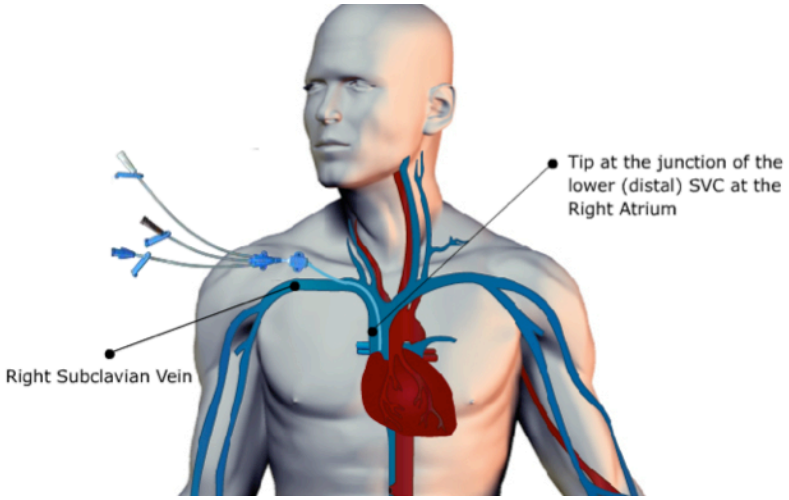
Ensuring adaptation and ownership in change implementation – a case study



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What are “Care Bundles”?

- Collection of evidence based clinical interventions (usually 3-5)
- Care bundle provides a means to ensure that the application of all the interventions is consistent for all patients at all times thereby improving outcomes

- Developed by Dr. Peter Pronovost in Michigan USA
  - Checklist for insertion and management of Central Venous Catheters to ensure that key interventions recommended by the CDC 2002 guidelines were implemented every time a CVC was inserted

The NEW ENGLAND JOURNAL of MEDICINE

ESTABLISHED IN 1812 DECEMBER 28, 2006 VOL. 355 NO. 26

An Intervention to Decrease Catheter-Related Bloodstream Infections in the ICU

Peter Pronovost, M.D., Ph.D., Dale Needham, M.D., Ph.D., Sean Berenholtz, M.D., David Sinopoli, M.P.H., M.B.A., Haitao Chu, M.D., Ph.D., Sara Cosgrove, M.D., Bryan Sexton, Ph.D., Robert Hyzy, M.D., Robert Welsh, M.D., Gary Roth, M.D., Joseph Bander, M.D., John Kepros, M.D., and Christine Goeschel, R.N., M.P.A.

Pronovost's Results

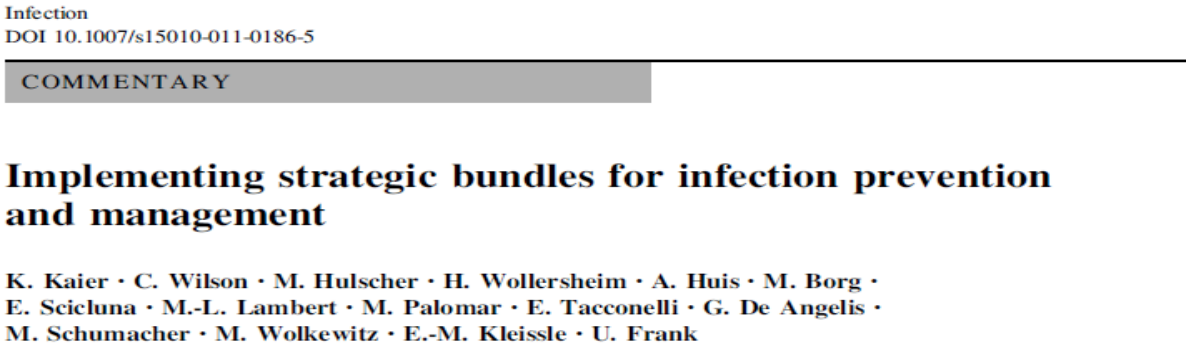
- 103 ITU's in 67 hospitals data was included in the study results

- Rate of catheter-related blood stream infections per 1000 catheter days decreased from 2.7 at baseline to 0 at 3 months after implementation

IMPLEMENT

Implementing Strategic Bundles for Infection Management

- In 2010 invited to participate in IMPLEMENT project
- EU funded project
- Look at process of implementation of CVC bundles in European hospital



Infection
DOI 10.1007/s15010-011-0186-5

COMMENTARY

Implementing strategic bundles for infection prevention and management

K. Kaier · C. Wilson · M. Hulscher · H. Wollersheim · A. Huis · M. Borg · E. Scicluna · M.-L. Lambert · M. Palomar · E. Tacconelli · G. De Angelis · M. Schumacher · M. Wolkewitz · E.-M. Kleissle · U. Frank

Project N° 20091107 under EU Health Programme 2008-2013

European Commission

Implementing Strategic Bundles for Infection Prevention and Management(IMPLEMENT)

Understanding hospital organisational culture relevant to IPC

Identifying effective interventions in EU hospitals

Implementation of Care Bundles to reduce infections in intensive care

Journal of Hospital Infection 86 (2014) 1–6

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Journal of Hospital Infection

journal homepage: www.elsevierhealth.com/journals/jhin

Review

Organizational culture and its implications for infection prevention and control in healthcare institutions

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[b] *Mater Dei Hospital and University of Malta, Msida, Malta*

Before we started

- Lack of written CVC policy
- Various shortcuts in proper attire, skin disinfection and draping
- Lines kept in far too long
- Sub-optimal hub disinfection when accessing lines
- Inadequate CVC dressings
- Major issues when patients transferred out of ICU with CVC

Focus groups

- We wanted to better understand our organizational culture in the ICU
- Look at attitudes, beliefs, perception, what are the ‘rules of behaviour’, shared values
- Identify the bottle necks and plan for them
- 3 focus groups

Focus groups results

- **Audits**
  - “incriminate the particular individual”
- **Documentation**
  - “this is not an integral part of our work”
  - “nurses should focus on patient care rather than filling extra documentation”
- **Short-cuts**
  - “there is nothing wrong in taking short cuts as long as nothing bad happens”
- **Teamwork**
  - “(nurses) will politely point out (mistakes) with junior doctors (but) they would not dream to do so with senior consultants; once bitten, twice shy ”
- **Accountability**
  - “when doctors start to follow infection control policies, then come to talk to us about accountability”

Kotter's 8 steps model for change

Create sense of urgency

- High BSI incidence ITU patients >48hrs

	Patients staying >48hrs	Patient Days	BSI episodes	BSI rate per 1000 pt-days
2009	661	6091	44	**7.2**
2010	857	6377	42	**6.59**
EU average (2007)				**4.2**

Form a powerful coalition

- Leads from infection control and ICU
- Multidisciplinary
- Close collaboration – knew who to pick
- Champions
- Trust within team and outside
- Energetic, motivated

Form a vision for change

- Visit to a collaborating hospital in Ireland
- Invest time in planning
- Standardisation

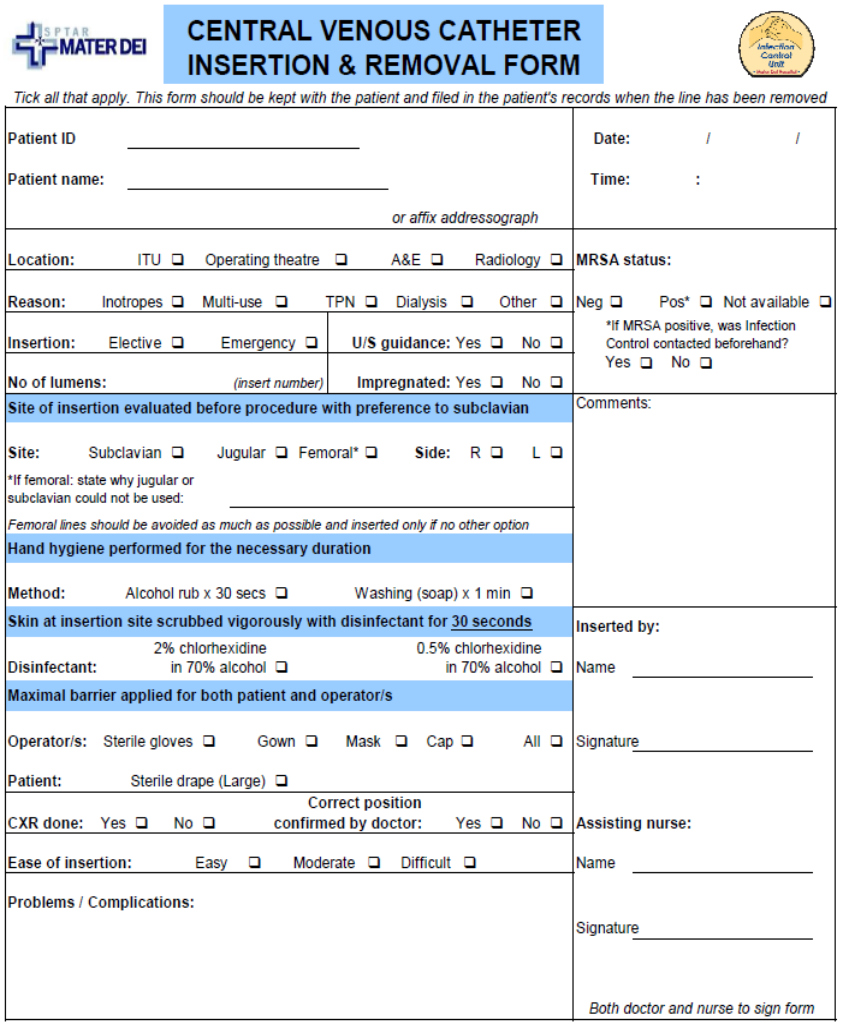
Change Process

- Using feedback from focus groups modified the Pronovost template to fit into our culture

- Nurses were *not* required to oversee doctor's performance or stop an insertion
- Informal feedback from link nurses identified non-compliant staff
  - Referred to champions

Documentation

- Modified approach to documentation
- Easy on documentation
  - Tick sheet
- Filled by doctor
  - signed by both doctor and nurse
- If not all form filled, still counted as a level of compliance



CENTRAL VENOUS CATHETER INSERTION & REMOVAL FORM

Tick all that apply. This form should be kept with the patient and filed in the patient's records when the line has been removed

Patient ID _____

Patient name: _____

or affix addressograph

Date: / /

Time: :

Location: ITU ❑ Operating theatre ❑ A&E ❑ Radiology ❑

Reason: Inotropes ❑ Multi-use ❑ TPN ❑ Dialysis ❑ Other ❑

Insertion: Elective ❑ Emergency ❑ U/S guidance: Yes ❑ No ❑

No of lumens: *(insert number)* Impregnated: Yes ❑ No ❑

MRSA status:

Neg ❑ Pos* ❑ Not available ❑

*If MRSA positive, was Infection Control contacted beforehand? Yes ❑ No ❑

Site of insertion evaluated before procedure with preference to subclavian

Site: Subclavian ❑ Jugular ❑ Femoral* ❑ Side: R ❑ L ❑

*If femoral: state why jugular or subclavian could not be used: _____

Femoral lines should be avoided as much as possible and inserted only if no other option

Comments:

Hand hygiene performed for the necessary duration

Method: Alcohol rub x 30 secs ❑ Washing (soap) x 1 min ❑

Skin at insertion site scrubbed vigorously with disinfectant for 30 seconds

Disinfectant: 2% chlorhexidine in 70% alcohol ❑ 0.5% chlorhexidine in 70% alcohol ❑

Maximal barrier applied for both patient and operator/s

Operator/s: Sterile gloves ❑ Gown ❑ Mask ❑ Cap ❑ All ❑

Patient: Sterile drape (Large) ❑

CXR done: Yes ❑ No ❑ Correct position confirmed by doctor: Yes ❑ No ❑

Ease of insertion: Easy ❑ Moderate ❑ Difficult ❑

Problems / Complications:

Inserted by:

Name _____

Signature _____

Assisting nurse:

Name _____

Signature _____

Both doctor and nurse to sign form

CVC maintenance

- Line maintanance checklist introduced
- Hub scrub with chlorhexidine alcohol x 15 seconds emphasised
- Daily review of central line necessity
- Review of line necessity before transfer to ward
  - If essential, ICN informed
  - Went to ward to ensure correct access practices

Kotter's 8 steps model for change

Communicate vision

- Several seminars, outside hospital, in evening
- Invited unit nurses and doctors
- Leaders from UK and Ireland as invited speakers
- Shared our plans
- Asked for feedback

Empower action

- Remove obstacles - provide necessary items (wipes, dressings, disinfection solutions)

- Foster ownership
- Training of intensivists on insertion
- Introduction of insertion checklist

Involve and engage stakeholders

Gown

Gloves

Nurse Training

- Onsite competency training for ICU nurses in small groups
- Training on mannequins
- Competency assessment
- Small onsite groups
- See one, do one

Create quick wins

Well done to each member of the ITU team!

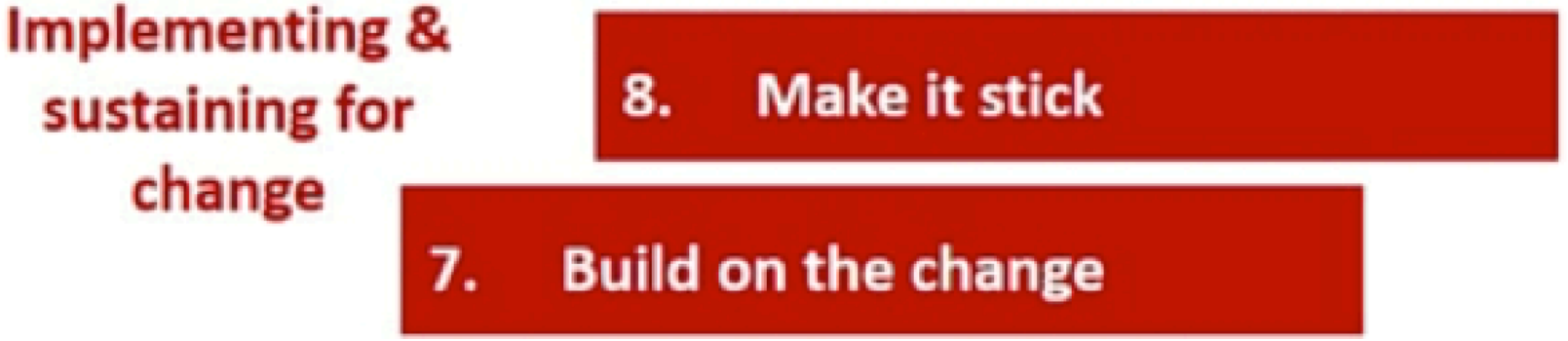
300 consecutive days free from MRSA bloodstream infections.

12th July 2013

HOSPITAL MATER DEI

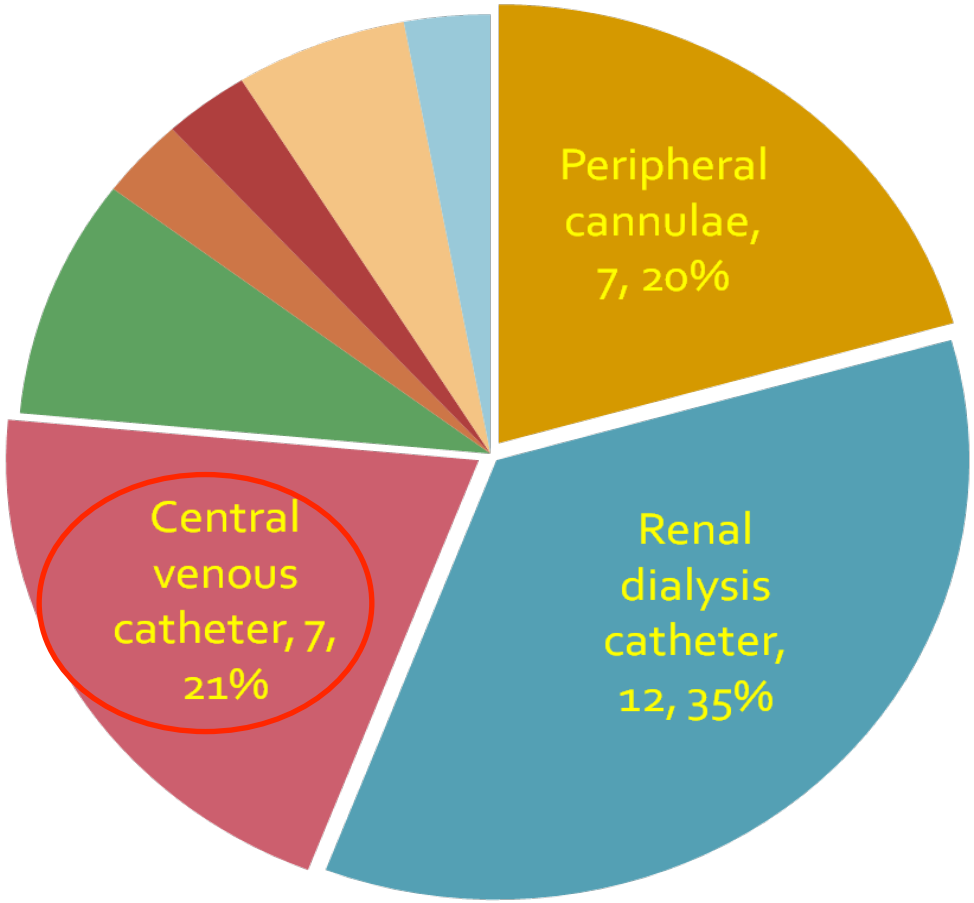
Infection Control Unit

Kotter's 8 steps model for change



Build on the Change

MRSA BSIs likely source - MDH - 2011



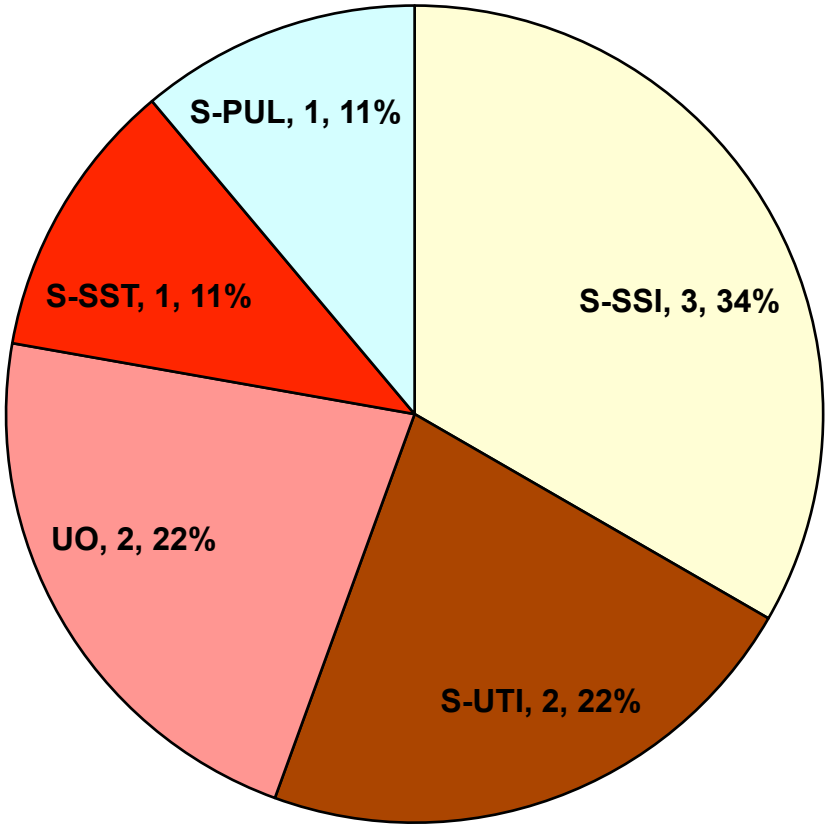
CVCs outside ITU

- Review of line necessity before transfer to ward
  - If essential, ICN informed
  - ICN visit ward to ensure correct maintenance practices
- Different challenges than ITU
- Lines not present as frequent as in ITU
- Competency issues noted
- Handled by different hcw – nurses and junior doctors

Hospital wide roll out

- Hospital wide training on CVC maintenance for >350 nurses
- Introduced training on CVC accessing for all foundation year doctors
- Introduced a tracking system of all CVC lines inserted in op theatres
- Continue follow-up of pts with CVC on ward by ICN and link nurse

2014 – No line related MRSA bacteraemia

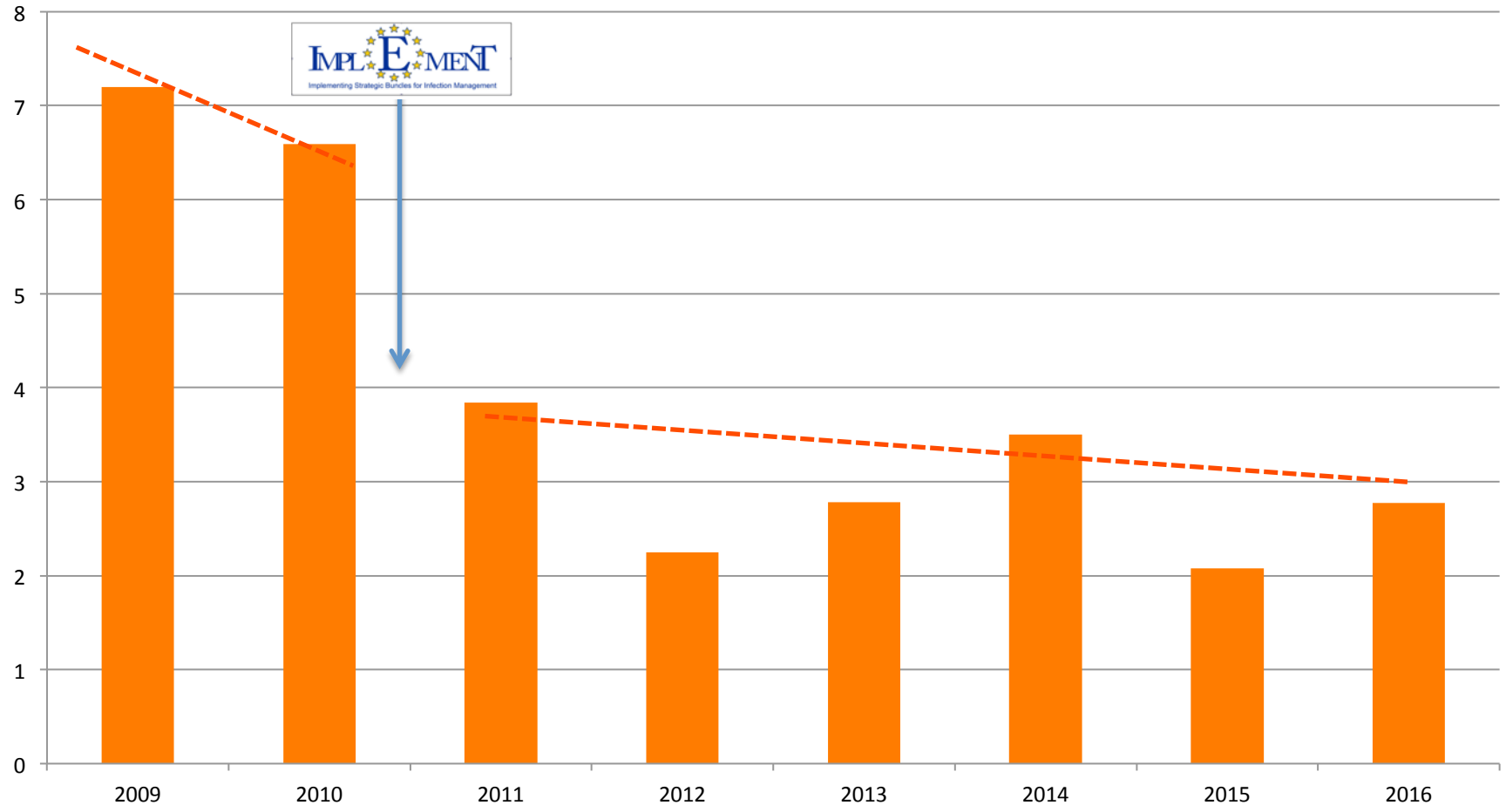


In the final analysis, change sticks when it becomes the way we do things around here.

John P Kotter

Make it stick

ICU-acquired BSI rate/1000 ICU bed days



What worked?

- Promote team work

  'teambuilding was great - together from start as a team – positive energy'

- Staff were involved from start and given opportunity to feedback and change

  "you involved the actual users and listened to our feedback"

What worked?

- We allocated time – effective change doesn't happen overnight

  "*we had undisturbed planning time*"

- Never stop talking about it; show passion
- Celebrate success
- If you have funding, specific budget that would really help
- Its hard work; be patient

Thank you

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