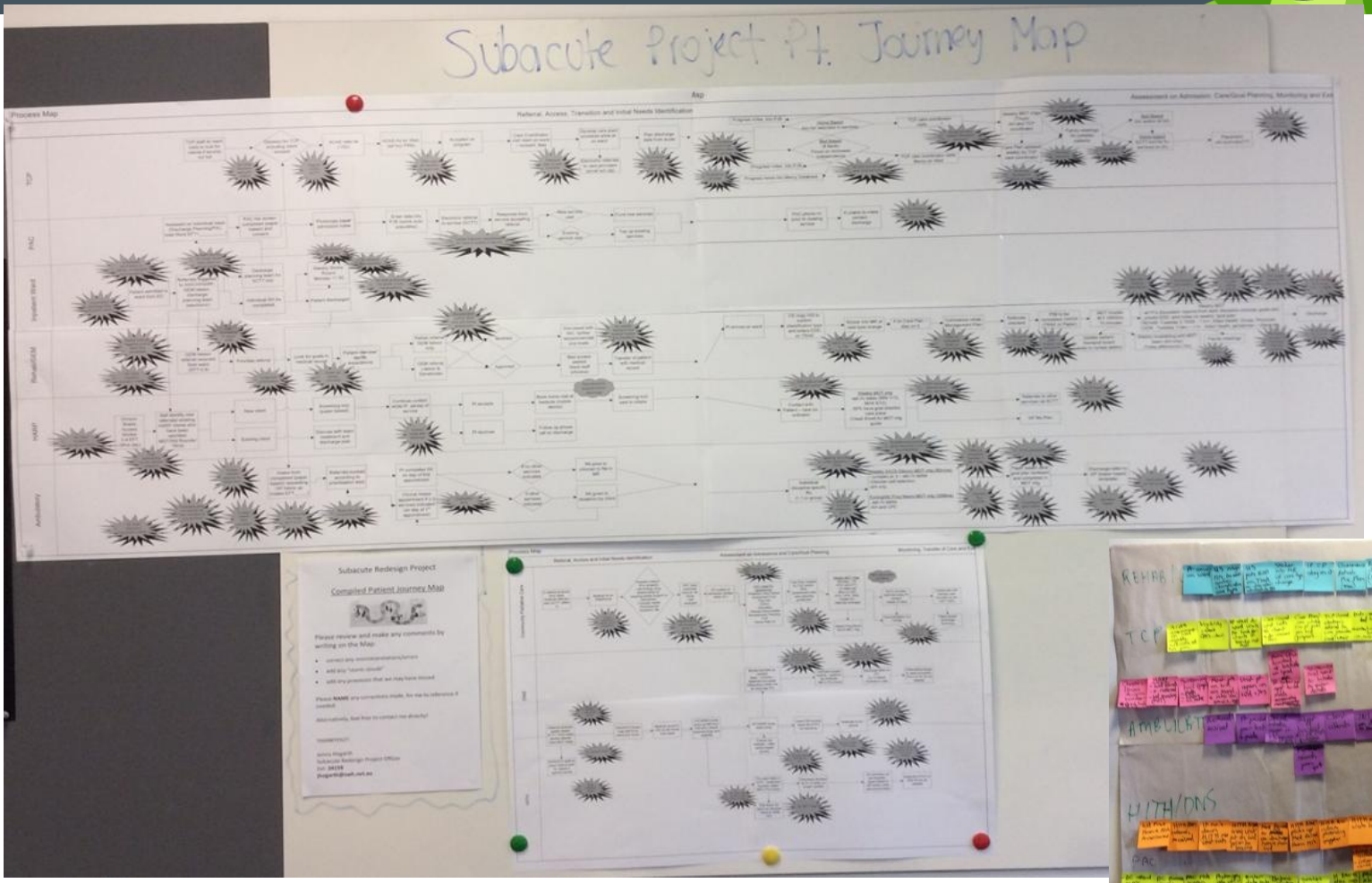
- Data becomes valuable when it informs us of **something useful** that **matters,** until then it is noise (Few 2015)

- Keep it real to the people at the coalface - put some thought into what data and how to present it
  - Overview gives context
  - Zoom & filter to make sense of it
  - Think of best way to present it to engage staff

How ‘data’ was used to drive our Subacute Redesign

- What are we trying to find out?
- What are we trying to achieve?
- Who is our target audience?
- How best will the target audience be engaged?
- Data accessibility
- Any system/process barriers that need to be considered?

Ownership from the beginning



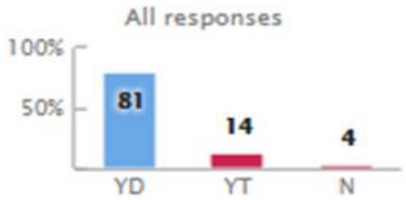
Maximum visibility: creating the conversation

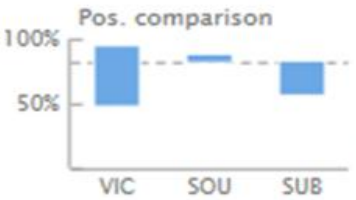
All of the patient assessment documents used by the MDT team across the staff cafeteria wall!!

Power of the consumer voice

VHES

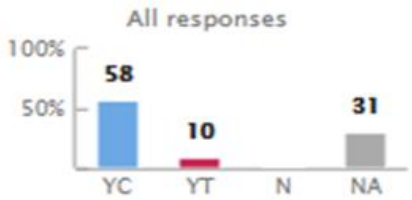
63. Were you given enough notice about when you were going to be discharged?

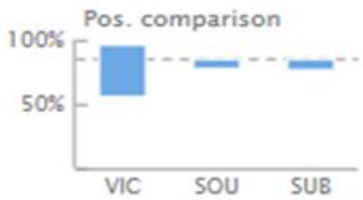




Dec 2015 81.4% (n=69)
Sept 2015 78.1% (n=119)
Dec 2014 66.8% (n=105)
State 65.8% (n=6309)
Health Reg./Serv. 81.8% (n=116)
Peer Group 74.3% (n=931)

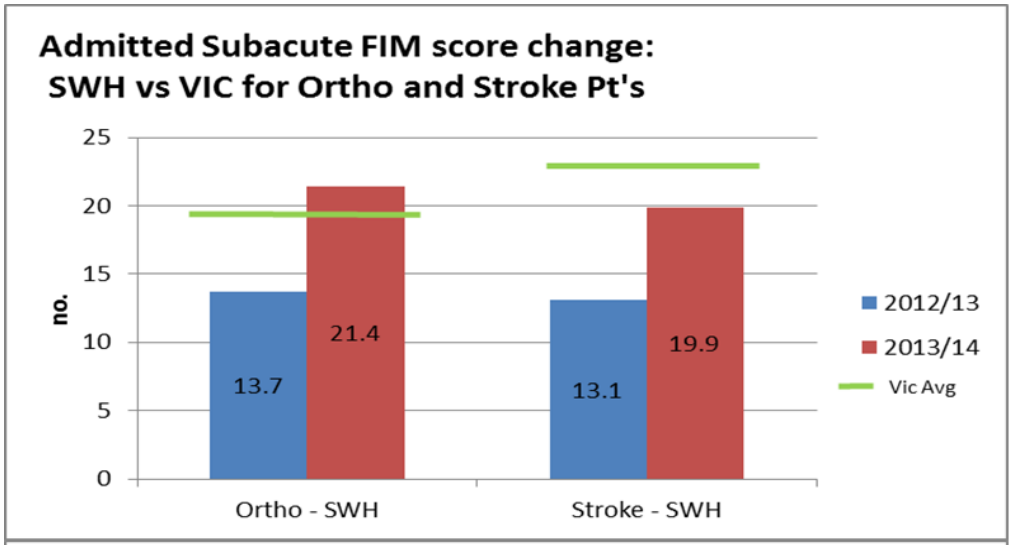
70. Did hospital staff take your family or home situation into account when planning your discharge?

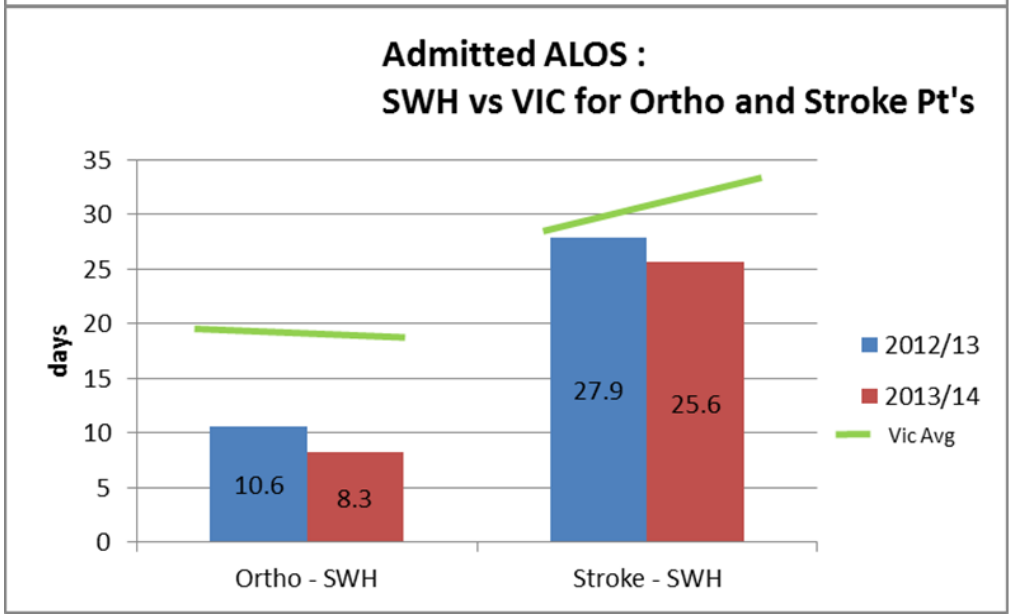




Dec 2015 84.9% (n=68)
Sept 2015 82.4% (n=119)
Dec 2014 78.3% (n=105)
State 72.2% (n=6267)
Health Reg./Serv. 84.4% (n=114)
Peer Group 80.3% (n=923)

Giving meaning to numbers





Improved patient outcomes in a **shorter stay**!

Pictures vs numbers

BEFORE

11 outstanding

NOW

3 outstanding

Bringing it all together

Possible Services
Acute inpatient
Inpatient Rehabilitation
Inpatient GEM
Inpatient Palliative Care
SACS (centre based and home based)
Outpatient Allied Health
HARP
DNS
HITH
HACC
PAC
TCP
Community Palliative Care
External services

Subacute Redesign Project– patient journey – Diagnostics / Solution design / Intervention stage

Process

Access and Initial contact → Initial Needs Identification → Assessment → Care Planning and Implementation → Monitoring and Review → Transition and Exit

Working Groups

Transition, Referral, Access, and Initial Needs Identification

Assessment on Admission, Care/Goal Planning and Monitoring

State issues

- Multiple and confusing access processes and referral pathways
- Intake processes historical, siloed push systems
- Variety of referral methods –↓ information = difficulty with prioritisation
- Inconsistent timing of referrals – prior to AH input
- Late timing and lack of co-ordinated referrals to NA services
- Inconsistent content, detail and methods for handover/transfer of care from admitted to non admitted services
- Nil multidisciplinary decision making as to rehab suitability
- Current system relies heavily on individual clinicians
- Acute wards streaming majority of patients to admitted subacute
- Inconsistent eligibility criteria and assessment for various service streams
- Lack of involvement of Pt/family in subacute decision making
- Multiple and duplicate assessment processes and tools for entry into each service
- Appointments not always made before discharge

- Multiple and duplicate assessment processes and tools
- Lack of effective processes for timely, multidisciplinary FIM calculation
- Care plans/ goal setting not a continuous process between service streams
- Setting of Discharge Dates
- Lack of patient driven goal setting and consultation- no Key Liaison
- ACAS only assess on Wednesdays
- Inconsistent MDT mtg processes across service streams
- Multiple systems utilised for documentation/communication
- Current services and care pathways ill prepared for full impact of ABF and consolidation of HIP funding streams
- Inconsistent discharge, follow up and re-entry processes
- Multiple systems utilised for documentation/communication – some unable to be viewed by other SWH services

Patient Experience

Directed by Clinicians into services

Assessment by multiple clinicians - duplication

- Confusing signage – akward finding way around hospital
- "Where am I going?"
- "Nurses are fantastic"
- "Decision made for me"
- "A lot of new information – nothing written"
- "Didn't have all appointments booked before going home"
- "Do I have to leave on that date?"
- "They answered all of my questions with care and thought"
- "unsure as to plan"
- "Confused, worried"
- "What do I do if I have any problems at home?"
- "overwhelmed with information"

FOCUS AREAS/ INTERVENTIONS

- Promote value of IDT approach – enhance governance – "rules of participation"
- Central team processing referrals
- Referral triggers/criteria and key data set
- Expand "complex client round" to all wards – develop clear criteria (eg. unclear plan, increased LOS, complex care needs)
- Increase understanding of roles and promote awareness of the service capacity – inclusion and exclusion criteria
- Access teams "huddle" across services (Comm. Health, DNS, PCU, TCP)
- Student interdisciplinary practice – case based learning, include med staff, nursing and AH
- Use team mtgs/ huddles for d/c planning and coordinated referrals – Key Contact Person (1 client = 1 referral)
- TRAK referral from ED to ambulatory (one system referral)
- Better use and update of D/C checklist
- Education on "how to refer" (minimum requirements- for new and experienced staff)
- Minimum standards for information/format of handover
- Rename "Discharge Planning Team" to "Community Transition Service"

- LIVE ELECTRONIC Assessment document that can be updated, have drop down boxes for more detail, best practice, actions required are clear and education provided
- Standard Guidelines/minimum standards for effective and efficient IDT mtgs and huddles- Template for IDT mtg discussions
- Key Contact Person
- Generic area to record broad assessment – medical history/social/surgical etc.
- Interdisciplinary Assessment (joint) where appropriate
- Links in TRAK to other systems such as MH, PERM etc. (in progress for PERM now)
- Rebranding of Multidisciplinary to Interdisciplinary Team – IDT
- Guidelines for arranging adhoc client MDT case mtgs

DATA/ KPI's

- Rehab/GEM Ax non acceptance outcome - 35%
- Days from Rehab/GEM acceptance to ward transfer – 0.28
- GEM/REHAB e-referral response rates (hours) – avg 19.5

Admitted rehab/GEM outcomes - FIMS

FIM score change: Ortho base=13.7, expected=19
FIM score change: stroke base=13.1, expected=23

% of co-ordinated referrals to appropriate community based services =8.3%

- Stroke Pt's d/c from acute to TCP base=0%, expected=2.1%
- Stroke Pt's d/c home from acute base=26%, expected=45%
- Stroke pt's d/c from acute to admitted subacute base=45.7%, expected=24.2%

- Admitted Subacute LOS for Z60A (rehab with CC) base=13.7, expected=13.3
- Discharge date on/prior to second set EDD from admitted subacute ward base=57%, expected=70%

- Formalised standard principles and criteria across all SWH subacute service MDT mtgs. and associated care plans base=0%, expected 50%
- Standard principles and processes across all SWH subacute services for Key Liaison Person base=0%, expected 50%

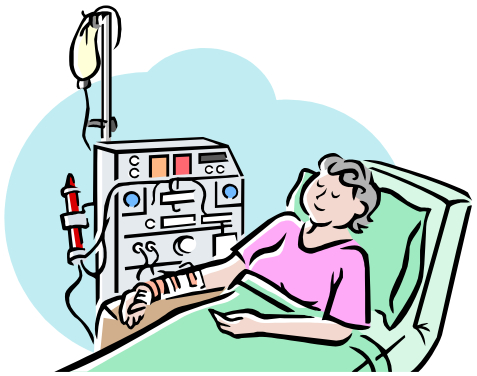
- SACS admissions from inpatient acute base=20%, expected=39%
- SACS admissions from inpatient subacute base=3.5%, expected=7.4%
- SACS mean time in days from referral to first face-to-face contact base=27, expected 19

- Excellent –good staff knowledge of different programs available under each service base 59.9%, expected= 75%
- Excellent –good staff understanding of referral processes (who, where, how, what, when etc.) base=58%, expected 75%

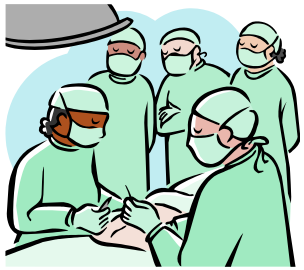
Check Measures (Health round Table 2012-13)	Base
ALOS in Acute for Stroke	4.9
ALOS in Acute for Hip and Femur Proc.	7.7
Emergency Readmission Rate for Stroke	1.10%
Emergency Readmission Rate for Hip and Femur Proc.	0%

Tell a story

Example – Patient with a Hip Fracture



→ Short Stay →



→ Short Stay → Acute → Rehab

← Medical: NWB 6/52

← REHAB

Deconditioned +++++

← Home with Supports

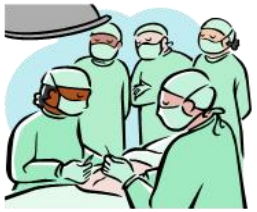
WHY?

x 8 Ward transfers before home!

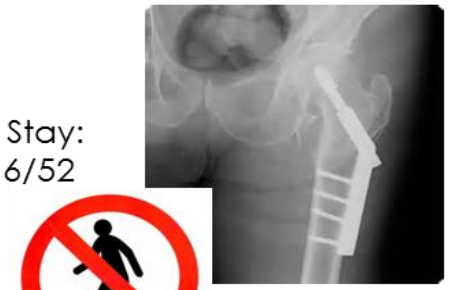
Now

Example – New pathway for this patient with a Hip Fracture

ED – Short Stay



Short Stay:
NWB 6/52



MDT – with Ward Focussed Subacute Access worker work out plan

TCP

bed based

6/52 – PT and OT for maintenance…

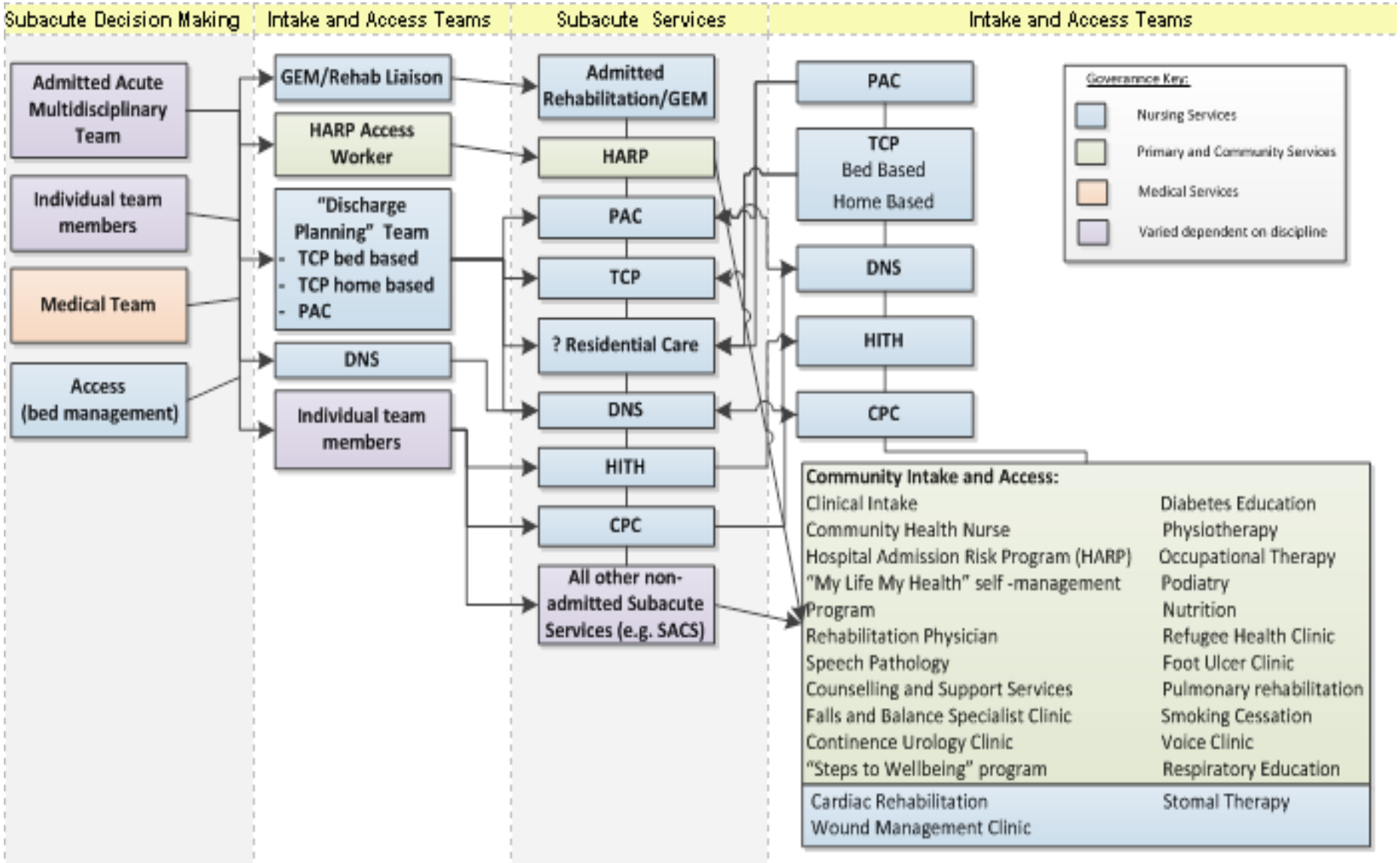
REHAB

Home with Supports

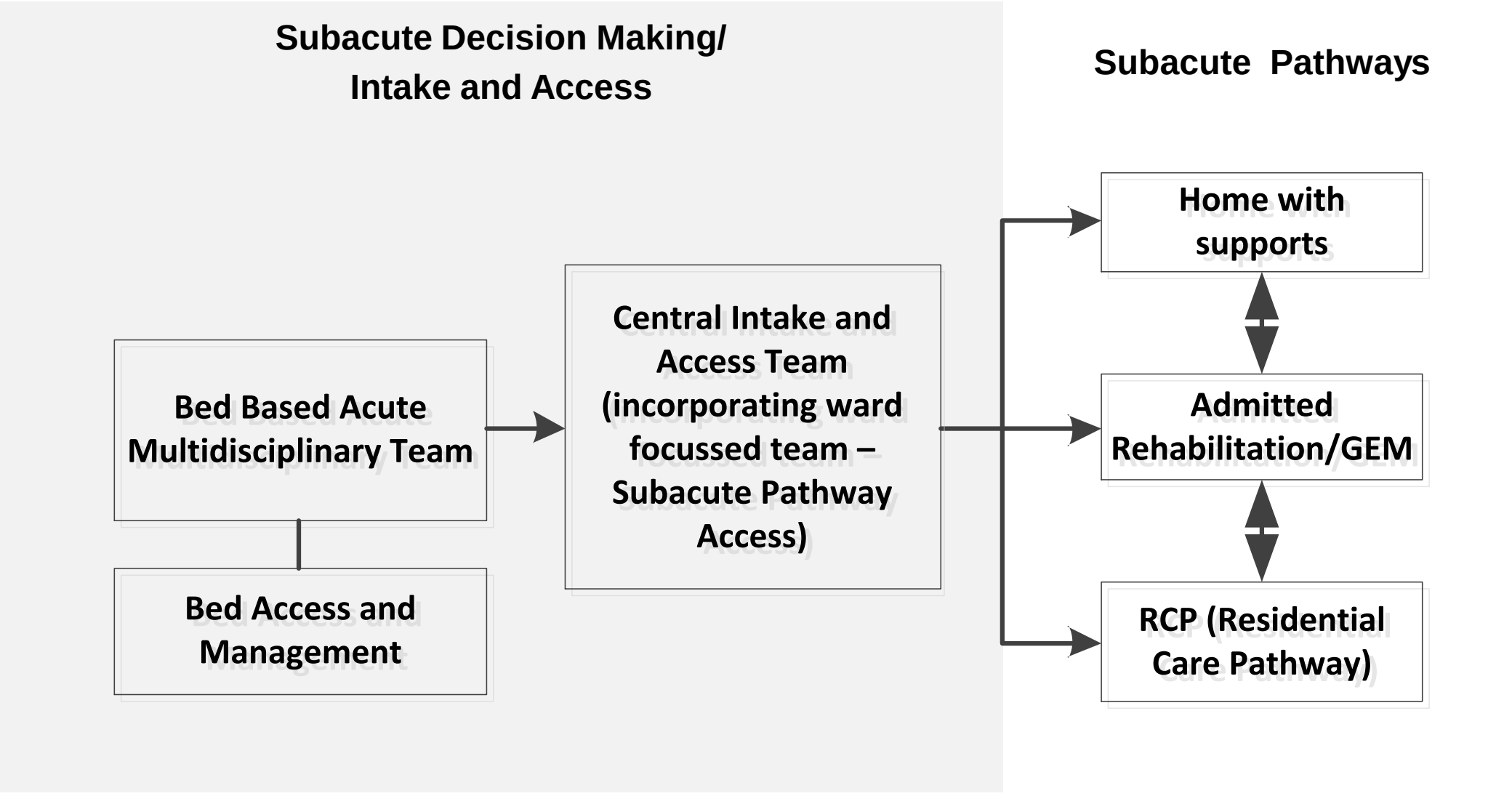
HOW?

x 5 Ward transfers & no de- conditioning

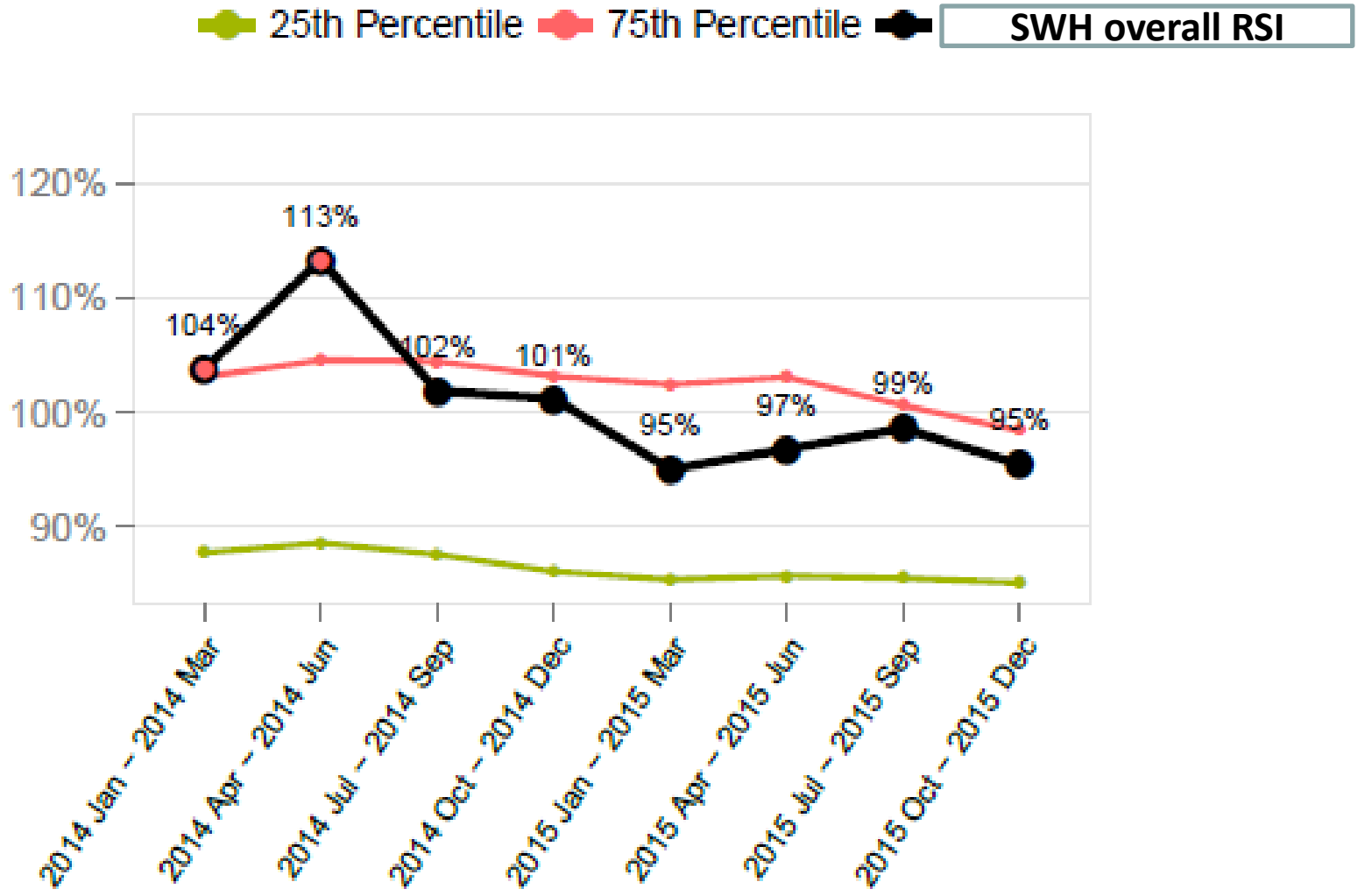
‘Non-acceptance’ of the current state – organisational realignment



‘Excitement’ for future state



Has it made a difference?



Learn from others
and be creative!

South West
Healthcare