

# **Managing the Lean Hospital: what it takes to engage the whole hospital**

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July 2009

# Fostering Joy and Pride: the Stroke Team



# Stroke - Results

	2006	2008
CT Scan within 24 hours	46%	100%
Patients on Acute Stroke Unit	-	99%
Aspirin within 24 hours	63%	100%
Physio within 72 hours	65%	98%
Sentinel Audit Score	60%	92%
<b>Mortality rate</b>	122	99
<b>Length of Stay</b>	29	22



# Some encouraging early results

- Trauma – FNOF 31% mortality ↓ ; 33% Length of Stay ↓ ; 42% paperwork ↓
- Stroke 92% Sentinel Audit Score, 23% mortality ↓, 24% LOS ↓
- Ophthalmology – New One stop shop – patient visits 50% ↓ ;
- High risk joint replacements – complications 85%; Length of Stay ↓ 43%
- Pathology – Test turnarounds from x3 to x10 quicker; 40% floor space saving
- Laundry, Estates, Finance and others – six figure cost savings
- 30% of staff engaged in week long improvement events and 1000 completed “Green” training

..... But still only scratched the surface





“We’re not Japanese and we don’t  
make cars”

- Patients are our guests, not our raw material
- Errors and waste lead to avoidable suffering and death
- We need to work with the grain of a professional culture
- Our “true north goal” is to put hospitals out of business!

How can we engage the whole Hospital in a 20 (+) year journey of transformation that will reinvent lean for healthcare and change forever the way that hospitals are run?

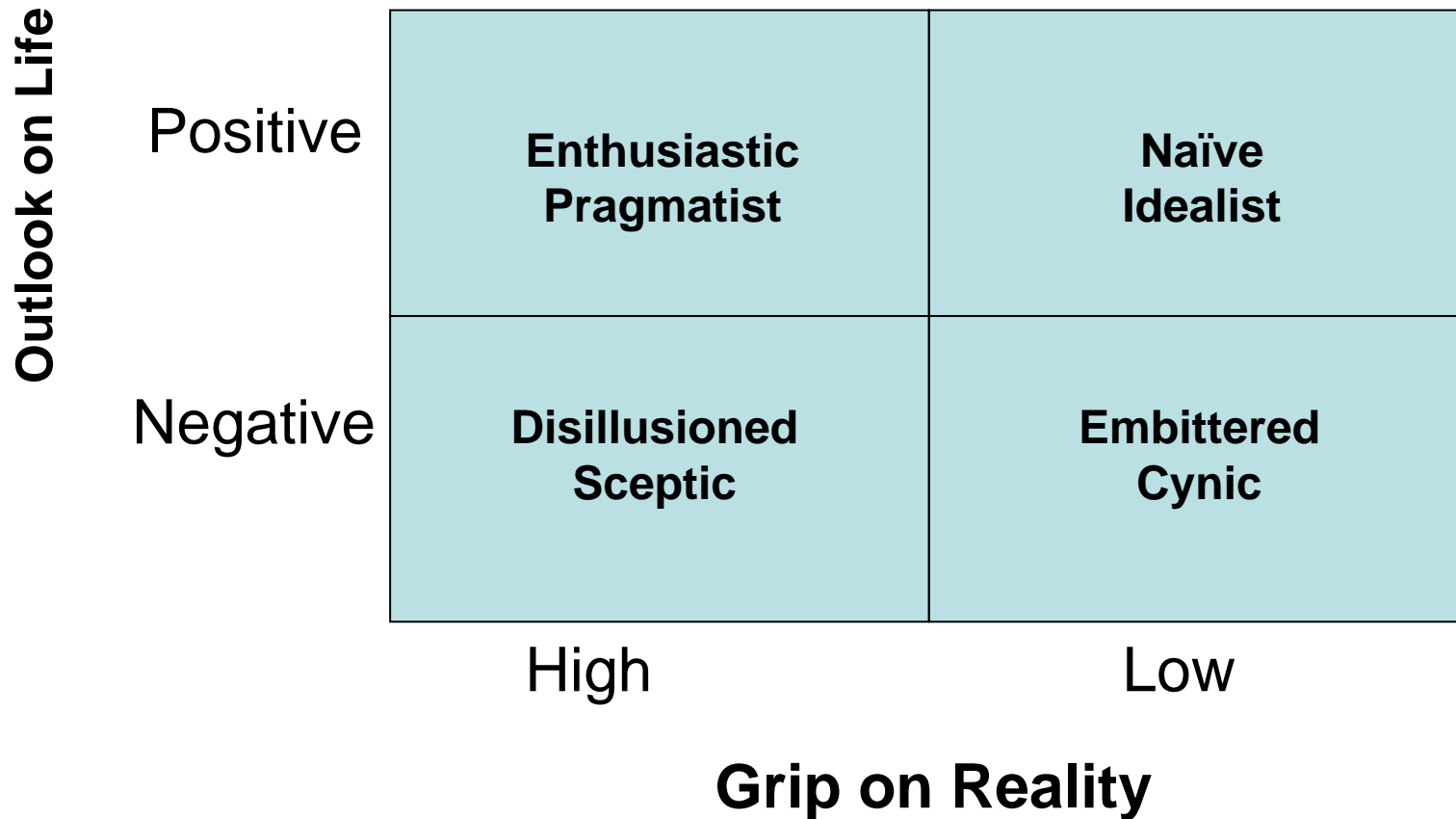
- Challenging the old mindsets
- Redesigning every end to end process
- Making it the way we manage every day
- Embedding it in our culture
- Creating a lean health and social care system
- Reflections and lessons

# **Challenging the old mindsets**

# From To

- Top down/externally imposed targets
- Problems worked around or passed upwards
- Few leaders...who are always in meetings
- Management based on anecdote and politics
- Self devised goals and measures for improvement
- Root causes addressed at source
- Many leaders who constantly “Go and See”
- Management based on data and scientific methods

# Fillingham's Motivational Matrix

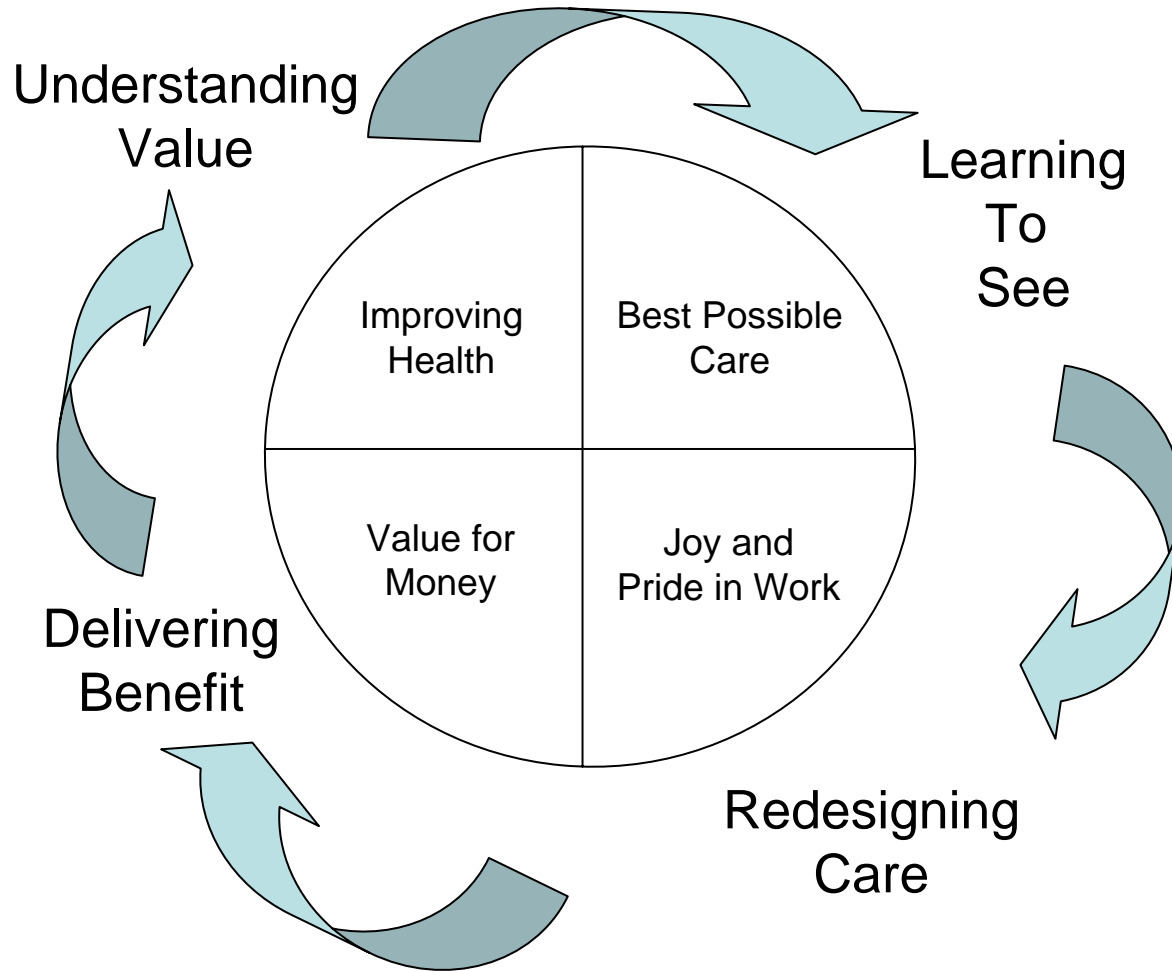


# Converting the Sceptics

- Rigorous use of lean methods
- Convincing data
- Hands on experience....RIE weeks
- Reinforce through changed management system and leadership style

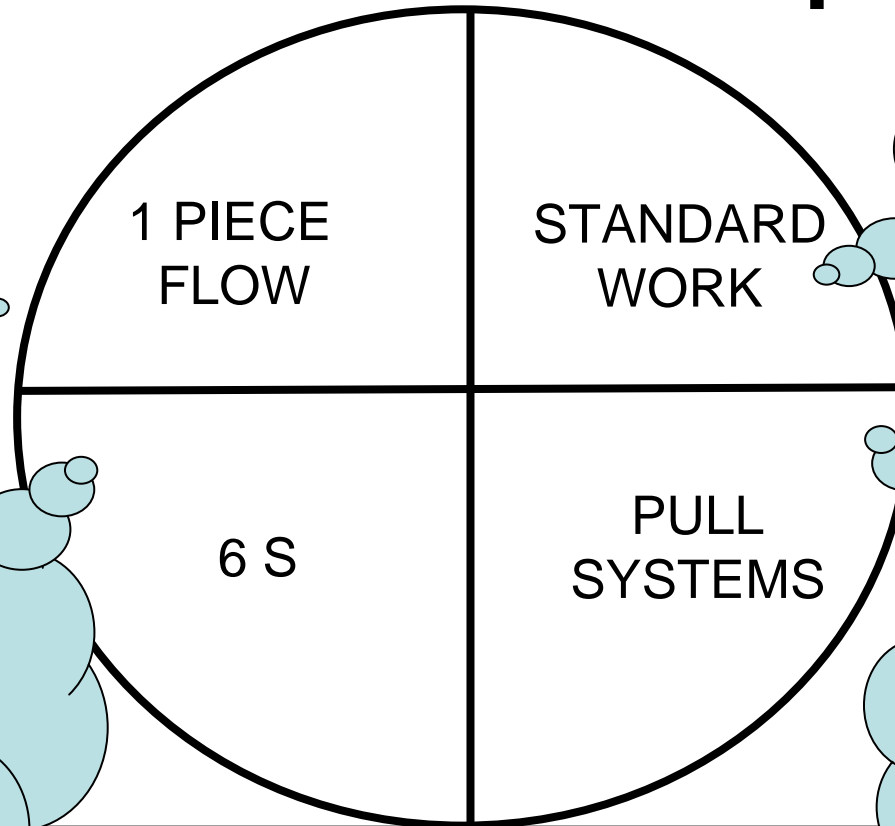
# **Redesigning every End to End Process**

# The Bolton Improving Care System



# Linked series of “Cells” that embody Lean Tools/Principles

Move away from batching, Backlog and Queues.



Reduce Variation & Complexity

Clear to See:  
Straighten  
Sweep & Clean  
Safety  
Standardise  
Sustain

Create signals To pull patients. Obvious when Something empty

**VISUAL MANAGEMENT.**  
“ability to see the process”

# Why did we need to change stroke service?

2005/6

High mortality rate – SMR 122

- Long length of stay – 43 days
- Stroke patients all over the hospital only 22% getting specialist care
- 13 beds for stroke off the main site
- No specialised staff

# Value Stream Map





# BICS Redesign Aims to Achieve Improvement in ...

Direct admission  
A&E care pathway  
CT in A&E

1 PIECE  
FLOW

STANDARD  
WORK

Bed management  
First 24 hours  
Roles and  
responsibilities

6 S

PULL  
SYSTEMS

Treatment rooms  
Dirty Utility  
High dependency  
on acute stroke unit

Board rounds  
Planned discharges  
Early supported  
discharge

## VISUAL MANAGEMENT.

“ability to see the process”

# De-cluttered and got rid of waste

- 6s areas on both wards
- Sluice
- Treatment room
- High dependency area on acute unit
- Store Room

# The waste !!



# The store room – after



# Standard Work

- Operational policy ,bed management
- Role of shift leader
- Board rounds
- First 24 hours
- Role of MDT staff
- Cleaning of commodes

# Creating Flow

- Direct admission from A&E
- Hyper acute bay
- On ward rehabilitation
- Early Supported Discharge team

# Visual Management

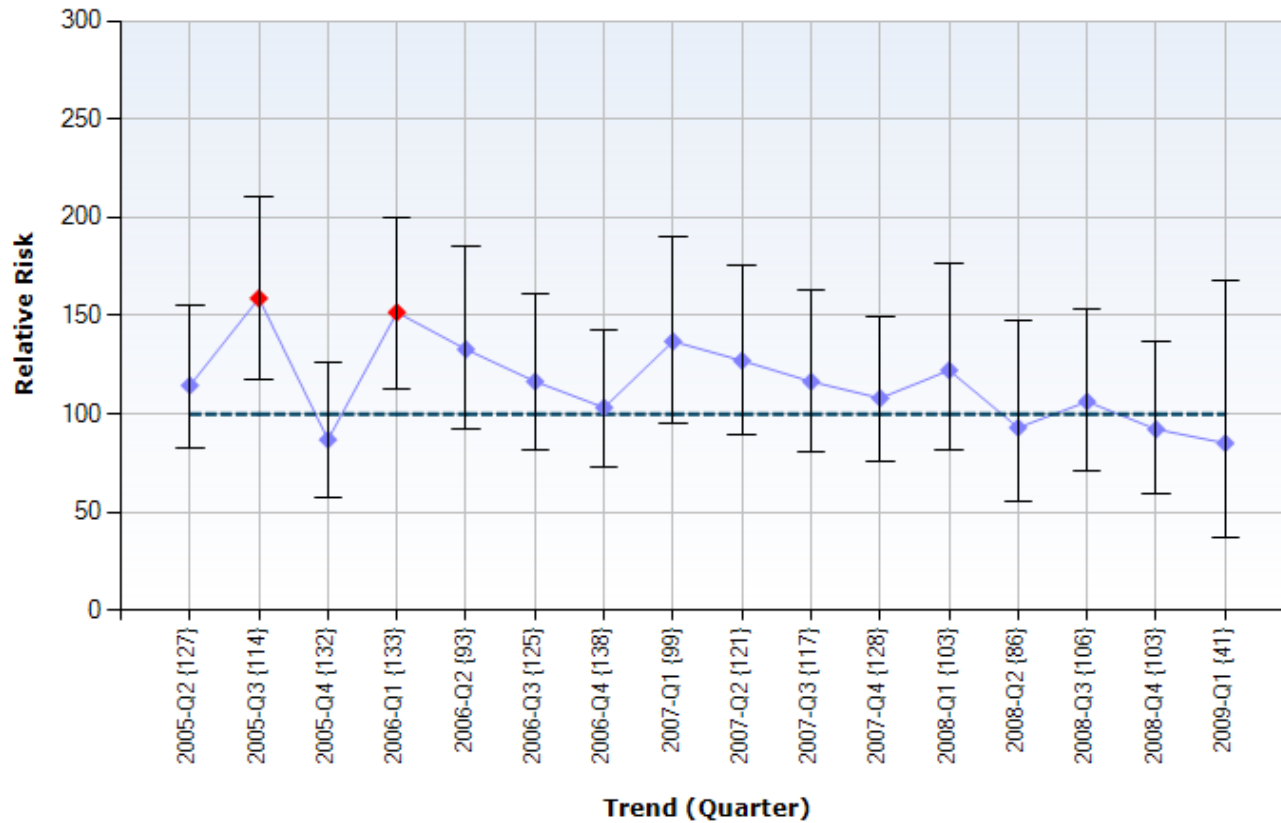


# Fostering Joy and Pride

- Staff sickness reduced to 3% in stroke from 15%
- Awards and publicity
- National Clinical Director visit
- Very positive patient and carer feedback

# Stroke Mortality 2005-2009

Mortality (in-hospital) | Diagnoses | Acute cerebrovascular ...

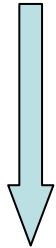


**“I can’t fault anything, it’s a very frightening time when you can’t walk ,or even stand or sit up , but I’m slowly getting mobile and looking forward to going home’**

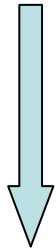
*Stroke patient April 2009*

**Making it the way we  
manage every day**

Trust wide goals



Improvement activities



Daily work

Policy Deployment

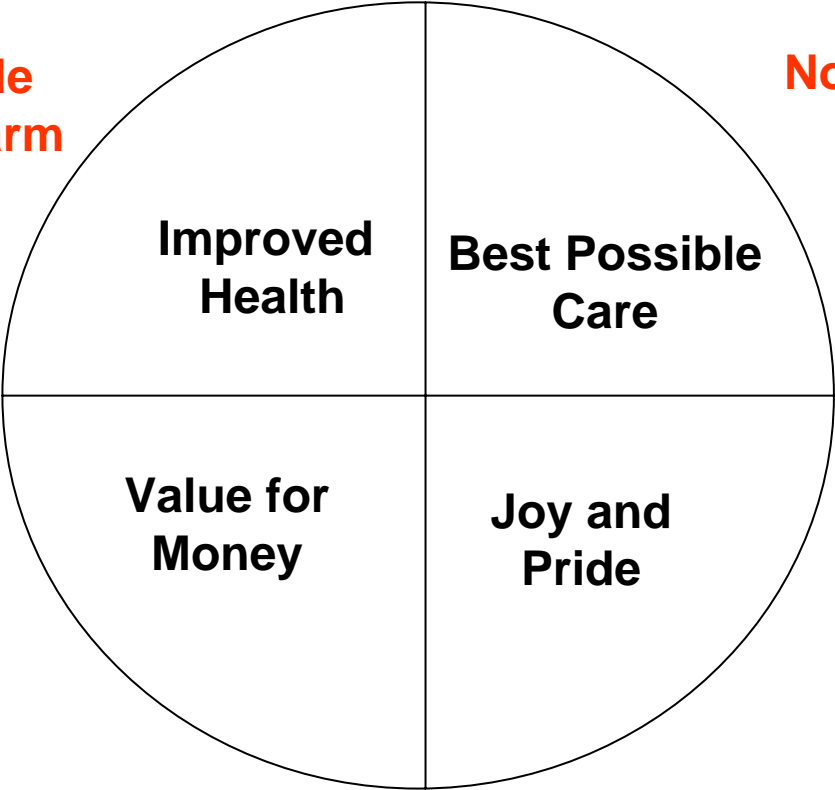
Mission Control and Information  
Centres

Team problem solving and action  
Logs; Exemplar Wards;  
“gateways”

# Policy Deployment – True North Goals

**No avoidable deaths or harm**

**No defects/best experience**

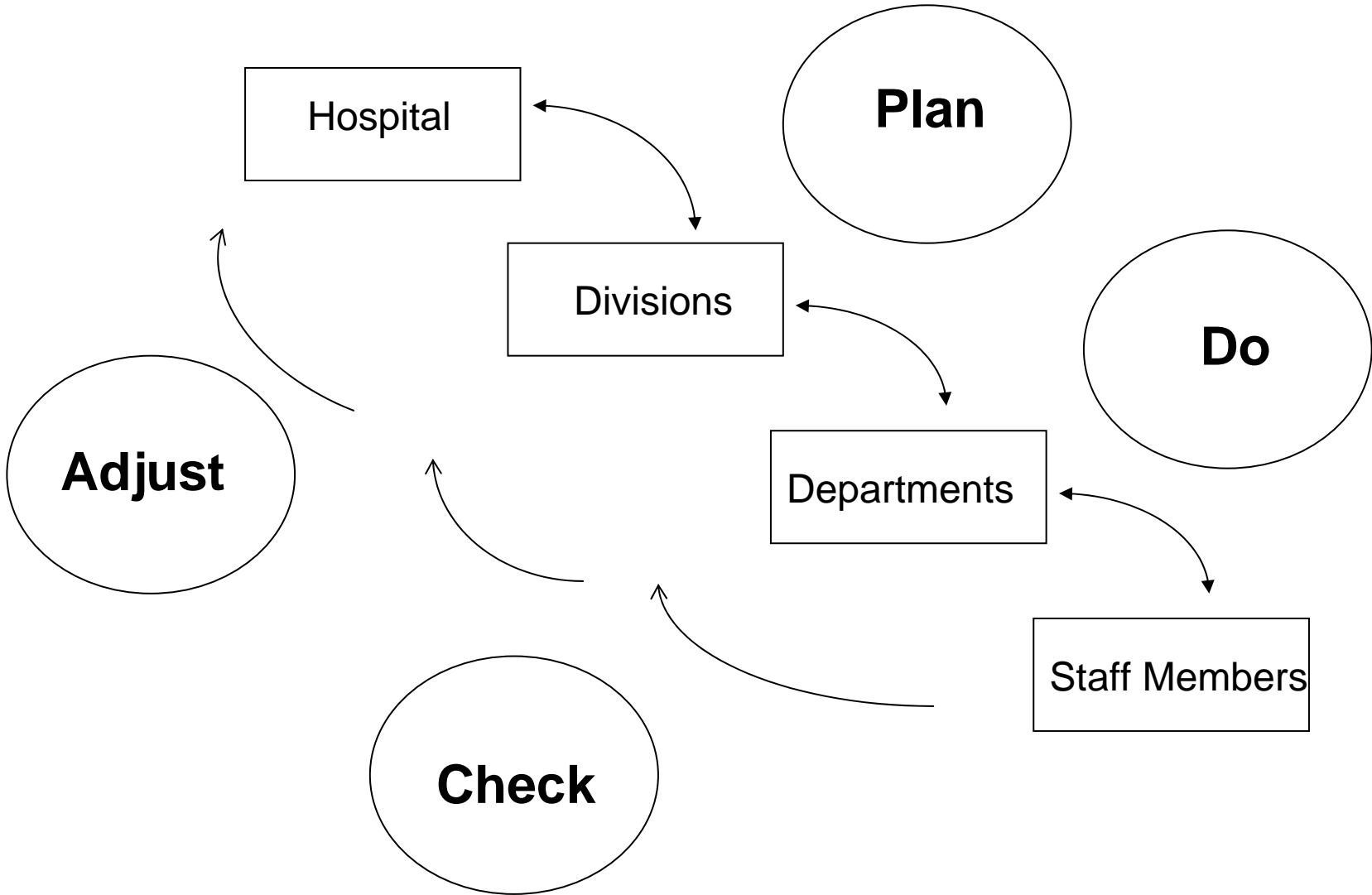


**No waste**

**Highest Morale**



# “Catchball”



# Mission Control and Information Centres



# **BICS Daily Work**

## **Exemplar Wards and Departments**

- Combines productive ward, Nursing Quality framework and lean daily work
- Rollout Trust-wide in 2009/10
- Extension to other departments, including non clinical
- Drive towards “model ward” standards

## Performance Measures

## Patient Outcome Measures

### Exemplar Standard attainment

PEAT – excellent  
KPI's – above 80%  
HII's – above 95%  
Sickness absence at or below 4.5%  
6S compliance above 80%  
LOS – at peer national average  
PDD – less 20% variation, 75% pre 9.30  
CHC - > 95% achievement of timescales  
All staff PDP's and KSF outlines

### Model Ward Standard attainment

6 months rolling consistency  
KPI's above 95%  
ANNT 100% compliance  
VIP 100%  
EWS 100%  
Sickness Absence below 4%  
6S compliance above 100%  
PDD – 85% PRE 9.30  
LOS –below peer national averages  
All staff qualified in specialty

### Tools and Techniques

6S  
BIC's – A3's and RIE's  
HHI audits  
Productive ward Audits

### Exemplar

HSMR reduction – to be linked to wards i.e. MINAP  
above 85%, Sentinel audit above national average  
Defects 50% reduction p.a.  
Increase patient experience >85% 'good' / 'excellent' on  
comment cards  
10% reduction in cardiac arrests  
2% reduction in pressure sore incidence  
10% reduction in patient falls and found on floor#

### Model Ward Standard Attainment

6 months rolling consistency  
No avoidable HCAI's  
No preventable Cardiac arrests  
No medication errors  
MIPAP and Sentinel among highest national  
performance  
Increase patient experience >99% 'good' / 'excellent' on  
comment cards  
50% in pressure sore incidence  
50% reduction in patient falls and found on floor

### Trust Initiative /Project Links

Essence of Care                      Compassionate Care  
5 million Lives  
Patients First  
Safer Clinical Systems  
Productive Ward  
Advancing Quality  
Hygiene Code  
NHSLA

# Daily Problem Solving in Lean Blood Sciences Lab



# Patient Gateways

- A plan for every patient reviewed regularly
- Gateways to check all steps completed
- Reinforces evidence based practice
- Strengthens multi-disciplinary team working
- Bed-side handover involving the patient
- Real time problem solving and process improvement
- Early indications of reduced length of stay and improved staff morale



**Embedding it in our Culture**

- Policy Deployment
- Rapid Improvement Events
- HR Processes
- Leadership Development
- Professional Education and Appraisal
- BICS Academy

# BICS Academy

## Bolton Hospital - Simpler Healthcare™ Certification

	Green	Bronze	Silver	Gold	Platinum
	3 Hours	3 Days	2 Weeks	2 Weeks	3 Days
Prerequisites	None	Green Certification Advanced Reading	Bronze Certification Advanced Reading	Silver Certification Advanced Reading	Gold Certification
Knowledge	Business Case History of Lean Fundamentals of BICS Flow Game Journey Update, Theadacare Video Journey Update Pathology Video	Effective Team Management Bolton Mgt. System (BICS) A3 Thinking RIE Prep RIE Event RIE Sustainment Problem Solving & CA Tools Team Leader Training Certification Assessment	VSA Methodology VSA Scoping 6S & Visual Management One Need Flow Pull Systems Standard Work Flow Cell Basic Tools	Policy Deployment 2P / 3P Product/Service Development Project Management Leadership & Followership Steering Committee	Mentorships Partnerships TPOC/Mission Sponsorship Facilitation/Coaching
Skills	Understand Bolton's Commitment to Patient Care Understand the History of Continuous Improvement Understand How I can Learn & Contribute	Understand each role as it relates to BICS How to use A3 Thinking to Solve Problems Understand your role in team participation & event mgmt	How to select key areas for targeted improvement How to use basic tools to see and eliminate waste How to lead others in the application of the methods	How to link improvement to strategy How to use advanced tools when and where appropriate Understand how to develop the BICS infrastructure	How to apply transformational thinking How to apply the technique for each respective tool The ability to mentor the application of BICS at all levels
Behaviors	Can describe the high level BICS approach Can describe why BICS is important	Using A3 thinking to solve problems Seeing elements of waste	Working effectively in a team Identifying process problems before people problems	Leading improvement in a systematic way Working with complexity (people, process & tools)	Unquestionable belief that the tools apply everywhere Confidence to teach others at any level
Requirements	Green Certificate	Bronze Training Certificate Participate in one PS/CA Activity**	Silver Training Certificate Participate in one VSA Activity Participate in two RIEs**	Gold Training Certificate Lead one VSA Activity Lead 2 RIEs**	Platinum Certificate Participated/Lead 20+ RIEs Developed 3 Mission A3s

\*\* Must demonstrate proper preparation, execution and sustainment using A3 methodology



# **Developing a Lean Health and Social Care System**

# **The current health and social care system has:**

- High levels of avoidable hospital attendance and admission
- Wide variations in length of stay
- Unacceptably high rates of readmission
- Suboptimal management of chronic illnesses
- An unacceptable rate of errors leading to avoidable suffering and even death

# Caring for the **Bolton** Family Council

- Use of lean by Bolton PCT as framework for commissioning and for provider services
- Whole system redesign of urgent care journey underway with PCT and Social Services
- Lean already used by NHS, Police, local businesses and to some extent Local Authority
- “Bolton Vision” (LSP) expressed an interest in using Lean to drive public service and community health improvements

# Engaging the whole hospital: lessons

- Apply lean tools rigorously....whilst reinventing them for your own context
- Maintain constancy of purpose and consistency of message
- Cultivate the early adoptors – the power of a converted sceptic!
- Celebrate successes....but don't over claim
- Survive and learn from your setbacks
- Manage to “stay on the pitch” whilst changing the rules of the game

*“I was in despair, but now I  
have hope”*

Dr M Egbe  
Geriatrician