

Welcome to the Discharge to Assess Best Practice Event

Hosted by NHS England

&

South Warwickshire NHS Foundation Trust

Welcome, Housekeeping & Plan of the Day

Jayne Rooke

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Programme Manager

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South Warwickshire NHS Foundation Trust



Overview of Homefirst Discharging to Assess

Jane Ives – Director of Operations
South Warwickshire NHS Foundation Trust

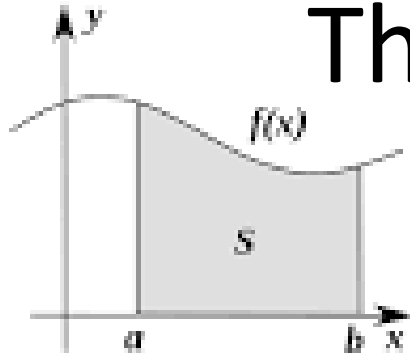


SUCKING EGGS

WHAT YOUR WARTIME GRANNY
COULD TEACH YOU ABOUT
DIET, THRIFT AND GOING GREEN



The Opportunity Calculus



TCS - system integration

+

Health Foundation – Flow programme tools and a different way to engage clinicians

+

Commissioner and provider shared risk financial model

+

Local authority leadership changes

=

Ability to work as a whole system



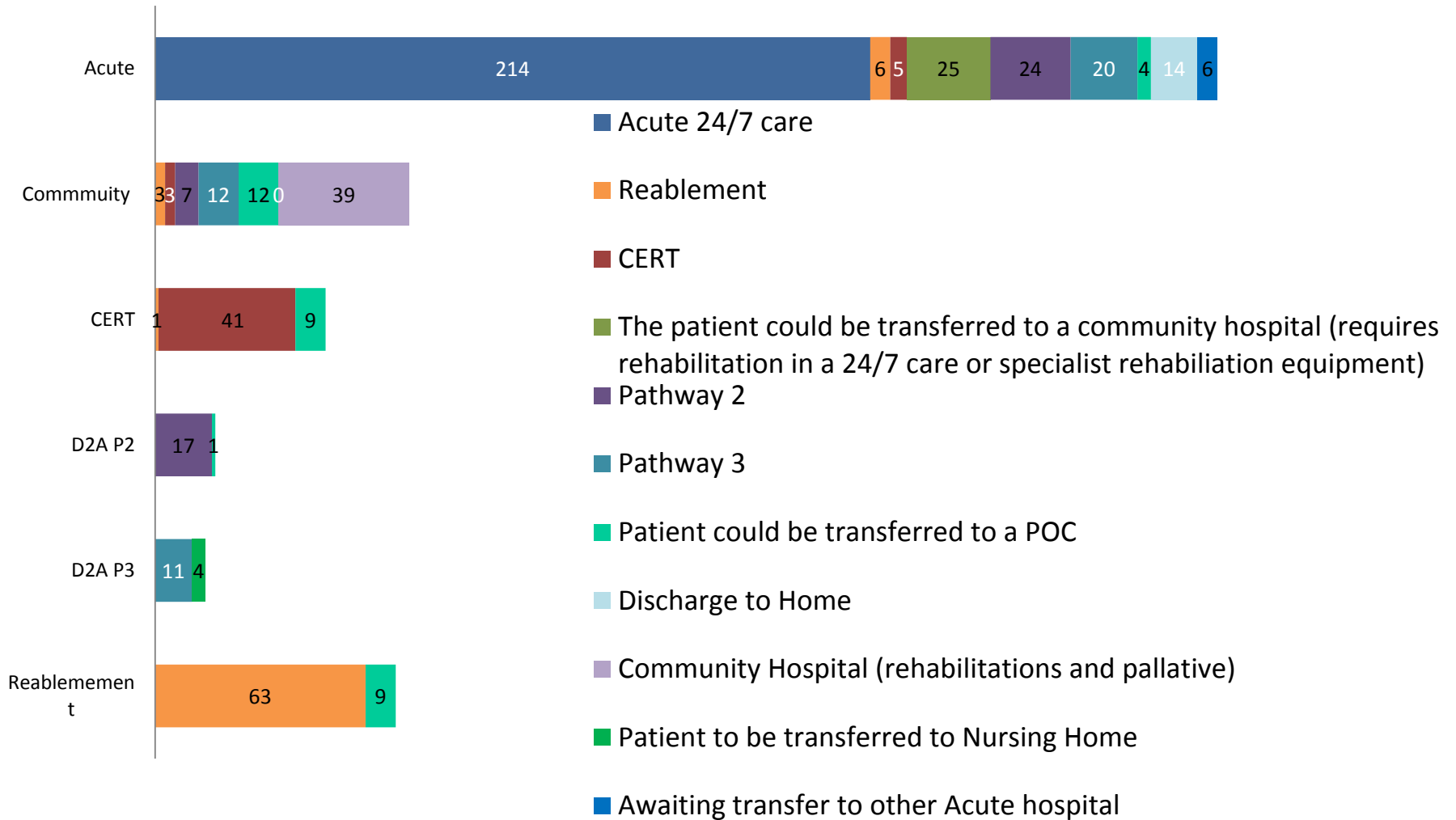
What is D2A and Why do it!

- 3 Step Guide - The Warwickshire model - where we are now, how did we get here and shortcuts you can take!
- Value for money – making the case to commissioners and providers
- Tips on getting started – managing shared risk
- Tips on getting the model to work effectively
- Evaluation – what is the impact

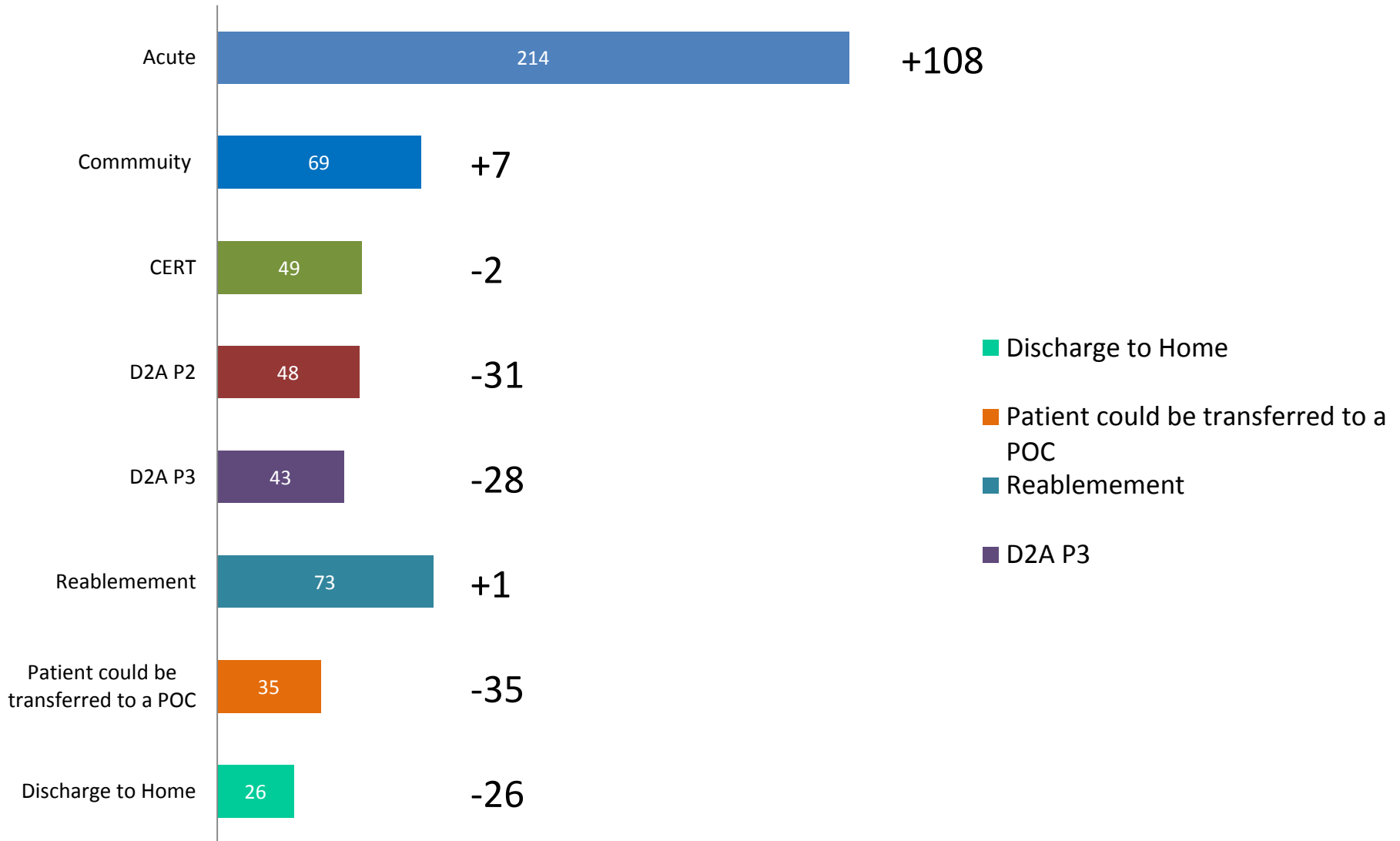


Whole System Audit 2015

Whole System Point Prevalence Audit January 29th



Breakdown of patient needs 2015



Point prevalence audit

Cost of provision (not price)

Care Provision	AVERAGE Weekly Cost
Acute Hospital	£2,345
Community Hospital	£1,750
D2A P3	£1,000
D2A P2	£750
CERT	£900
Reablement	£400
Home Package of Care	£150

Weekly cost to the system of the wrong shape in 2015 was £221,030 per week or £11.5m per year.

Service	2015 Weekly Cost	2015 Right Shape Cost
Acute Hospital	£745,710	£501,830
Community hospital	£152,250	£120,750
D2A P3	£15,000	£43,000
D2A P2	£13,500	£36,000
CERT	£45,900	£44,100
Reablement	£28,800	£29,200
Extra cost to POC	£0	£5,250
Total	£1,001,160	£780,130

Key message

Concentrate on system cost not provider vs commissioner or health vs social care cost



Patient no longer has care needs – that can only be met in an acute hospital



Pathway 1

Pathway 2

Pathway 3

Patients needs can be safely met at home

Unable to return home - Patient requires further rehabilitation/reablement

Unable to return home - Patient has very complex care needs and may need continuing care

Reablement service
Up to 6 weeks

CERT (IMC)
Up to 6 weeks

Community hospital
Up to 4 weeks

Temporary Residential Home
Up to 4 weeks

Nursing Home
Up to 6 weeks

EXPLICIT CHANGE OF FUNDING

Self Fund/
Self Care

LA funded
home care

Pathway 1

Self Fund/
Self Care at
Home

CHC
Funded
care

LA Funded
care

Self Fund
Residential
care

LA funded
Residential
care

Self
Funded
care



Step 1 – Pathway 1 and Trusted Assessment – 2012/13

- Restarts of packages of care within 14 days by ward team
- Direct referral to Reablement from OT/DC without hospital social work team involvement
- eCAT – in-house technology solution for trusted assessment referrals
- Developing reablement and CERT capacity (early supported discharge and community admission avoidance service)



Step 2 - 2013-2016

An Integrated Health & Social Care Response: Our Shared Purpose

No decision about long term care needs in an acute setting. Minimise hospital stay and maximise independence, with care at home wherever possible

- Support timely discharge from hospital

- Maintain independence where possible

- Reduce the level of long term care packages

- Net neutral impact on Social Care spend

Commissioning the Pathway 3 Pilot

- Funded by SWCCG and SWFT – commissioned by WCC
- MoU between CCG, SWFT and WCC
 - Crucial in terms of managing risk, roles and responsibilities.
- WCC relationship with the nursing home market
 - Determined the beds that were commissioned
- Assessing the nursing home market:
 - Quality and readiness of providers to engage
 - versus
 - Not wishing to destabilise the market
 - Not wishing to stifle CHC flow
- Procuring the model of medical support (GP)
- Managing additional capacity in the system (for Social Care and Community investment...)



Key Success Factors in Maintaining D2A Flow – Top Tips

- Continuity of care co-ordination role acute – through to discharge
- Good written information for consent
- Weekly MDT – continuity of staff
- Quality of medical model

Patients eligible for D2A Pathways 2 & 3 = 445

Unsuccessful Referrals

124 patients

Length of Stay (acute) :

Pathway 2 =
45.9 days

Pathway 3 =
56.8 days

Discharge destination :

Home – 64
Nursing/Residential home – 27
RIP – 28
Other - 5

Post Discharge Care

LA funded care 42% - average £461/week
CHC Funded care 44% - average £977/week

LA Funded (4)
£321/week

CHC Funded (1)
£850

LA Funded (39)
£476/week

CHC Funded (41)
£980/week

Accepted Referrals

321 patients

Length of Stay :

Pathway 2 (85 patients)

Acute = 18.6 days
D2A bed = 29.1 days
Total = 47.7 days

Pathway 3 (236 patients)

Acute = 31.0 days
D2A bed = 38.3 days
Total = 69.3 days

Discharge destination:

Home – 83
Nursing/Residential home – 135
Readmitted - 36
RIP – 50
Other

**Cost of D2A
£1.66m**

**EXBD saving
£904k**

**SWFT provider saving
£231k**

LA Funded (6)
£262/week

**Est LA saving
£266k**

LA Funded (71)
£503/week

**Est CHC saving
£820k**

CHC Funded (6)
£843

CHC Funded (58)
£866/week



Key Commissioner Messages

- Extended LoS in pathway 3
 - therefore actual pathway costs higher – but cheaper than if the extended stay was in acute hospital.
- Halving of CHC funded care
 - (either at home or in residential setting)
- No shift to LA funded care (small reduction!)
- Assumed shift to self funding
- **SYSTEM SAVINGS !**

STEP 3 – Current Work in Progress

Defining Pathway 2

- Broad group of patient needs
- Intent is for discharge home
- Range of facilities
 - Residential Homes,
 - Community Hospitals
 - Therapy Led Discharge Transition Unit
 - Extra Care Housing....
- Getting the **capacity** and **flexibility** right is key
- Still not cracked NWB!!



Discharge Transitional Unit (DTU)









- DTU is a unique Therapy led unit
 - For those who need intensive therapy where this cannot be safely carried out at home.
- Therapy Ethos aiming for independent living
- All activities are delivered by therapists
 - Extended therapy roles
 - *“Ten Key Roles for AHP’s. DOH”*
 - Existing qualified non medical prescriber within respiratory Physiotherapy.
- Aim to discharge home / usual place of residence
- ‘Everyone’s business’: Shared team responsibility

A note about CHC process

- Do you have trusted assessment so your complex discharge co-ordinators undertake DST on behalf of CHC commissioning?
- Do you have a straight to DST pathway?
- Are CHC assessments undertaken in D2A capacity or in acute beds?









System flow and Quality Metrics 2011 – 2015/16

Indicator	Baseline 2011/12	2015/16	Change
A&E 4 hour performance	93.5%	96%	 2.5%
Acute Hospital length of Stay	7.7 days	5.4	 2 days
Over 75 Acute length of Stay	12.6	9.1	 3.5 days
Community Hospital length of stay	35 days	18 days	 17 days
Emergency readmissions	12%	11%	 1%
Excess bed days cost > 65 years (final column is 1 year Aug 13 – July 14)	£3.234m	£2.328	 £0.9m
Excess bed days % of emergency income	13%	9%	 4%
Patients requiring Nursing Home care funded through CHC (baseline is control group)	44%	24%	 -45%

SWFT, CCG and LA – all in financial balance

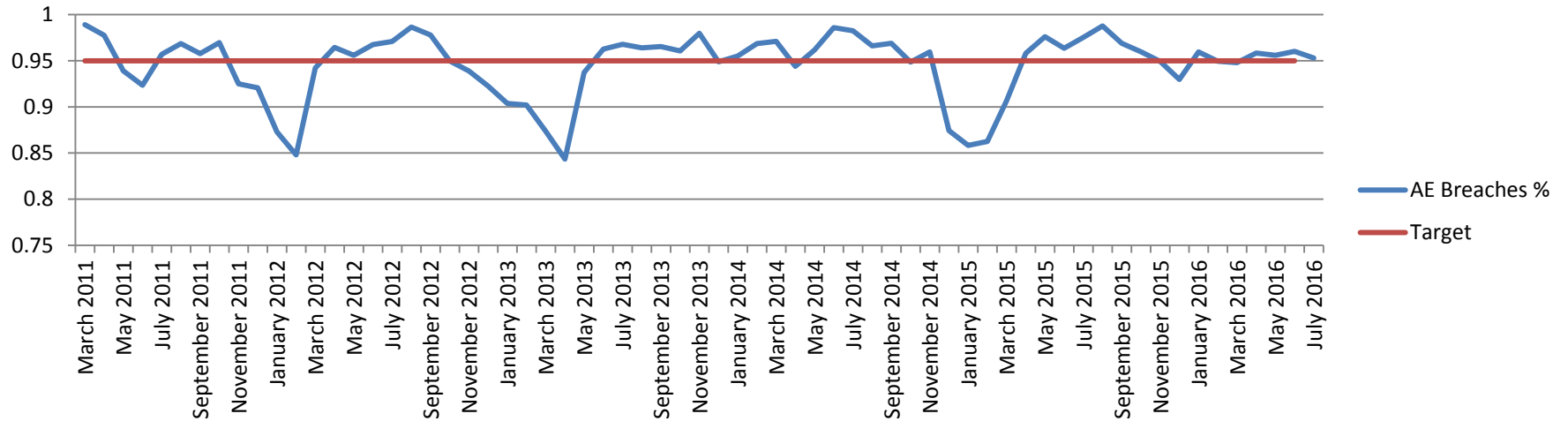


System Outcomes - Quality

Indicator	Baseline 2011/12	April 2015	Change
SHMI	1.11	1.02	 0.9
Emergency readmissions	12%	11%	 1%
Average medical outliers	12	4	 8 per day
Patient over 3 hospital ward moves	14%	2%	 12%
Patient falls in hospital per 1000 bed days	Acute 2 /Community 2.4	Combined 1.6	 0.8
Patient in their own home 91 days after discharge from intermediate care	85%	88%	 +3%

A&E 4 Hour Performance

A&E 4 Hour Performance



Any Questions?

Coffee Break

Homefirst Pathways – Integration and the Future

Tracey Sheridan

Denise Cross

Sharon King

Dawn Johnson

Amy Bastow

Sallie Green

Jane Mason

Michelle Greening

Setting up Pathway 3 D2A

Jane Ives

Caroline Cody

Cristina Ramos

Lunch Break

Capacity and Demand Model

Presented by

Phil Colledge / Tracey Sheridan

Objective of the session

- Background
- Challenge- Operational Capacity Plan June 16
- Six Step Process
- Plans

Background

- Restarts of packages of care within 10 days by discharge co-ordination team
- Direct referral to Reablement without hospital social work team involvement
- eCAT – in-house technology solution for trusted assessment referrals
- Developing reablement and CERT capacity (early supported discharge and community admission avoidance service)

Challenge- Operational Capacity Plan June 2016

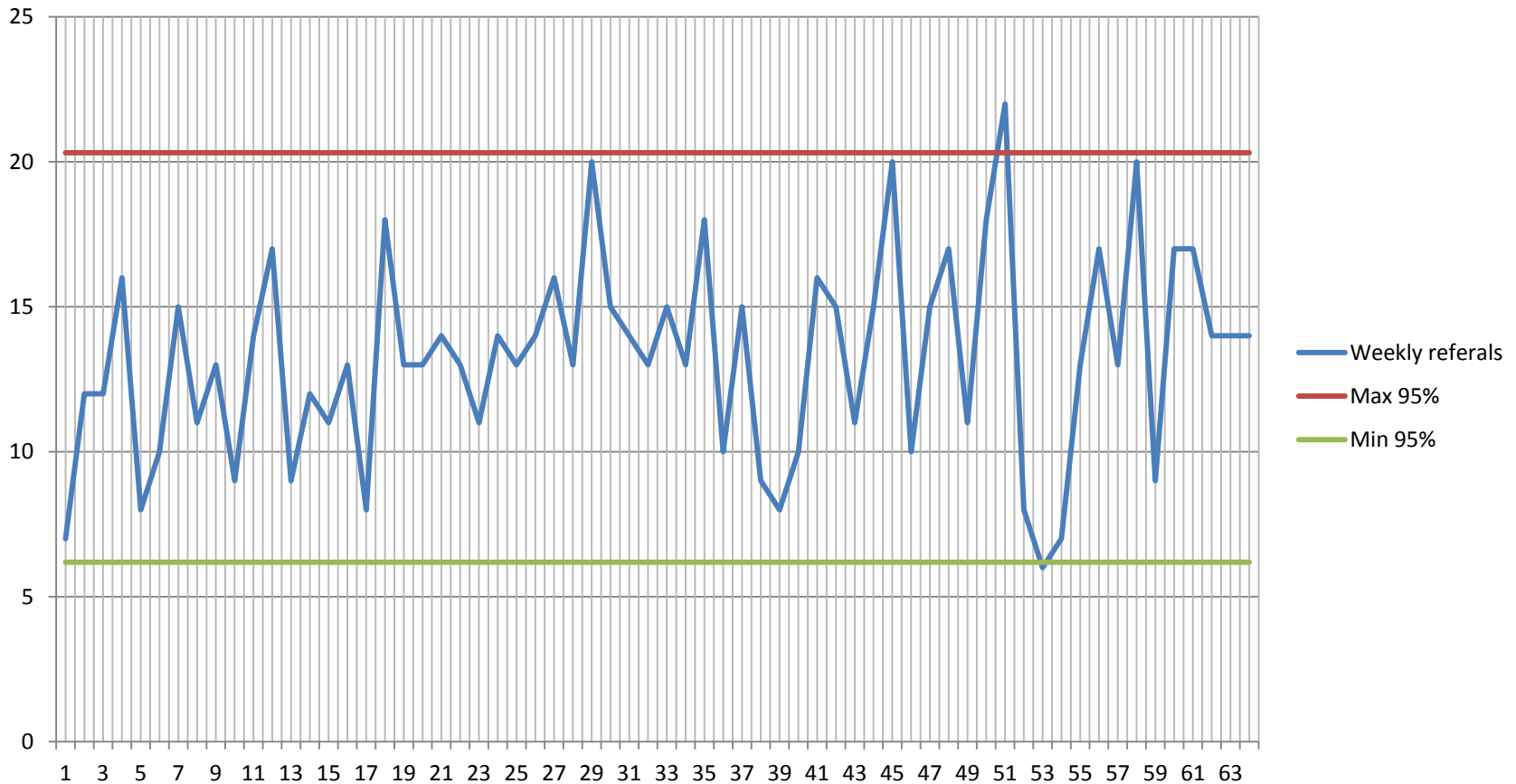
Increased capacity in community to

- Ensure all supported discharges are taken on the day
- Increase the level of admission prevention by having a genuine 2 hour response to primary care referral
- Hold more patients awaiting car package to reduce the number in Acute and community beds to zero

Six Step Process

- Step1 - Referral data Patterns
- Step 2 – Length of Stay (LOS) statistics
- Step 3 - DES model simulation
- Step 4 – Occupancy Vs. Activity modelling
- Step 5 – Activity Vs. Staff modelling
- Step 6 - Staff requirements and skill distribution

Referral Pattern and Demand (Step 1)



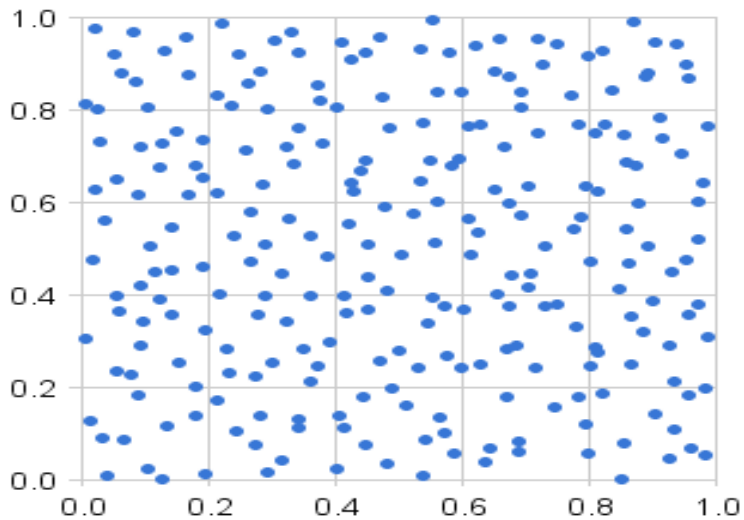
Referral Pattern and Demand (Step 1)

- Referral data has repeating patterns
- People see patterns every where (Apophenia)
- We can use statistics and mathematics to find historical patterns that match (really exist)
- We can use historical referral data to find potential matches with current patterns (Auto-correlation)
- Given we find matches , we can use what happened historically to predict what may happen now (Regression)
- We can determine a number of statistical properties from referral patterns that are useful for modelling (Used in Step 3)
- Given we have a “predicted referral pattern” we can use this in modelling (Used in Step 3)

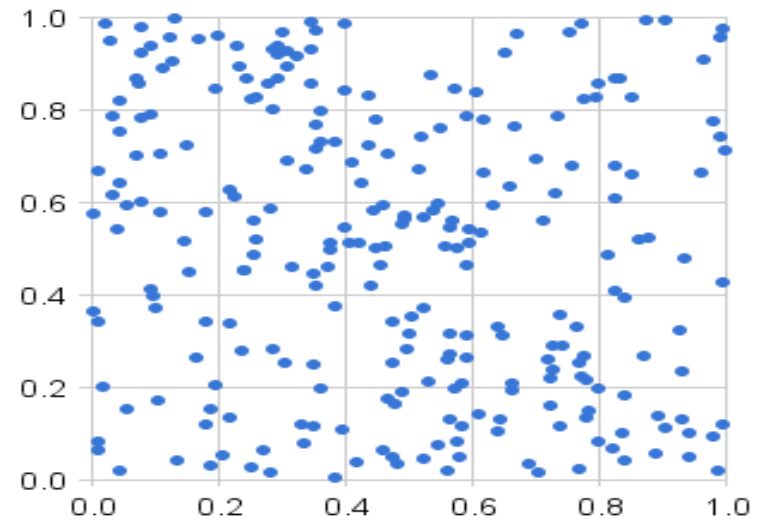
Referral Pattern and Demand (Step 1)

Apophenia - Can you see patterns in data set A or B ?

Data Set A



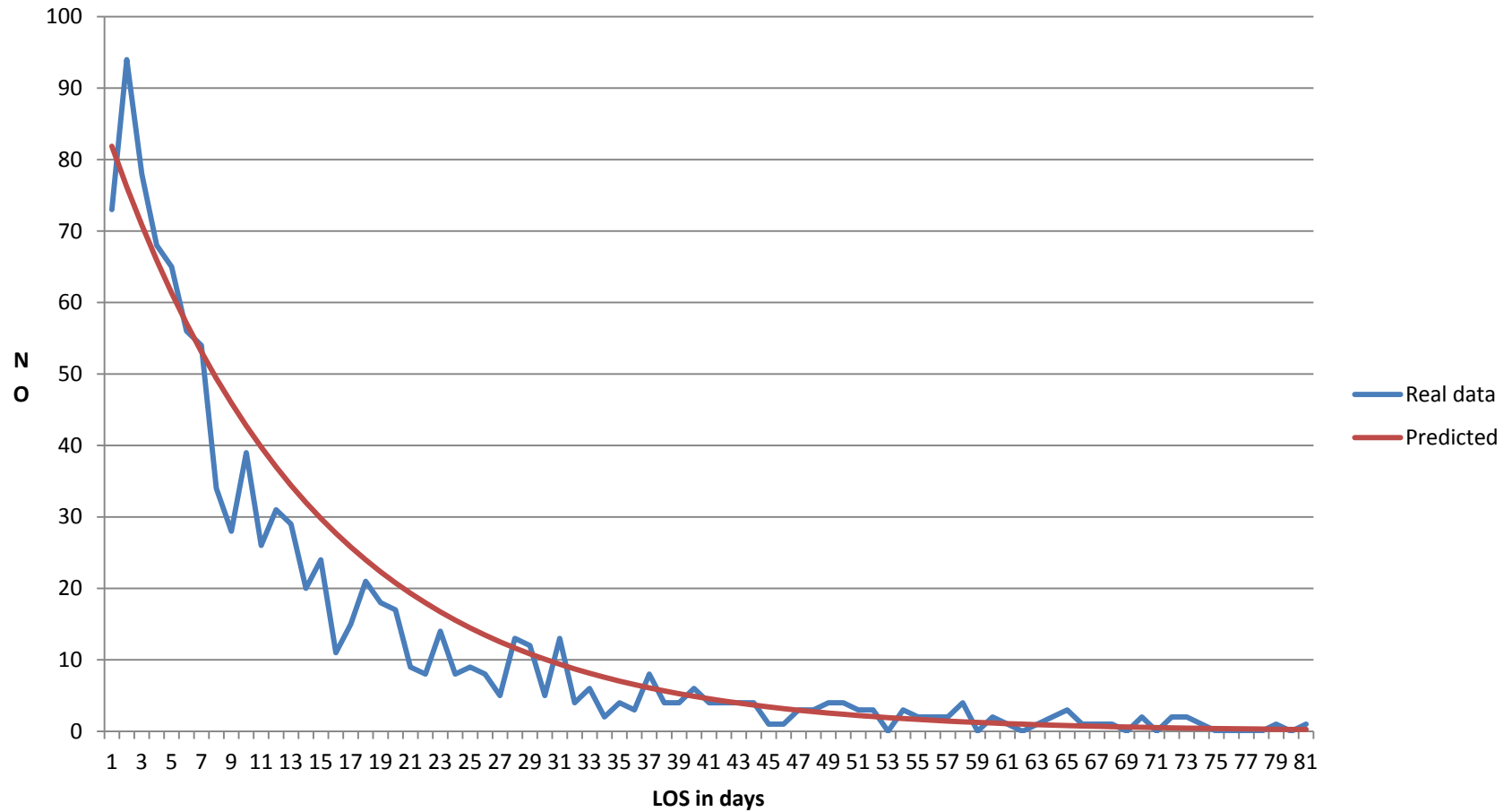
Data Set B



Length of Stay (LOS) (Step 2)

- Capacity has a significant dependency on Length of Stay (LOS)
- Determine LOS characteristics from historical data
- Using regression and stat-fit to determine LOS best fit equation (Normally Exponential decay)
- Use LOS statistical distribution to inform (Step 3 DES)

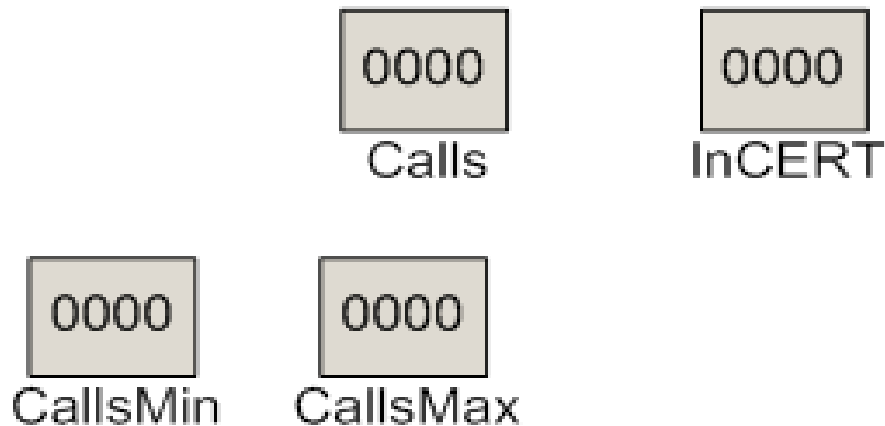
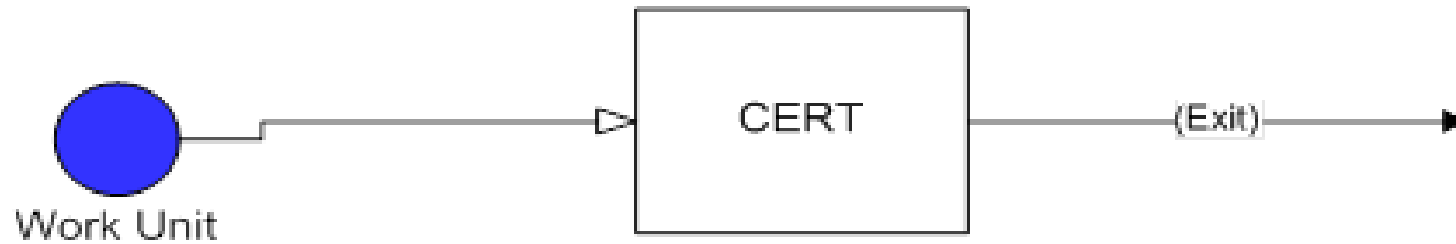
Length of Stay (LOS) (Step 2)



DES Model (Step 3)

- Use Referral pattern from (Step 1) and LOS from (Step 2)
- Produce simple Discrete Event simulation (DES) model to predict (Patient Occupancy inside the service)
- Simulate DES model for 52 weeks , and 52 replications to determine , the average occupancy , min occupancy and the max occupancy for the service
- Output of the model are estimates of occupancy of the service that will inform (Step 4)

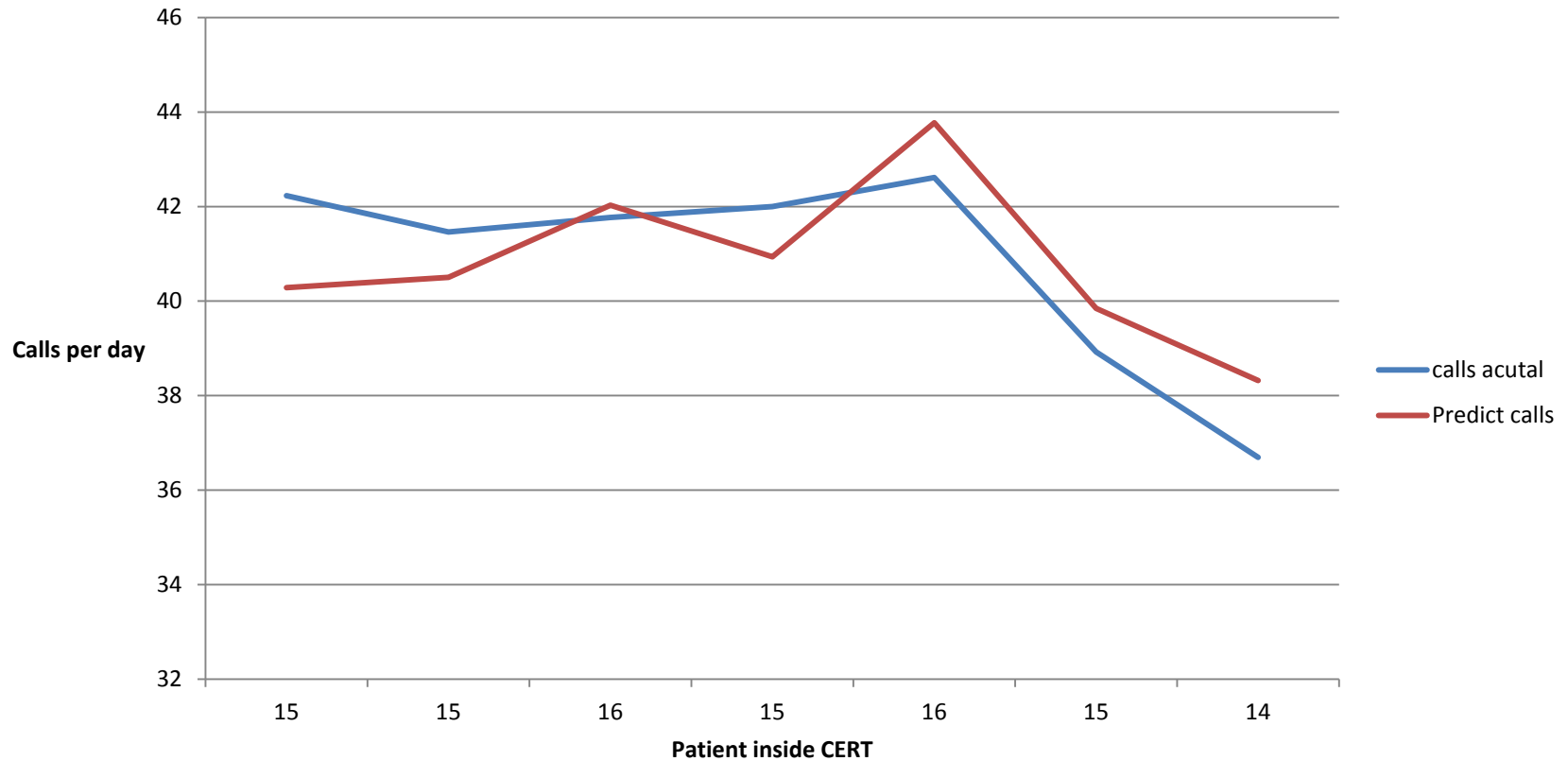
DES Model (Step 3)



Occupancy Vs. Activity (Step 4)

- Using historical data of occupancy and activity levels , using regression to determine the mathematical relationship between them with a high correlation
- Use the output from (Step 3) and its predicted occupancy , to predict the activity level using the mathematical relationship (Step4) , this will inform (Step 5)

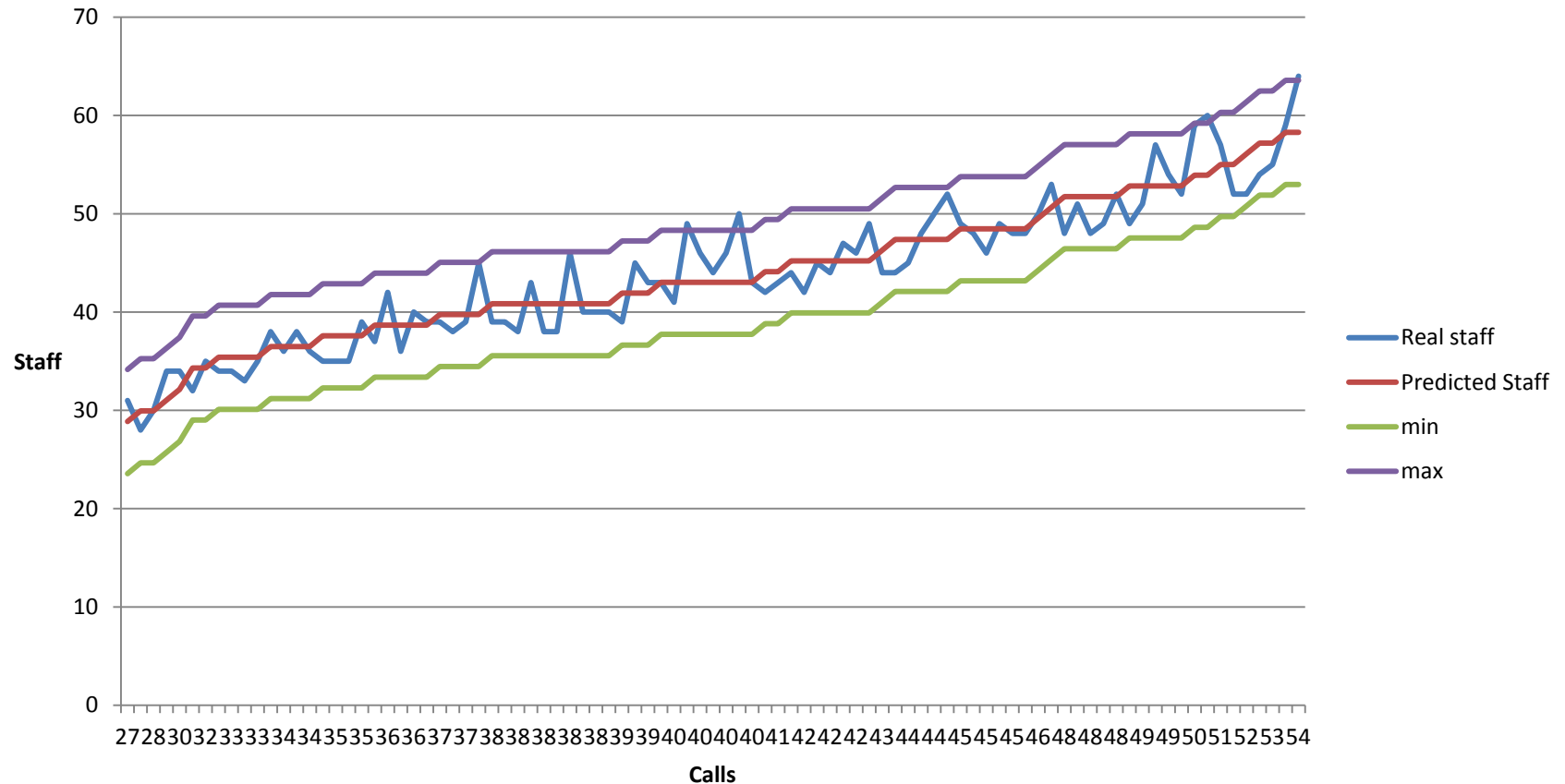
Occupancy Vs. Activity (Step 4)



Activity Vs. Staff (Step 5)

- Using historical data of staffing and activity levels , using regression to determine the mathematical relationship between them with a high correlation
- Use the output from (Step 4) of predicted activity , to predict the staffing level using the mathematical relationship (Step5) , this will inform (Step 6)

Activity Vs. Staff (Step 5)

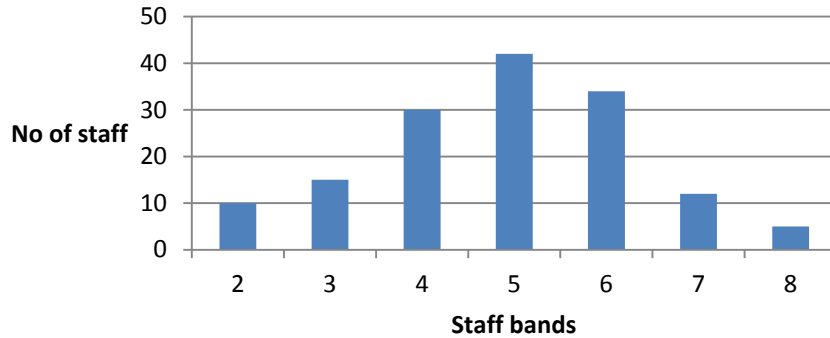


Staff Distribution (Step 6)

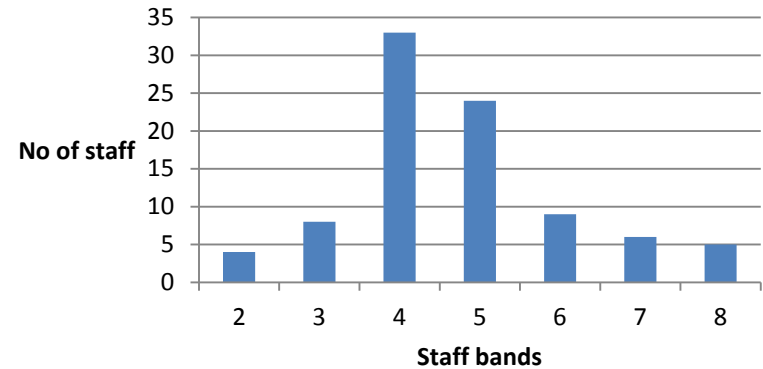
- Using predicted staffing levels from (Step 5)
- Apply staffing levels to staff grade distributions to determine estimate of staff grade numbers by grade
- Staff grade distribution is dependent on (Occupancy) of service and case mix of patients.

Staff Distribution (Step 6)

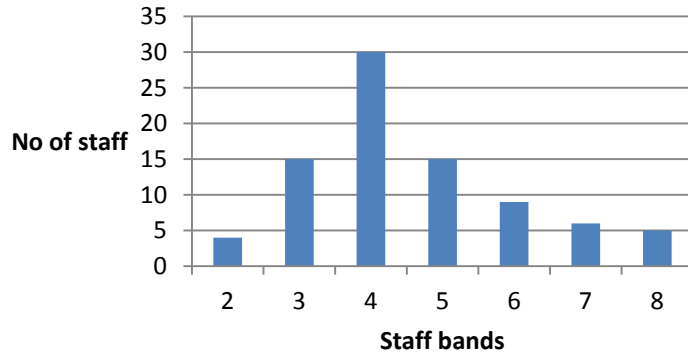
Staff Band distribution



Staff Band distribution



Staff Band distribution

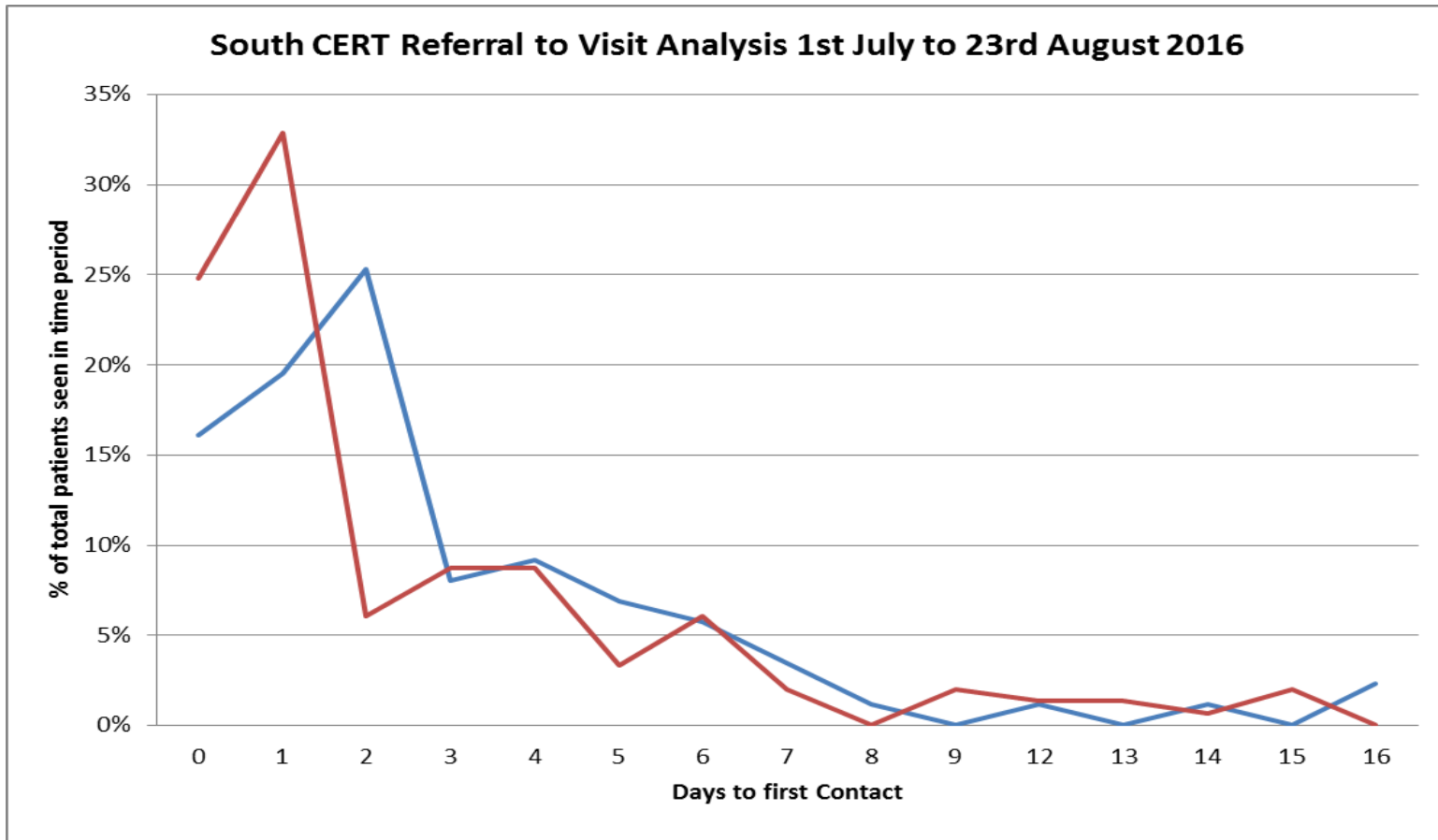


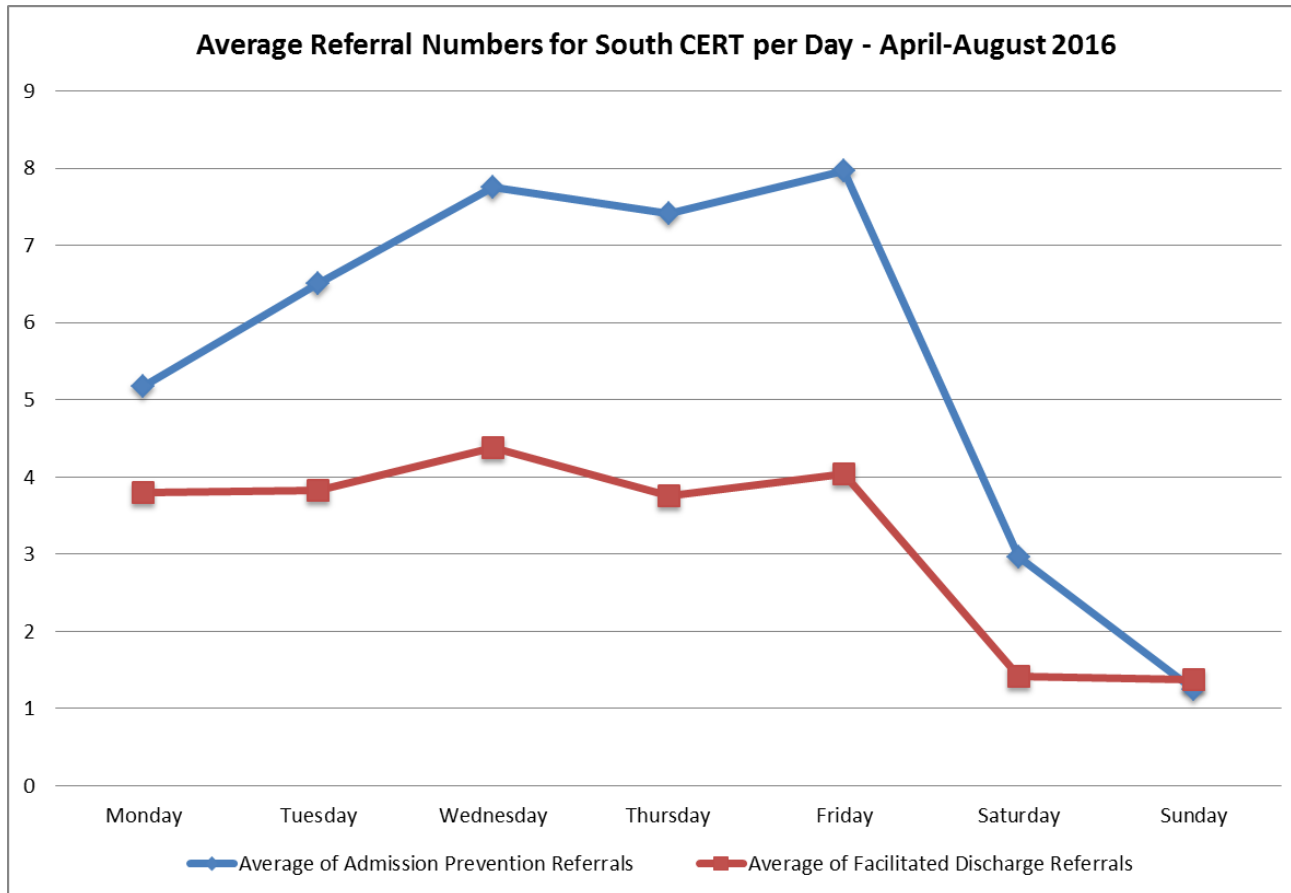
Any Questions?

Plans- Work in Progress

- 60% referrals to CERT in South are accepted within 2 hours
- To increase level of admission prevention work is required with referrers
- System in place to monitor impact of new investment for example Apprentices
- Regional Capacity Management team
- Work underway with GEH and UHCW

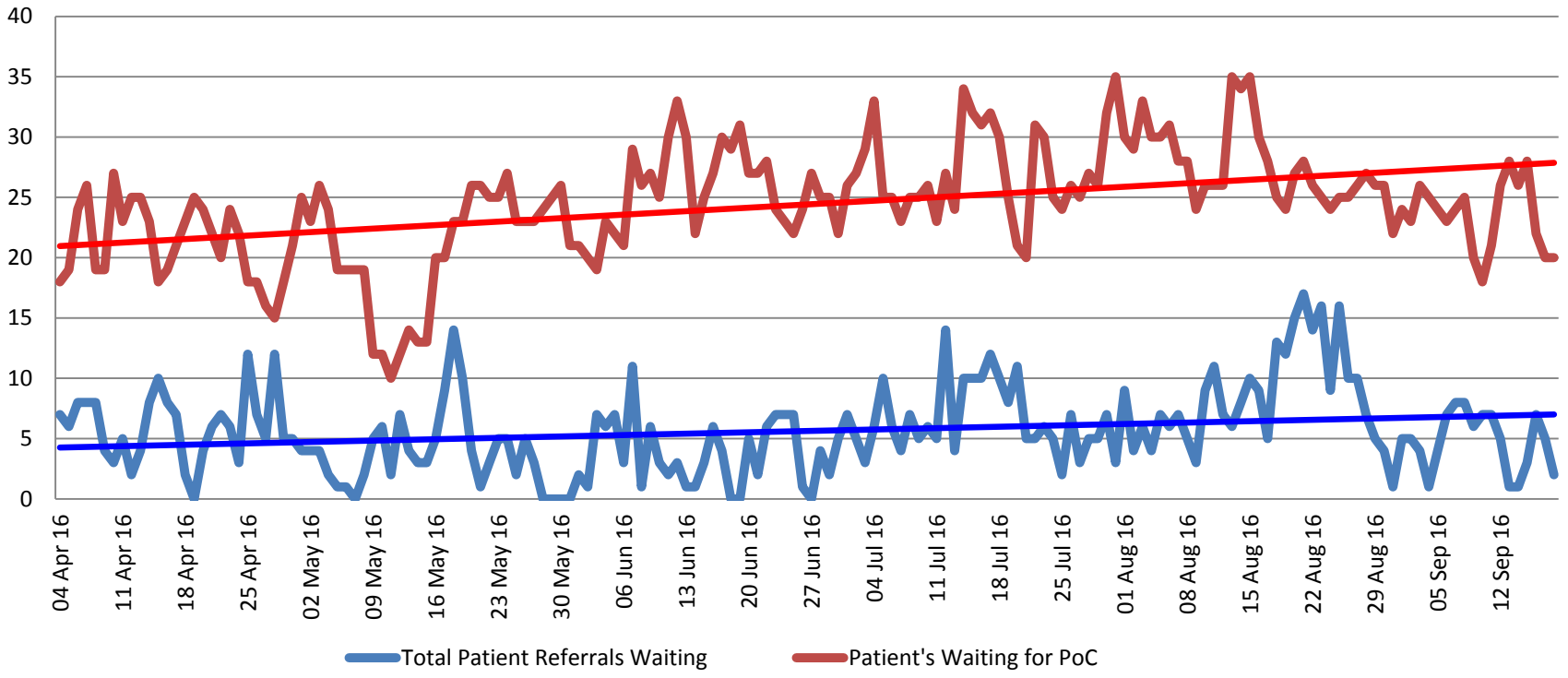
Referral to CERT





Investment- impact

South CERT Patient Referrals Waiting & PoC Waiting Apr-Aug 2016/17



Regional Capacity Management

- The current EMS trigger system is entered by admin staff online , they are required to answer multiple choice questions in the following categories (For Community)
- Staffing
- Expected Capacity and demand
- Response
- Non-direct patient care
- Environment

Proposal

Expected capacity Vs Expected demand

Day	Expected demand in X	Predicted capacity in X
1	Xx	Yy
2	Xc	Yc
N	Xw	Yw

This will allow the system to estimate the accuracy and reliability of the “capacity and demand model”,

D2A Evaluation Workshop

Sue Phillips

Head of Transformation

NHS South Warwickshire CCG

Mike Donnison

Information Lead

NHS Arden and Greater East Midlands Commissioning
Support Unit

Agenda

- A short history
- The evaluation itself
 - Purpose
 - Approach
 - Analysis
 - Cost/Benefit Impact
 - Information Governance
- Learnings
- Next Steps

A short history

- D2A started in July 2013
- Shared vision
 - Improved patient care – it was the right thing to do
 - Benefits to each organisation but most importantly across the system
- Information Governance did not come without its challenges
- Initial evaluations undertaken by the local authority – these did not quite identify the health benefits
- In house evaluation initially concentrated on our CCG savings only - some of that easier to identify

Purpose of the Evaluation

To quantify the cost/ benefit impact of a cohort of patients admitted to acute care by comparing those accepting the D2A pathway to those not accepting the D2A pathway prior to their acute discharge

Approach - Metrics and Data

- **Metric Development**

- Measures the pathways followed by patients accepting/ not accepting D2A
- Measures of Acute Stay, D2A Stay, Health and Social Care Packages Received
- Measures include Length/ Costs of Stay, Packages allocated and weekly costs
- Approximately 60 Metric identified

- **D2A Dataset Development**

- Underpinned the quantification of the metrics
- Data items held across Health and Social Care – Not accessible by one single party
- Data linkage key to pulling elements together (NHS Number)
- Subject to data sharing agreements
- Subject to data sharing agreements
- Communication, Data Quality, Version Control issues and time related dependencies
- Good data quality is key

Analysis

- Analytical Model compared Accepting Group Vs Non Accepting Group for each of P2 and P3
- Model Estimation was
 - 'The costs relating to the Non-Accepting Group if the patients in the Accepting Group had not accepted D2A'*
 - (i.e. Patients in Non Accepting group were volume adjusted equating to patient numbers in accepting group)
- Estimated costs then compared to actual costs identified in the Accepting Group
- Scope of Comparison – Acute Stays, D2A Stays, Patient Transport, Social Care, Continuing Healthcare and Funded Nursing Care packages
- Comparisons does not account for differences in the make up of the two groups

Acute/ D2A Stay Analysis

- Total cost of acute spells compared directly between accepting and non-accepting group (volume adjusted)
- Not Casemix adjusted
- Reduced Acute Care Costs in Acceptor Group
 - - Shorter lengths of stay
 - - Referral onto D2A Beds
 - - Cost Aversion identified as benefit to Commissioners
- Acute + D2A Stay lengths in Acceptor > Acute Stay Length in Non-Acceptor
- **Trim Point Adjustment**
 - Greater numbers of acceptors (than non-acceptors) discharged below trim point
 - Bed days below trim point quantified, Average cost per bed day applied (£94)
 - Cost aversion identified as benefit to the provider

Post Discharge Analysis

- **Scope – Continuing Healthcare, Social Care, Funded Nursing Care**
- **12 Month Time Horizon**
- **Cost Impact estimates initially based on 6 months**
 - Assumed no changes to the initial number of packages received
- **Refined Model**
 - Developed for Continuing Healthcare and Social Care
 - Takes into account changing (reducing) numbers of service user over time
 - Quantifies patients receiving packages at each month post discharge and related average weekly costs
 - Not applied to Funded Nursing Care (Lower Cost Impact)

Sensitivity Analysis

- Aim : To quantify the effect of uncertainty in the model
- Examined the cost impact of varying the probabilities of individuals receiving packages of care
- ‘Plausible Ranges’ applied, 5 to 25%, depending on volume of patients
- One way and two way sensitivity analysis applied
- Found that small variations in probabilities could potentially have large effects on cost impact
- Variations in probabilities susceptible to
 - Small numbers
 - Poor Data Quality

Key Drivers of Cost/Benefit Impact

In the accepting group

- **D2A Provision**
- **Shorter Acute Lengths of Stay, fewer excess bed days**
- **Decreased probability of Social Care Packages**
- **Decreased probability of CHC packages (and lower cost per package of those receiving)**
- **Increased probability of Funded Nursing Care packages**

Information Governance

- **The process**
 - Data set produced by South Warwickshire Foundation Trust (SWFT) Discharge Team
 - Sent to CSU
 - Dataset generated
 - Activity data reported
 - Dataset shared with Warwickshire County Council to add social care information
 - Report produced
 - All covered by an Appendix E

Learnings

- Always, always, always plan your evaluation as part of the scheme design – a retrospective fit is very challenging
- Don't underestimate the time you need to sort the IG out in your area
- If you are looking at system savings work as a system to agree your approach and work together to ensure you understand the data
- ...and be prepared that the answer may be different to what you expect – or what your organisation wants the answer to be
- Test and re-visit your assumptions

Learnings cont...

- Clear set of metrics to inform evaluation
- Underpinned by dataset to quantify metrics
- Requires good cross organisational data collection and co-ordination arrangements
- Importance of good data quality
- Analytical Model constructed to quantify cost impact of patients accepting D2A
- Refined model to track and quantify post discharge packages over time
- Sensitivity Analysis tested uncertainty in the model

Next Steps

- **D2A to move to business as usual**
- **Thank you and any questions**

Thank you for attending this
year's Discharge to Assess
Best Practice Event!