

# OneTogether to reduce surgical site infection (SSI)

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# Aims of the session

- ❑ Describe the OneTogether partnership and its program of work from its launch in 2013 to date
- ❑ Have an awareness of the elements of care that will mitigate the risk of surgical site infection (SSI)
- ❑ Demonstrate the use of the OneTogether Self Assessment Tool
- ❑ Present results of the pilot study of the tool
- ❑ Next steps for OneTogether

# The 'OneTogether' Partnership



- Formed in 2013 by professional organisations with an aim to improve patient safety by preventing SSI
- OneTogether has a sole objective to support clinical staff ensure that the best infection prevention practice is provided to every patient that undergoes surgery to improve patient outcomes
- Material agreed by all partners, free from commercial influence; commercial support for design/distribution of educational materials is free without copyright

# Why is quality assurance in preventing SSI's important?

- ❑ SSI accounts for 16% of all HCAI
- ❑ It is the most common healthcare acquired infection in surgical patients
- ❑ SSI Significantly increases length of hospital stay, costs, patient morbidity and mortality
- ❑ Knowledge of best practice and importance of compliance in preventing SSI could be improved
- ❑ Current quality assurance systems do not accurately measure infection prevention practice in operating theatres or drive improvement



# Patients' experiences of surgical site infection

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*There is nothing you can do anyway, you are in agony.'*

*'It was really stinking and I couldn't look at it.'*

*'The amount of fluid coming out of it is extremely embarrassing.'*

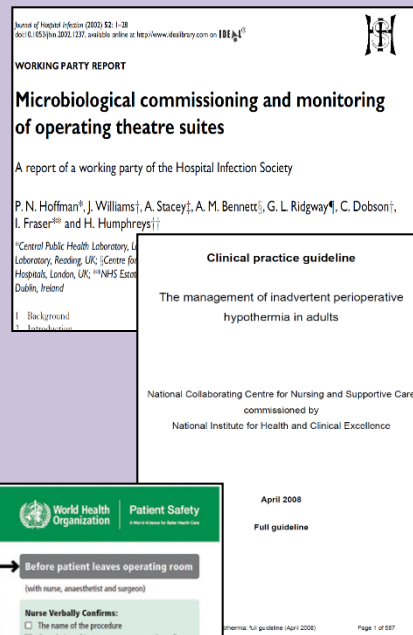
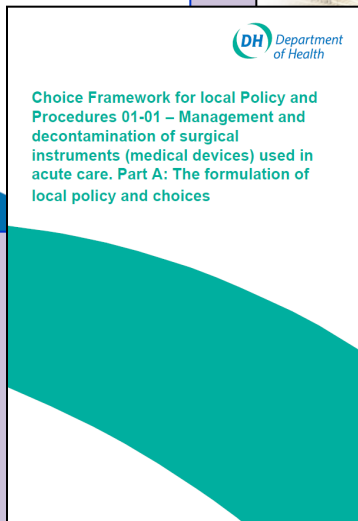
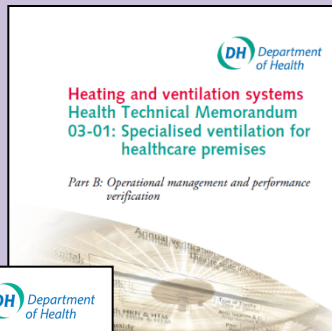
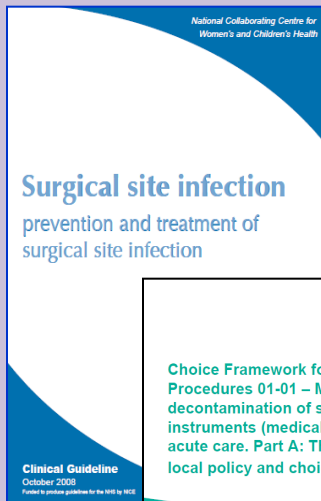
*'This wound has taken over my life, and in fact both our lives [patient plus spouse].'*

# Infection prevention in theatre



Skin preparation  
Timely antibiotic prophylaxis  
Patient warming  
Aseptic technique  
Protection of instruments  
Equipment – dust  
Clutter – cleaning  
Minimising number of people  
Controlling airflow (doors)

# Existing guidance



# How well is SSI prevention policy implemented?

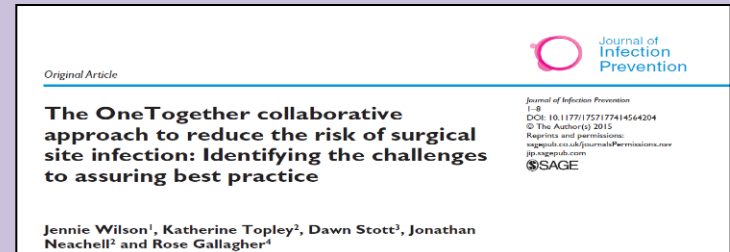
## Findings from OneTogether workshop 2013

Policy area	Practice in operating departments	Compliance with policy
Skin preparation	Variation in approach to skin disinfection and no standard approach to washing/showering prior to surgery	Variable
Perioperative hypothermia	Although there is NICE guidance, implementation depends on surgeon and/or anesthetist	Weak, although good in recovery
Instrument management	Although policy exists it is not universally known about	Good
Surgical environment	Focused on the 'Saving Lives' care bundles, which are not specific to the operating theatre	Variable and influenced by leadership, enforcement and surgeons
Prophylactic antibiotics	Focus on World Health Organization's safer surgery checklist	Good; although hard to measure timing
Wound management	No consensus on use of wound dressings; no specific policy	Variable; capacity an issue
Surveillance	Limited knowledge or involvement in surveillance activity	Poor, especially follow-up in community; no feedback on data



# Barriers to implementing best practice to prevent SSI: Key themes

- ❑ **Variability** in knowledge of, and availability, of policy
- ❑ **Conflict** of ideas/opinion
- ❑ **Poor knowledge** of evidence
- ❑ Importance of practices to prevent SSI **not recognised**
- ❑ **Lack of standards** to support best practice
- ❑ **Ownership** and responsibilities not defined
- ❑ Lack of **leadership**



# 7 Infection Prevention Standards

1. Skin preparation
2. Antibiotic prophylaxis
3. Patient warming
4. Instrument management / maintaining asepsis
5. Surgical environment
6. Wound management
7. Surveillance



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# Standards and guidance: reducing the risk of infection on the patient's surgical pathway



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## 1. Skin Preparation

**1.1 Washing**

**Recommendation**

HSG recommends that patients should shower or have a bath prior to admission to hospital and that they should wash their hands thoroughly with soap, either the day before or on the day of surgery.<sup>14</sup>

**1.2 Hair Removal**

**Recommendation**

HSG recommends that razors should not be used for hair removal because they increase the risk of SSI. If hair must be removed, then clippers with disposable heads are recommended.<sup>15</sup>

**1.3 Skin Disinfection**

**Recommendation**

HSG recommends that the skin should be disinfected immediately prior to the incision with alcohol-based or povidone-iodine (betadine or equivalent solution).<sup>16</sup>

**1.4 Preventing Skin Recolonisation**

**Recommendation**

HSG recommends that if an iodine dress is used, this should be left in place until the patient has no iodine allergy.<sup>17</sup>

**4. Instrument Management**

**Recommendation**

All pre-sterilised instruments must be checked for evidence that they have been sterilised and that the packs are intact.

Instruments should be held up in a clean area, as close to the procedure time as possible, and protected from contamination prior to use. All prepared instruments must be clearly identified at all times.

Staff who undertake procedures with their hands on simple techniques, must be trained and demonstrated a proficiency before being allowed to undertake these procedures independently.<sup>18</sup>

**3. Perioperative warming**

**Recommendation**

HSG recommends that the patient's temperature should be 36°C or above before they are transferred to the operating department.

Patients should be adequately covered to minimise heat, and exposed only during surgical preparation.

The patient's temperature should be documented before induction of anaesthesia and then every 30 minutes until the end of surgery. If below 36°C, the patient should be actively warmed using forced air warming.

Insulation and fluids (500ml or more) and blood products should be warmed to 36°C using a fluid warming device.<sup>19</sup>

**2. Prophylactic Antibiotics**

**Recommendation**

HSG recommends that there must be a local guideline to antibiotic prescribing including a written on appropriate empirical prophylaxis.<sup>20</sup>

Surgical prophylaxis should be given intravenously on induction of anaesthesia or within 60 minutes before the incision is made.<sup>21</sup>

In most circumstances a single dose of antibiotic with a long enough half-life to achieve activity through the operation is sufficient.<sup>22</sup>

**7. Surveillance**

**Recommendation**

The risk of SSI should be evaluated using a standardised system to provide feedback to surgeons and the surgical team about the quality of infection prevention in the operating theatre.

Monitoring of infection rates is essential to provide patients with accurate information about the risk of SSI associated with the operation.<sup>23</sup>

**5. Surgical Environment**

**Recommendation**

An effective air changing ventilation system should be in operation.

The doors to the operating theatre should remain closed and not be left out of theatre until it is a minimum to ensure efficiency of the ventilation.

The number of personnel present in theatre should be kept to a minimum.<sup>24</sup>

**6. Wound Management**

**Recommendation**

HSG recommends that surgical incisions should be covered with an appropriate sterile dressing at the end of the operation.<sup>25</sup>

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# The OneTogether Infection Prevention Self Assessment tool for theatres

- ❑ Need to define standards of care in order to:
  - Improve knowledge
  - Drive compliance with best practice
  - Monitor practice
  - Support staff training
  - Ensure clear policies
  - Support collaboration across multidisciplinary teams

# Assessment Tool



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Assessment: Infection prevention  
practice across the surgical pathway

<b>HOSPITAL OR TRUST</b>	
<b>THEATRE SPECIALITY</b>	
<b>PERSONNEL CONDUCTING ASSESSMENT</b>	
Name and job title	
Name and job title	
Name and job title	
Name and job title	
<b>DATE(S) OF ASSESSMENT</b>	

# Electronic Version



## MENU

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[Assessment Guide](#)

[Instruction Summary](#)

## Assessment Selection:

<p>1.1 Patient Washing</p>  <p><b>Incomplete</b></p>	<p>1.2 Hair removal</p>  <p><b>Incomplete</b></p>	<p>1.3 Skin disinfection</p>  <p><b>Incomplete</b></p>	<p>1.4 Preventing skin recolonisation</p>  <p><b>Incomplete</b></p>	<p>2 Prophylactic antibiotics</p>  <p><b>Incomplete</b></p>
<p>3.1 Warming intravenous and irrigation fluids</p>  <p><b>Incomplete</b></p>	<p>3.2 Perioperative warming, pre-operative</p>  <p><b>Incomplete</b></p>	<p>3.3 Perioperative warming, intra-operative</p>  <p><b>Incomplete</b></p>	<p>3.4 Perioperative warming, post-operative</p>  <p><b>Incomplete</b></p>	<p>4.1 Maintaining asepsis – surgical practice</p>  <p><b>Incomplete</b></p>
<p>4.2 Maintaining asepsis – instrument management</p>  <p><b>Incomplete</b></p>	<p>5 Surgical environment</p>  <p><b>Incomplete</b></p>	<p>6 Wound management</p>  <p><b>Incomplete</b></p>	<p>7 Surveillance of Surgical Site Infection (SSI)</p>  <p><b>Incomplete</b></p>	<p><b>Overall Compliance Score</b></p> <p><b>Incomplete</b></p>



# OneTogether Self Assessment Tool for infection prevention in operating theatres

How it works:

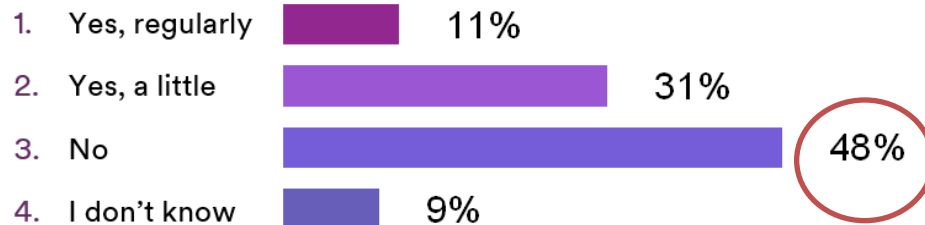
- ❑ Assess against defined standards for each key aspect of infection prevention
- ❑ Standards based on **existing evidence-based guidelines** e.g NICE
- ❑ Self-assessment process looks for:
  1. A defined standard (written in local policy)
  2. Evidence that the standard is routinely applied in practice (observation and questioning of staff)
- ❑ Assessment conducted jointly by Theatre Practitioner and Infection Prevention Nurse
- ❑ Identify gaps in defined standards and their application to drive improvement

# Collaboration between theatre staff and infection prevention nurses



## Voting Question

**Does an Infection Prevention Nurse Specialist spend time in theatres?**







5. Surgical Environment		Defined standard	Standard is applied	Comments
Ensuring that the risk of airborne contamination entering the operative site is kept to a minimum		Present in local policy  <i>N = 0; Partial = 1; Yes = 2</i>	Evidence that element is performed  <i>N = 0; Partial = 1; Yes = 2</i>	<i>If 'partial' - specify where non-compliant:</i>
1	The required air pressure and ventilation systems across the operating theatre (including anaesthetic and scrub rooms) is defined.			
2	There is a defined process to ensure that the doors to the operating theatre remain closed while an operation is in progress.			
3	There is a defined number of staff that may be present within the operating theatre for each procedure.			
4	There is a defined process to monitor traffic in and out of the operating theatre to ensure it is kept within agreed limits.			
5	There is a defined process to ensure that equipment is cleaned to remove all dust prior to it being brought into the operating theatre.			
		[Sum of scores ÷ 10 x 100 = %]	[Sum of scores ÷ 10 x 100 = %]	Overall % compliance  [sum of all scores ÷ 20 x 100]

# Does your theatre have a **defined standard** ?

*There is a defined process to ensure that equipment is cleaned to remove all dust prior to it being brought into the operating theatre.*

## **Scores**

2 = if you have a written policy/process

1 = There is some consensus but no written policy

0 = There is no policy or clear standard

# Is this standard **applied** in your theatre?

*There is a defined process to ensure that equipment is cleaned to remove all dust prior to it being brought into the operating theatre*

## **Scores**

2 = There is 100% compliance with the standard

1 = There is some compliance but it is not consistent

0 = Rarely compliant, no agreed standard

# Pilot testing of self-assessment tool

- ❑ Piloted in 15 theatres in 10 UK hospitals
  - Separate assessment in each specialist theatre as practice varies
  - Infection Prevention and theatre staff completed together – shared learning
  - Emphasis on information for improvement
- ❑ Evaluated as invaluable tool for identifying gaps in best practice and driving improvements

# How one pilot site used the OneTogether tool

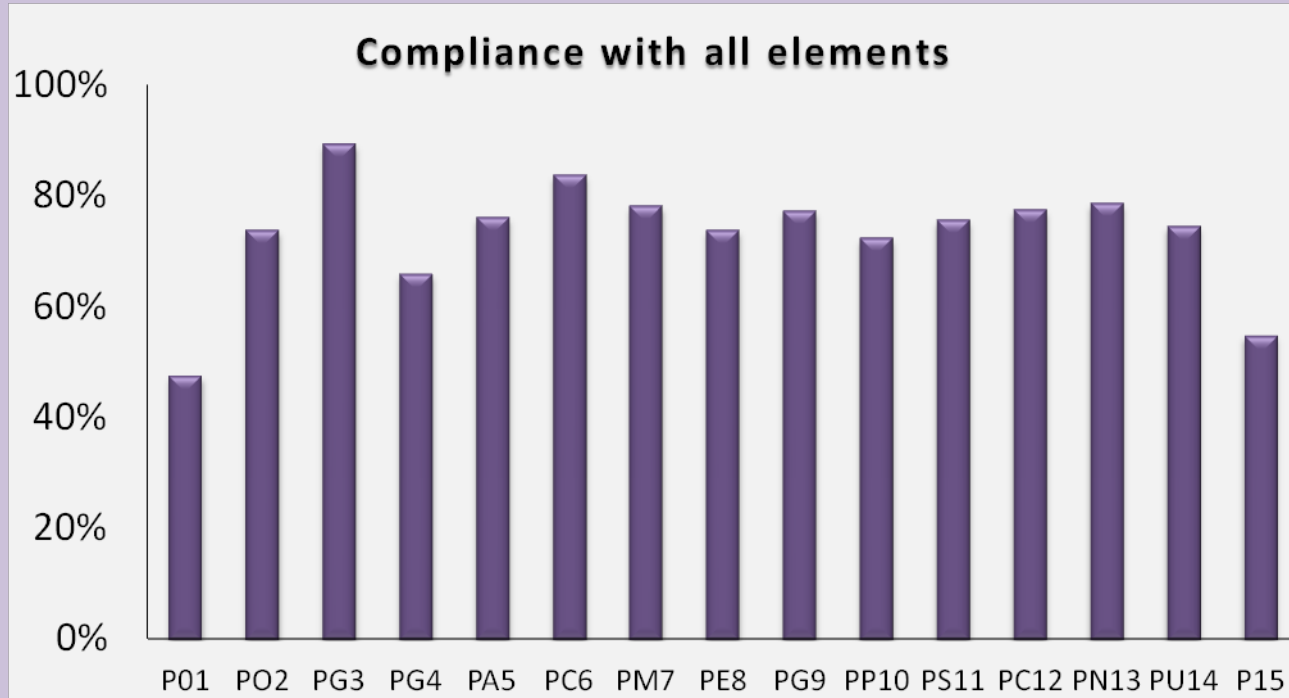
- ❑ Focused on one department
- ❑ Started by going through the tool with our link infection prevention leads
- ❑ Ask same questions to different members of staff
- ❑ Observed practices and speak to patients
- ❑ An 'excuse' for infection prevention to visit theatres
- ❑ Big eye opener for infection prevention team and also for clinicians involved

# What they found

- ❑ Several variations in practices
- ❑ Lack of awareness of policy
- ❑ Limitations and gaps in the written standard
- ❑ Issues with availability of equipment
- ❑ Patient instructions mostly verbal
- ❑ Biggest gaps in warming all throughout patient journey

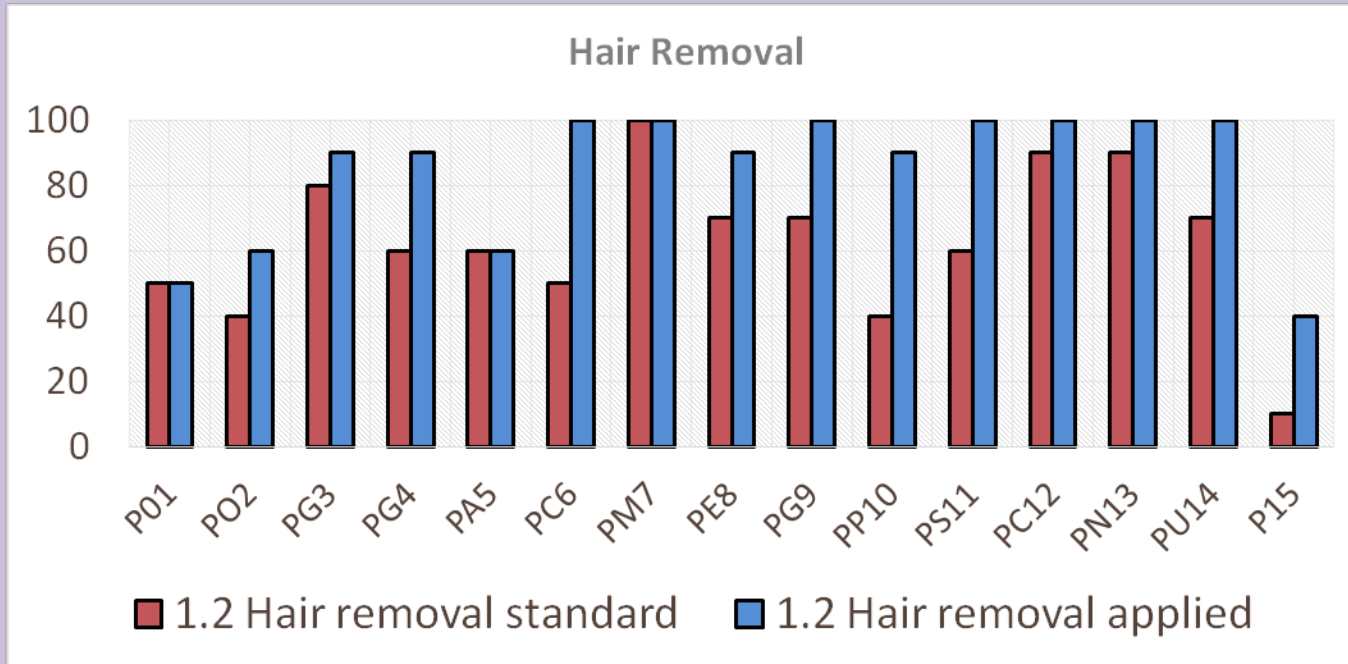


# Overall compliance with all elements

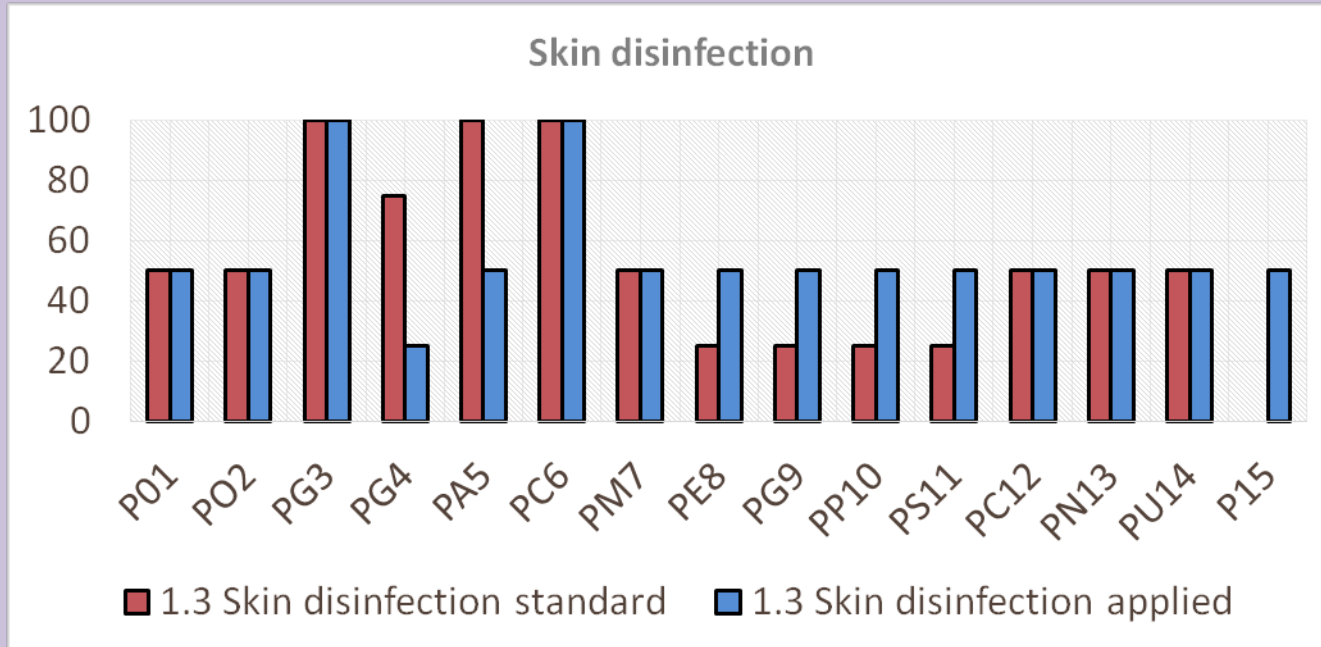




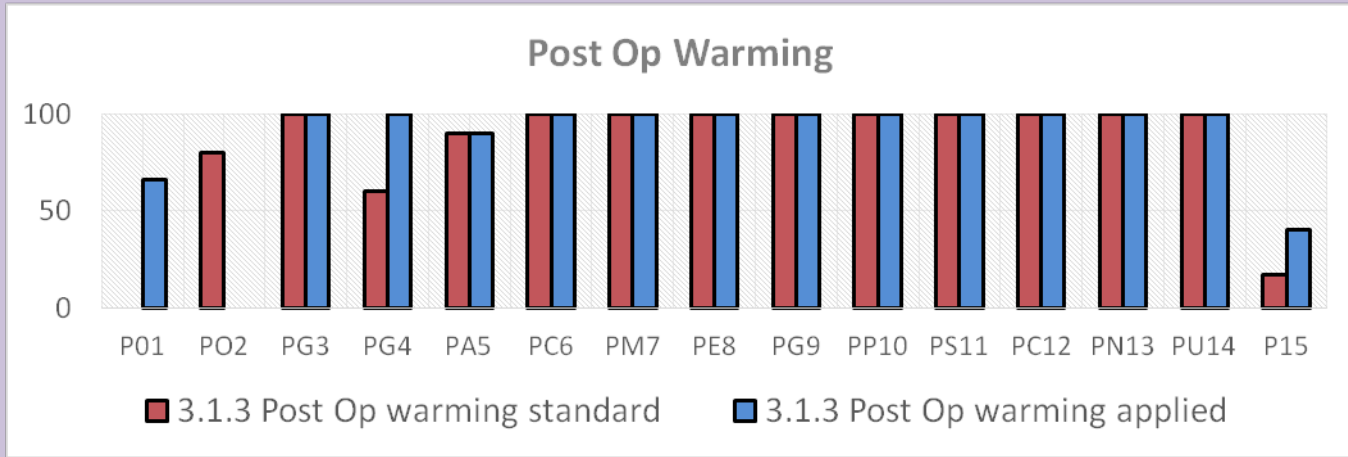
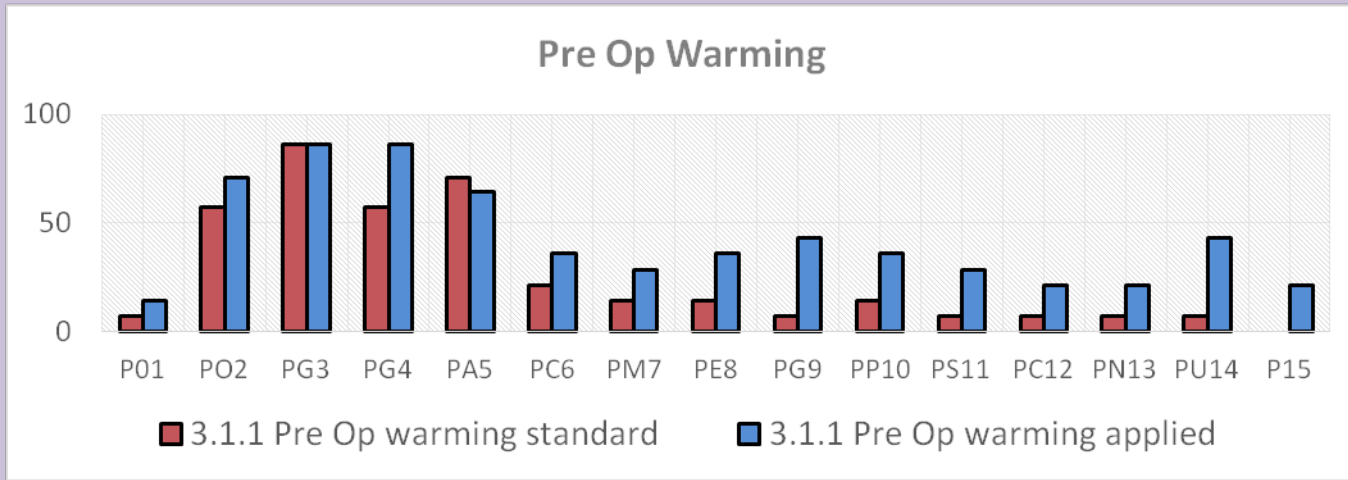
# Compliance with hair removal



# Compliance with skin disinfection



# Compliance with warming in at risk patients





# Action plan

<b>ACTION PLAN LEAD</b>		<b>ACTION PLAN TEAM</b>	
<b>Speciality</b>			
<b>Date</b>			

<b>AREA OF ONETOGETHER SURGICAL PATHWAY:</b>			
<b>Initial compliance score:</b>	%	<b>Re-assessed compliance score:</b>	%

IMPROVEMENT AREA	ACTIONS	LEADS	RAG	REVIEW DATE	COMMENTS/UPDATE

# Prioritising Actions

There are a number of ways in which a team may prioritise actions for improvement:

- In order of compliance scores
- Speed of implementation of actions required
- Risk assessment of non-compliance

OneTogether recommends that the results from the assessment, action planning and prioritisation should be reviewed and approved by a local multi-disciplinary team.

# Making improvements...

- ❑ Agree on where to focus energies to improve/change
- ❑ What could be changed easily?
- ❑ What needs more energy? More complex to deal with.
- ❑ Meetings and discussions with key stakeholders
  - feedback results
- ❑ Focus on the process, look closer
  - Ask what, why, when, how, who

# The journey towards improvement

- ❑ Tool gives you leverage to challenge poor practice and to trigger change and helps you ask the right questions to understand the problem first
- ❑ Change doesn't happen overnight, it needs perseverance
- ❑ Start from the easy and work your way to the most challenging
- ❑ Do not jump in with a solution immediately – look closer
  - What are the patients are saying?  
*‘one thing I remember from my operation experience is that I was sooo cold!’*
- ❑ Work with those who want to work with you first
- ❑ Keep focus on the WHY are we doing this
- ❑ Be realistic, know what works in your culture
- ❑ Celebrate success





# ‘Practice Improvement Toolkits’

to support localised quality improvement programmes:

- Skin preparation toolkit nearly complete and includes
  - Poster
  - Factsheet
  - Example of a protocol
  - Example of Staff competency document
- Work continuing on other toolkits to support the improvement of the other infection prevention standards

# OneTogether Conference 2017

**Birmingham Conference  
and Events Centre**



- Engage healthcare professionals and organisations
- Launch of the improvement toolkits
- OneTogether Impact Awards



# Website



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Join us in reducing the risk of infection on the patient's surgical pathway

Learn more >



**The POWER of collaboration**

OneTogether is a partnership between leading professional organisations with an interest in the prevention of surgical site infection (SSI). The partnership has been initiated as a quality improvement collaborative with the aim of promoting and supporting the adoption of best practice to prevent SSI throughout the patient's surgical journey. [Read more >](#)



**Helping you make a difference**



To support the use of OneTogether's Assessment Toolkit, the OneTogether Assessment Toolkit Training Video

**@OneTogetherUK**



**OneTogether is proudly supported by**

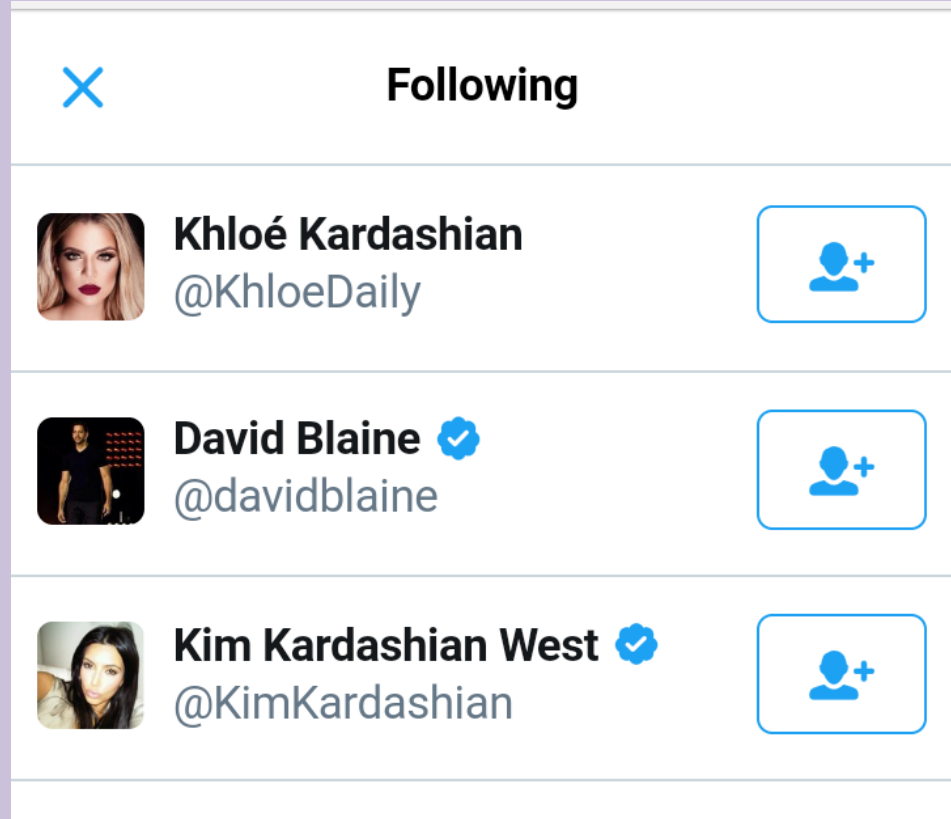
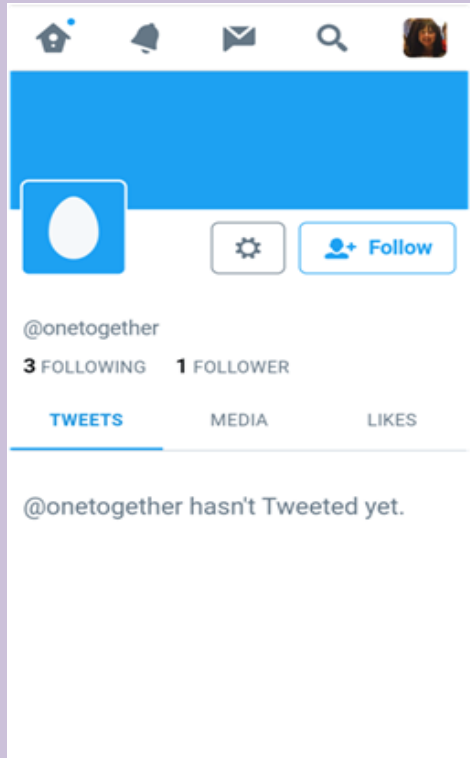




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# Thank you

