An Evaluation of the Impact of the NHS Education for Scotland Cleanliness Champions Programme on Clinical Practice

Full Report
An evaluation of the impact of the NHS Education for Scotland Cleanliness Champions Programme on clinical practice

Full Report

Dr Colin Macduff
Fiona Baguley
Dr John Gass
Michael Tuckwell
Dr Bernice West
Acknowledgements

The research team would like to thank all the NHS Scotland staff who gave their time to take part in this research. It is very much appreciated. Similarly we would like to acknowledge the help and advice of The Project Steering Group. We are particularly grateful to Christine Waddington, NES Information Services Officer, and all the staff from her department who did so much to enable the survey work.

Aberdeen
September 2009
TABLE OF CONTENTS

List of Figures 5
List of Tables 6
Glossary of abbreviations 7

SECTION 1: THE CLEANLINESS CHAMPIONS PROGRAMME:
CONTEXT, CONTENT AND PROGRESS 2002 – 2008

1.1 Introduction: the policy context 8
1.2 Cleanliness Champions Programme 2002–2003: Formulation and format 9
1.3 Cleanliness Champions Programme 2003–2006: Enactment and educational evaluation 12
1.4 The revised Cleanliness Champions Programme 2007 14
1.5 The commissioned evaluation of impact 2008 15

SECTION 2: EVALUATION DESIGN AND METHODS

2.1 An analytic framework 16
2.2 Evaluation structure, key features and ethical aspects 18
2.3 Methods used in Phase 1: Organisational perspectives 21

2.3.1 Initial consultations with key informants at national level 21
2.3.2 Pilot testing of a questionnaire for Cleanliness Champions 22
2.3.3 Organisational perspective questionnaire 22
2.3.4 Questionnaire survey of Local Health Board Co-ordinators (NHS National Hand Hygiene Campaign) 23
2.3.5 E mail survey of the perceptions of service managers 24

2.4 Methods used in Phase 2: Census questionnaire survey of Cleanliness Champions 25

2.4.1 Identification of Cleanliness Champions and logistical considerations 25
2.4.2 The questionnaire and its distribution 26
2.4.3 Questionnaire analysis methods 27

2.5 Methods used in Phase 3: Interviews 28

2.5.1 Considerations for sampling Cleanliness Champions 28
2.5.2 Access to colleagues 30
2.5.3 Interview topics and formats 30
2.5.4 Visits to Cleanliness Champions and colleagues 31
2.5.5 Interviews with key organisational contacts, Local Health Board Co-ordinators (Hand Hygiene) and clinical service managers 31
2.5.6 Analysis and synthesis of interview data 32

SECTION 3: FINDINGS FROM PHASE 1 (ORGANISATIONAL LEVEL PERSPECTIVES)

3.1 The organisational perspective questionnaire 33

3.1.1 Achievements and difficulties related to Health Board implementation of
Cleanliness Champions

3.1.2 Extent and nature of evidence of impact in key areas
3.1.3 Perceived prevalence of different types of CC role/practice development
3.1.4 Perceptions of behaviour change
3.1.5 Perceived facilitating factors
3.1.6 Perceived barriers to implementing change in practice following CCP completion

3.2 The questionnaire to Local Health Board Co-ordinators (Hand Hygiene)

3.2.1 LHBCs and interactions with CCs
3.2.2 LHBCs’ perceptions of the CCP and impact of CCs

3.3 The questionnaire to service managers

SECTION 4: FINDINGS FROM THE PHASE 2 CENSUS OF CLEANLINESS CHAMPIONS

4.1 Response rate
4.2 Key characteristics of respondents and representativeness of CCs as a whole
4.3 Respondents involvement with the CCP
4.4 Types of CC role/practice development
4.5 Enablers for the CC role
4.6 Barriers for the CC role
4.7 Impact on CCs own working practices
4.8 Impact on colleagues working practices
4.9 Perceived impact for patients
4.10 CCs’ reflections and projections
4.11 Trends and associations within the data set

SECTION 5: FINDINGS FROM THE PHASE 3 INTERVIEWS

5.1 Interviews with Cleanliness Champions
5.2 Interviews with Cleanliness Champions’ colleagues
5.3 Interviews with Clinical Service Managers
5.4 Interviews with Local Health Board Co-ordinators (Hand Hygiene)
5.5 Interviews with Key Organisational Contacts
5.6 Visits to Cleanliness Champions in workplace settings

SECTION 6: DISCUSSION OF FINDINGS

6.1 Limitations of the study
6.2 What more has been learned about the Cleanliness Champion Programme?
6.3 What has been learned about the impact of the Cleanliness Champion Programme?
6.4 Why has the Cleanliness Champion initiative impacted as it has in practice?
6.5 What might be the best way forward?
6.6 Conclusion

SECTION 7: RECOMMENDATIONS

REFERENCES

APPENDIX: Summary tables of main thematic content from interviews in Phase 3
**LIST OF FIGURES**

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure 2.1</td>
<td>The Cleanliness Champions Initiative as a Policy to Practice Development</td>
<td>17</td>
</tr>
<tr>
<td>Figure 2.2</td>
<td>Typology of CC role and practice development</td>
<td>20</td>
</tr>
<tr>
<td>Figure 4.1</td>
<td>Year completed the CCP</td>
<td>42</td>
</tr>
<tr>
<td>Figure 4.2</td>
<td>Versions of programme delivery used by respondents</td>
<td>43</td>
</tr>
<tr>
<td>Figure 4.3</td>
<td>Perceived relevance of programme for practice</td>
<td>43</td>
</tr>
<tr>
<td>Figure 4.4</td>
<td>How well programme prepared CCs for their role</td>
<td>44</td>
</tr>
<tr>
<td>Figure 4.5</td>
<td>Types of CC role/practice development</td>
<td>45</td>
</tr>
<tr>
<td>Figure 4.6</td>
<td>Self reported motivation level of CCs</td>
<td>46</td>
</tr>
<tr>
<td>Figure 4.7</td>
<td>Rating of impact for patients</td>
<td>56</td>
</tr>
<tr>
<td>Figure 4.8</td>
<td>Achievements in relation to expectations</td>
<td>58</td>
</tr>
</tbody>
</table>
LIST OF TABLES

Table 1.1: CCP learning units 10
Table 1.2: Envisaged attributes and parameters of CC role 11
Table 1.3: Main findings and recommendations of evaluation (West et al 2006) 13
Table 1.4: Main revisions incorporated in 2nd edition of CCP 14
Table 2.1: A typology of CC role and practice development 19
Table 2.2: Indicative initial sampling frame for interviewing CCs 29
Table 2.3: Core interview schedule for CCs 30
Table 3.1: Extent and nature of evidence of CC impact in key areas 34
Table 3.2: Perceived prevalence of types of CC role/practice development 35
Table 4.1: CC respondents by occupational group 41
Table 4.2: CC respondents by workplace setting 41
Table 4.3: CCs’ key allies 46
Table 4.4: Perceived impact on personal working practices 50
Table 4.5: Perceived impact on colleagues’ working practices 53
Table 5.1: Numbers of CCs interviewed 63
### GLOSSARY OF ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFC</td>
<td>Agenda for Change</td>
</tr>
<tr>
<td>CC</td>
<td>Cleanliness Champion</td>
</tr>
<tr>
<td>CCP</td>
<td>Cleanliness Champions Programme</td>
</tr>
<tr>
<td>HAI</td>
<td>Healthcare Associated Infection</td>
</tr>
<tr>
<td>HB</td>
<td>Health Board</td>
</tr>
<tr>
<td>HH</td>
<td>Hand hygiene</td>
</tr>
<tr>
<td>HPS</td>
<td>Health Protection Scotland</td>
</tr>
<tr>
<td>IC</td>
<td>Infection Control</td>
</tr>
<tr>
<td>ICM</td>
<td>Infection Control Manager</td>
</tr>
<tr>
<td>ICN</td>
<td>Infection Control Nurse</td>
</tr>
<tr>
<td>ICP</td>
<td>Infection Control and Prevention</td>
</tr>
<tr>
<td>ICT</td>
<td>Infection Control Team</td>
</tr>
<tr>
<td>ISD</td>
<td>Information Services Division (Scottish Government)</td>
</tr>
<tr>
<td>LHBC</td>
<td>Local Health board Co-ordinator (Hand hygiene)</td>
</tr>
<tr>
<td>MRSA</td>
<td>Methicillin Resistant Staphylococcus aureus</td>
</tr>
<tr>
<td>NES</td>
<td>NHS Education for Scotland</td>
</tr>
<tr>
<td>NHS QIS</td>
<td>NHS Quality Improvement Scotland</td>
</tr>
<tr>
<td>PPE</td>
<td>Personal Protective Equipment</td>
</tr>
<tr>
<td>RCN</td>
<td>Royal College of Nursing</td>
</tr>
<tr>
<td>RGU</td>
<td>Robert Gordon University</td>
</tr>
<tr>
<td>SEHD</td>
<td>Scottish Executive Health Department</td>
</tr>
<tr>
<td>SGHD</td>
<td>Scottish Government Health Department</td>
</tr>
<tr>
<td>SPSS</td>
<td>Statistical Package for Social Sciences</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organisation</td>
</tr>
</tbody>
</table>
SECTION 1: THE CLEANLINESS CHAMPIONS PROGRAMME: CONTEXT, CONTENT AND PROGRESS 2002-2008

1.1 Introduction: the policy context

International recognition of the significance of Healthcare Associated Infections (HAIs) for patient morbidity and mortality, and the related governance and service delivery issues for healthcare organisations, has developed substantially within the past decade. During this time, initiatives in various countries have sought to enhance educational opportunities for healthcare workers and to change the culture of healthcare services. Hand hygiene campaigns have been particularly prominent in this regard (World Health Organisation 2007).

Within this global context, there has been increasing development and integration of HAI initiatives within broader patient safety frameworks and campaigns. At international level this has resulted in a World Alliance for Patient Safety (WHO 2005). Within the USA, the Institute for Healthcare Improvement’s 100,000 Lives Campaign identified three HAI prevention practices as being amongst the top six key priorities for action (Wachter and Pronovost 2006).

The concerns, responses and developmental trends outlined above have similarly been prominent within Scottish healthcare policy (and politics) since the millenium. The Ministerial Action Plan (SEHD 2002) launched a series of integrated HAI prevention and control initiatives on surveillance, prudent prescription of antibiotics, measuring performance against national quality assurance standards, environment and education. These have become established and have evolved and expanded over the past seven years, as part of a whole systems policy approach which is operationally driven by the HAI Task Force. Chaired by the Chief Nurse for Scotland, this multidisciplinary Task Force now has a Delivery Plan designed to address over 50 areas for action between 2008 and 2011 (Scottish Government 2008). Moreover, within the broader ambit of the more recent Scottish Patient Safety Alliance, one third of the action areas are focused on HAI prevention and control.

The net result has been a myriad of related activity by Scottish Government bodies charged with supporting enactment. For example, recently:
NHS Quality Improvement Scotland has produced standards for HAI prevention and control (NHS QIS 2008)

Health Protection Scotland has overseen a national NHS Hand Hygiene Campaign incorporating mandatory quarterly auditing of compliance with hand hygiene by all of Scotland’s 14 territorial Health Boards (e.g. NHS HPS 2009). Within this context a Local Health Board Co-ordinator has also been appointed in each Board.

NHS Education for Scotland (NES) has been charged with taking forward the educational aspects of the Action Plan. This comprises a spectrum of initiatives ranging from the mandatory induction training framework for all healthcare staff through to more specialised educational resources for Infection Control Teams and specific disciplines like microbiologists. Within this spectrum, one of the most substantive and enduring initiatives has been the Cleanliness Champions Programme (CCP).

1.2 The Cleanliness Champion Programme 2002-2003: Formulation and format

In May 2002 it was suggested that there was a need for 3,500 “Cleanliness Champions” (SEHD 2002) and by the end of that year it had been decided that there should be at least one of these individuals (i.e. Cleanliness Champions) in each clinical area of the health service in Scotland who should have "a clearly defined role...and be appropriately trained" to support the infection control teams. Accordingly during 2002 NES representatives along with appropriate health professionals from across Scotland set about developing a work–based educational training programme to equip health care workers with the skills and knowledge necessary to ensure good local practice in preventing HAIs and to take on the role of Cleanliness Champion. Importantly, the Programme aimed to engage with a range of professional and ancillary health workers and was targeted at the key middle ground between general induction training and specialist practice.

In addition to preparing the educational programme, NES also developed organisational infrastructure for implementation involving key people and processes. This was guided by the “Diamond Model” (NES 2000) which focuses on: strategy; supporting structures; resource appraisal; and measuring outcomes. To co-ordinate this national project a central information and registration database was established. Each NHS Health Board/Division
was responsible for selecting suitable staff to undertake the programme and appropriate staff to provide mentorship. In addition each organisation appointed a local Registering Officer who supplied registration data (e.g. job title; occupational group; workplace setting) to the NES central records department. Thus co-ordination of the CCP was planned to operate at the local and national level.

The Cleanliness Champion Programme (CCP) was launched in September 2003. To facilitate uptake of the programme it was agreed to offer three main modes of delivery, namely: Web-based e-learning; CD Rom; and Hard Copy Open/Distance Learning (ODL). Moreover there was the option for local organisations to deliver content via in-person classroom sessions (Face to Face format) if desired. The developed CCP curriculum comprised 11 learning units (Table 1.1).

**Table 1.1: CCP learning units**

<table>
<thead>
<tr>
<th>Learning unit number and name</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Why Cleanliness Champions?</td>
<td></td>
</tr>
<tr>
<td>2 The chain of infection</td>
<td></td>
</tr>
<tr>
<td>3 Hand hygiene Parts 1,2,3</td>
<td></td>
</tr>
<tr>
<td>4 Personal protective equipment (PPE)</td>
<td></td>
</tr>
<tr>
<td>5 Safe use and disposal of sharps</td>
<td></td>
</tr>
<tr>
<td>6 Maintenance of clean healthcare environment</td>
<td></td>
</tr>
<tr>
<td>7 Safe handling and disposal of waste</td>
<td></td>
</tr>
<tr>
<td>8 Food hygiene and pest control</td>
<td></td>
</tr>
<tr>
<td>9 Staff hygiene and dress</td>
<td></td>
</tr>
<tr>
<td>10 Patient care practices</td>
<td></td>
</tr>
<tr>
<td>11 The role of the Cleanliness Champion and its impact on the patient’s experience</td>
<td></td>
</tr>
</tbody>
</table>

Each unit involved a number of learning activities, some of which were work-based. The curriculum development group estimated that the programme’s on-line learning activities would take around 16–20 hours in total. Taking into account the related work-based activities, it was estimated that the programme could be completed in approximately 14–16 weeks. Each student was required to maintain a Folder of Evidence of Learning documenting the learning journey and achievement of unit competencies. It was recommended that their mentor authorised or “signed off” the satisfactory completion of each Unit.
The role of the Cleanliness Champion, as envisaged in the CCP and supporting materials, is presented in terms of attributes and role parameters (Table 1.2)

**Table 1.2: Envisaged attributes and parameters of CC role**

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Role parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Being motivated and interested</td>
<td>Be an identified team member selected from within existing care team</td>
</tr>
<tr>
<td>Being able communicators</td>
<td>Be specifically prepared for the role through a national training programme</td>
</tr>
<tr>
<td>Being assertive</td>
<td>Undertake the role as an integral component of his or her existing job</td>
</tr>
<tr>
<td>Being diplomatic</td>
<td>Act as a role model and provide support to other team members, within the scope of his or her own remit</td>
</tr>
<tr>
<td>Being adaptable</td>
<td>Liaise with a range of staff, as agreed with the line manager</td>
</tr>
<tr>
<td>Being a “self-starter”</td>
<td>Be recognised by the team for his or her contribution to prevention and control of infection in relation to the areas in CCP, but will not be expected to deliver specialist advice</td>
</tr>
<tr>
<td>Being a team player</td>
<td>Contribution to the organisation’s review of practice standards, at the request of the ICT and through the line manager. He or she may also undertake and report on local observation studies relating to compliance, as agreed with the line manager</td>
</tr>
<tr>
<td>Being perceptive and aware</td>
<td></td>
</tr>
<tr>
<td>Being realistic about competencies and abilities</td>
<td></td>
</tr>
</tbody>
</table>
1.3 The Cleanliness Champion Programme 2003-2006: Enactment and educational evaluation

During the first year of the Programme several Health Boards were in the vanguard of enactment, while others struggled to find the capacity to resource and support their staff in such a way that substantial numbers could complete the programme within four months. By the end of July 2005, 3099 staff had registered on the programme. Of these 523 had completed it and 195 had withdrawn. With HAI policy and practice coming ever more into the mainstream political arena, the disparity between numbers of registrants and completers was highlighted in the press around this time and periodically thereafter. During 2005, the Chief Nurse for Scotland introduced a policy that all G grade nurses (i.e. typically senior clinical nurses) would be required to undertake the programme. This heralded a major change in the nature of many staff’s initial engagement with the Programme. Up to that time slightly over half of CCP students had been volunteers, while 45% had been nominated by a manager or colleague.

During 2005, a commissioned evaluation of the development and implementation of the educational programme was also underway. Undertaken by a team from Robert Gordon University which included several of the present authors, this research aimed:

1. To evaluate the role of NES in terms of its development of the programme, its strategy for supporting implementation, and congruence between intention and enactment.
2. To evaluate the educational programme curriculum in terms of its content, formats and related processes.
3. To evaluate the experiences of the students who undertook the programme, their mentors, and key health service managers who were involved in implementing the programme.
4. To make informed initial judgement in regard to the programme’s overall fitness for purpose.

The full report from this study (West et al 2006) is available at:

The reader is referred to this source for details of research processes, findings and recommendations. However, in order to give relevant context for the present report, Table 1.3 now summarises the main findings and recommendations of the evaluation.

Table 1.3: Main findings and recommendations of evaluation (West et al 2006)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The process of programme development overcame some initial difficulties to produce a curriculum that met the basic educational needs of a broad range of staff with a wide spectrum of previous educational attainment. The role of NES was widely praised by participants.</td>
</tr>
<tr>
<td>2</td>
<td>The very large volume of positive comments highlighting the usefulness and positive impact of the programme materials was remarkable, especially as many staff had difficulty in getting time at work to complete the learning units.</td>
</tr>
<tr>
<td>3</td>
<td>The three main modes of programme delivery each proved useful and the key message in this regard was the value of multiple, flexible formats for delivery of this type of national programme.</td>
</tr>
<tr>
<td>4</td>
<td>The main criticisms of the curriculum were that it was repetitive and that some content was perceived as not relevant for certain groups of students. The survey helped to identify which learning units had been least useful for particular occupational groups, and which were valued by almost all.</td>
</tr>
<tr>
<td>5</td>
<td>The main difficulty with the initiative was the health service management of this relatively large-scale educational programme. In particular, most areas had struggled to find the capacity to resource and support their staff in such a way that substantial numbers could complete the programme in less than four months.</td>
</tr>
<tr>
<td>6</td>
<td>It was recommended that review and potential restructuring of the programme to enhance student choice could not only help students to complete the programme quicker, but also help maintain focus/motivation for new cadres of Cleanliness Champions which contained smaller proportions of voluntary students.</td>
</tr>
<tr>
<td>7</td>
<td>Infection Control Nurses emerged as the backbone of the mentoring system. The findings clearly showed that this group of nurses and their other colleagues within Infection Control Teams had played a pivotal role in CCP success so far.</td>
</tr>
<tr>
<td>8</td>
<td>Uptake of the CCP was very much dominated by nursing staff who constituted at least two thirds of all students and three quarters of all mentors. Moreover two thirds of all students were based in acute hospitals. Several key professional groups (e.g. front-line medical staff) were noticeable by their lack of engagement with the programme, and concerted efforts were needed to address this.</td>
</tr>
<tr>
<td>9</td>
<td>Healthcare Assistant and Domestic Services staff appeared to have very positive experiences of the Programme, and it was recommended that every clinical area should have a CC from one of these occupational groups.</td>
</tr>
<tr>
<td>10</td>
<td>The CC role appeared to have been translated into practice in a number of ways ranging from “silent” individual role modelling through to vocal advocacy, challenging of practice and service re-design. This seems to have been related to individual motivation, perceived workplace support and perceptions of authority and autonomy. By leaving substantial scope for interpretation of CC role enactment, the educational programme encouraged enrolment of a relatively diverse range of healthcare staff in this initiative. However there was opportunity to more directly support the CC role in order to influence local action plans, and several ideas were proposed that might help this happen.</td>
</tr>
</tbody>
</table>
As such, it can be seen that the CCP emerged as very largely fit for its intended purpose of giving healthcare staff core knowledge and skills in the prevention and control of HAIs. Interestingly, the evaluation was also informed by the views of those who had pioneered the use of the CCP with undergraduate medical, dental and nursing students (e.g. see Chalmers and Straub 2006) between 2003 and 2005. Within these contexts, the CCP appeared to have significant potential as a core primary educational tool that could be used to prepare new healthcare practitioners.

1.4 The revised Cleanliness Champions programme 2007

During 2005, 2006 and 2007 many G grade nurses registered on the programme and completed it. The use of classroom/face-to-face learning sessions, often blended with use of hard copy learning materials, appears to have become more prevalent and to have increased completion rates. As part of ongoing quality assurance and improvement processes informed by the 2006 evaluation, NES introduced a revised 2nd edition of the CCP educational materials in October 2007. The main revisions made are summarised in Table 1.4.

Table 1.4: Main revisions incorporated in 2nd edition of CCP

<table>
<thead>
<tr>
<th>Change</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>The introduction to the programme has been included in Unit 1.</td>
<td></td>
</tr>
<tr>
<td>Unit 9 ‘Staff Hygiene and Dress’ has been combined with Unit 11 ‘The Role of the Cleanliness Champion’ to create the new Unit 10.</td>
<td></td>
</tr>
<tr>
<td>Unit 10 ‘Patient Care Practices’ has been modified to make it more applicable to a wider range of healthcare workers with more of a risk management approach. It has been renamed Unit 9 ‘Reducing Risk’.</td>
<td></td>
</tr>
<tr>
<td>Many photographs, graphics and illustrations have been revised.</td>
<td></td>
</tr>
<tr>
<td>Workplace activities have been reviewed and made more generic where appropriate.</td>
<td></td>
</tr>
<tr>
<td>The requirement for photocopying or printing has been reduced significantly.</td>
<td></td>
</tr>
<tr>
<td>Students are asked to enter findings directly into their Folder of Evidence where space is provided.</td>
<td></td>
</tr>
<tr>
<td>More information for the student and the mentor at point of use.</td>
<td></td>
</tr>
<tr>
<td>Further clarification has been given as to what is required to be written within the Folder of Evidence.</td>
<td></td>
</tr>
</tbody>
</table>

Moreover, by this time fully customised versions of the CCP were available on the web only for: dental services staff; Scottish Ambulance Service staff; dental undergraduates; and medical undergraduates.
1.5 The commissioned evaluation of impact 2008

Following a process of competitive tendering towards the end of 2007, NES commissioned our team from RGU to undertake an external evaluation of the impact of the CCP. The original aim of the evaluation as given by NES was to: “evaluate the impact on clinical practice of nursing staff following completion of the Cleanliness Champion Programme and to assess the contribution to patient care which undertaking the programme has made”. At the 1st meeting of the Evaluation Steering Group in April 2008 it was agreed to widen this remit beyond nursing staff in order to include any NHS staff who had undertaken the programme. This covered the 14 Territorial Health Boards and 4 of the Special Health Boards, but excluded non-NHS staff who may have completed the programme. It also excluded students from healthcare disciplines such as medicine, dentistry and nursing which had all incorporated the CCP into their undergraduate programmes by 2008. These programmes have integral evaluation processes (for example see Kerr et al 2009).

The specific given objectives were:

- To explore changes in the behaviours relating to infection control and prevention of infection of staff who have undertaken the cleanliness champion programme.

- To gather evidence of changes in clinical practice following completion of the cleanliness champion programme.

- To identify the barriers to implementing change in practice following completion of the cleanliness champion programme.

- To identify factors which facilitate the implementation of change in practice following completion of the cleanliness champion programme.
SECTION 2: EVALUATION DESIGN AND METHODS

2.1 An analytic framework

In order to address the four specific objectives, it was firstly useful to locate the evaluation within the wider context of the overall Cleanliness Champions initiative. To this end we drew on the Model for Analysing Policy to Practice Executive Developments (“MAPPED”; Macduff 2007a). Figure 2.1 depicts the Cleanliness Champions Initiative as a Policy to Practice development.
Figure 2.1 The Cleanliness Champions Initiative as a Policy to Practice development

**Part 1: Initial policy formulation and advancement**

<table>
<thead>
<tr>
<th>Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advocated agendas around ICP</td>
</tr>
<tr>
<td>Awareness of need/opportunity for an aligned initiative</td>
</tr>
<tr>
<td>Aspiration for CCs</td>
</tr>
<tr>
<td>Authority</td>
</tr>
<tr>
<td>Alliances for advancement</td>
</tr>
<tr>
<td>Advantageous adaptation</td>
</tr>
</tbody>
</table>

**Part 2: Taking the policy initiative forward towards enactment**

<table>
<thead>
<tr>
<th>Level of analysis</th>
<th>Mode of technological development</th>
<th>Mode of knowledge production</th>
<th>Mode of containment</th>
<th>Mode of strategic expansion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ideation</td>
<td>Idea of a national educational programme for all h.c. occupational groups. Expectations of utility and effectiveness.</td>
<td>Idea of supplementing formative reviews of progress with formal external evaluations.</td>
<td>Idea of maintaining control over integrity of CCP as one distinct programme.</td>
<td>Idea of capitalising on enthusiasm of key actors to build momentum.</td>
</tr>
<tr>
<td>Mobilisation</td>
<td>NHS Diamond Model used to plan implementation strategy.</td>
<td>Commissioning of external evaluations of programme and its impact.</td>
<td>Work of Steering Group, Editorial Group and Practice Education Coordinator.</td>
<td>Work with early adopter Health Boards as a conduit to expansion across all NHS and beyond.</td>
</tr>
</tbody>
</table>

**Part 3: Key elements influencing articulation between policy and practice**

- The enacted CCP with 4 delivery options, suggested CC attributes and role parameters
- The national evaluation of programme contents
  - Local audits
  - The planned national evaluation of clinical impact
- Structural constraints on dynamic instability (central control mechanisms to co-ordinate)
  - e.g. central and regional registration mechanisms
- Regional and local organisation structure and practices
  - Characteristics of translating organisations
  - Effectiveness of communication strategies, mentoring, monitoring and feedback

**Part 4: Translation and enactment of CC role at local clinical level**

- **LEVEL 1:** Practices of Individuals
- **LEVEL 2:** (Clinical Level) Situated Power, Service Priorities and Embedded Culture of Place

<table>
<thead>
<tr>
<th>KEY TO - - - LINES IN PART 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>a = CC undertaking programme and integrating it into practice</td>
</tr>
<tr>
<td>b = CC's programme activities eg local audits</td>
</tr>
<tr>
<td>c = CC's relationship with the national initiative and its processes</td>
</tr>
<tr>
<td>d = CC's relationship with mentor and local organisation (e.g. Infection Control Dept)</td>
</tr>
<tr>
<td>e = Relationship between clinical area and local organisation (e.g. monitoring/auditing)</td>
</tr>
</tbody>
</table>
The light green shaded areas within Figure 2.1 relate to the development and evaluation work undertaken up until 2007. In contrast the yellow shading indicates the primary areas of interest for the evaluation of the CCP’s clinical impact. The most relevant inter-relationships between these areas are indicated and explained at the foot of Figure 2.1.

### 2.2 Evaluation structure, key features and ethical aspects

As such, Figure 2.1 highlights the importance of three particular areas for enquiry, namely:

- Organisational support for the initiative and individual Cleanliness Champions, and how they have monitored the impact of the initiative on clinical practice and within the organisation (Figure 2.1, Part 3, far right.).
- The practices of individual Cleanliness Champions themselves in terms of changes in their clinical practice with patients and associated behaviours relating to infection prevention and control (e.g. with relatives and visitors). See Figure 2.1, Part 4, Level 1.
- The “deeper” impact of the Cleanliness Champions on behaviours and practice within the local clinical area as a whole, particularly in terms of any changes initiated (Figure 2.1, Part 4, Level 2) and associated outcomes (e.g. for patients).

Consequently the evaluation was structured around these three main areas. Moreover we sequenced enquiry broadly in the order described above so that the evaluation had three distinct (but at times concurrent) phases. These will be described in the next sub-sections of this report in terms of the principal methods used. The four evaluation objectives detailed are present and addressed within each of these three research phases.

A particular feature of the evaluation was the application of a typology of role and practice development (Macduff 2006, Macduff 2007a and Macduff 2007b). This typology had been developed and tested in previous evaluation work where:

- new role holders had been given substantial scope to interpret a role and translate it into practice
- the desired outcomes related to this new role were not specified in terms of one detailed measurable target, but were multiple and more general in nature
- local context was a powerful shaping factor

As such, it appeared apposite. For the purposes of this new application, customisation of the typology was informed by the CC role parameters envisaged in Table 1.2, and by our previous CCP evaluation’s findings about initial integration of the role into clinical practice (see Table 1.3, Item 10). The resultant types and descriptors are presented in Table 2.1.

**Table 2.1: A typology of CC role and practice development**

<table>
<thead>
<tr>
<th>Type of role/practice development</th>
<th>Key features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slow/No go</td>
<td>Very limited/no development of key aspects of the CC role such as individual role modelling, recognition of contribution by other clinical team members, and working with ICT. Therefore very little/no impact on clinical practice.</td>
</tr>
<tr>
<td>Slow build</td>
<td>Some development of key aspects of the CC role, particularly individual role modelling of good practice. One or two key allies in the clinical team, but limited wider recognition of contribution. A moderate impact on clinical practice so far.</td>
</tr>
<tr>
<td>Push/Pull</td>
<td>Vigorous development of the CC role in terms of individual role modelling and assertion of good practice. However, a struggle to achieve any substantial recognition of contribution by other clinical team members. May or may not have good relations with ICT. A moderate impact on clinical practice so far.</td>
</tr>
<tr>
<td>Forming</td>
<td>Substantial development of key aspects of the CC role such as individual role modelling, recognition of contribution by other clinical team members, and working with ICT. Productive team approach making substantial impact within the clinical practice area.</td>
</tr>
<tr>
<td>Transforming</td>
<td>Very significant development of all aspects of the CC role including individual role modelling, recognition of contribution by other clinical team members, and working with ICT. Transforming infection prevention and control practice in the local clinical area.</td>
</tr>
<tr>
<td>Other</td>
<td>Respondent asked to describe key features of different type(s) found</td>
</tr>
</tbody>
</table>

The typology seemed to offer particular potential for Cleanliness Champions to self-assess in relation to the putative role/practice development types, with the option to describe their experience in different terms (see Table 2.1) if desired. Moreover there was also some potential for relevant colleagues to make assessment using this tool.
Figure 2.2 provides summative overview by mapping the typology on to the relevant part of the study’s analytical framework.

**Figure 2.2: Typology of CC role and practice development**

The evaluation used a mix of qualitative and quantitative methods. The next sub-sections of the report describe the principal methods used in the three main phases of the evaluation. Throughout the time of the study, reviews of relevant literature on HAI, national educational initiatives, and impact evaluations were carried out. Ongoing consultations with the evaluation Steering Committee and other key figures in the field also informed our thinking.

Following commissioning, there was consultation with the NHS Research Ethics Service who saw the study as a service evaluation rather than research requiring a full ethics application. The study also gained Robert Gordon University ethics approval prior to commencement.
2.3: Methods used in Phase 1: Organisational perspectives

As outlined above, Phase 1 was concerned with obtaining organisational perspectives on the CCP, particularly in terms of its impacts. This involved a range of people and processes. Where the processes involved checking initial understandings/tools and refining the study design, outcomes are summarised in this sub-section of the report, rather than in the findings section (Section 3).

2.3.1 Initial consultations with key informants at national level

Very early in the study, consultative interviews were carried out with three senior NHS staff. The aim was to obtain the views of key individuals with national remits for infection prevention and control that were particularly relevant to the Cleanliness Champion initiative. This also allowed us to check our initial understandings, and to explore proposed research approaches.

These informants gave insights into the “bigger picture” of HAI prevention and control activity across Scotland, highlighting the large number of initiatives impacting concurrently at all levels for NHS Boards (as outlined in Section 1.1). This meant that staff with ICP remits were very busy indeed, particularly in relation to issues that were high on the political agenda (e.g. rates of Clostridium difficile and MRSA). This was helpful in further sensitising our team to the research context and to the reality that our requests for participation and information would have to compete with a range of other pressing priorities.

Within this wider context, the value of the CCP was clearly recognised. During the interviews we explored the potential value of a range of outcome indicators in quantifying the CC contribution to patient care. These ranged from volume of personal protective equipment being used/amounts of hand gel, through to microbiological aspects such as rates of Staph. aureus bacteraemia. In all cases, however, direct attribution to the impact of Cleanliness Champions was seen as inherently problematic, due to the large number of concurrent “confounding” variables (such as separate hand hygiene and environmental audit initiatives).
2.3.2 Pilot testing of a questionnaire for Cleanliness Champions

Early in Phase 1 we asked a key contact in each Health Board to complete a questionnaire giving the organisation’s perspective on implementation and impact of the CC initiative. Further details on methods employed are given below in Section 2.3.3.

However, we also asked the key contact to distribute questionnaires to a cross section of any 12 CCs in their Health Board. This was designed to test the typology and to inform the design of the Phase 2 CC questionnaire. A total of 228 questionnaires were given to key contacts to distribute and 60 were returned to us (26%). From subsequent conversations with these key contacts it became clear that not all questionnaires had been distributed. This highlighted the limitations of distribution through a third party.

Nevertheless, the CC responses were very useful in giving an initial “flavour” of perceived impacts, barriers and facilitators. This informed subsequent questionnaire content and format. The role and practice development typology question was clearly understood and answered by CCs.

2.3.3 Organisational perspective questionnaire

As indicated above, early in the study we sought to identify a key contact in each of the 18 Health Boards. We were seeking individuals who had both purview of ICP and HAI matters within their Health Board, and operational knowledge of the local implementation and impact of the CC initiative. Recruitment was aided by a national Cleanliness Champions event in April 2008. Nineteen key contacts were established (one of the large Health Boards suggested two would be most practical and productive). These individuals were typically: Infection Control Managers; Senior Infection Control Nurses; or Cleanliness Champions Facilitators.

A questionnaire was developed that sought an organisational perspective on:

- organisational achievements in CC implementation and enabling factors
- organisational difficulties in CC implementation and influencing factors
- extent and nature of any evidence of the impact of the CC initiative in terms of: prevention and control of infection; patient focus and public involvement;
environment and equipment; education and training; and any other area(s). These areas reflected the foci of the new HAI Standards (NHS QIS 2008)

- which of the CC role/practice development types seemed most prevalent within the Health Board (rank ordering using typology)
- practice behaviours of CCs, related influence on colleagues, influencing factors (facilitators and barriers), and cultural considerations
- if they may be prepared to take part in a subsequent interview (Phase 3)

The key informant was asked to consult with relevant colleagues where/as necessary in order to form a judgement, and to send any documentary evidence they may have of the impact of CCs. The questionnaires were mailed to the key contacts, and a follow-up reminder was sent in the event of non-response. Data were entered on to an SPSS database. Content analysis of qualitative data was undertaken and simple descriptive statistics used to collate quantitative data. Findings from this questionnaire are reported in Section 3.

### 2.3.4 Questionnaire survey of Local Health Board Co-ordinators (NHS National Hand Hygiene Campaign)

Early in the study it also became apparent that useful perspectives could be obtained by seeking the views of the 17 Local Health Board Co-ordinators (LHBCs) who had been appointed during 2007 and 2008 to take forward the NHS National Hand Hygiene Campaign in each Health Board. To this end, a questionnaire was designed asking about:

- their own role, activities and whether they were a CC or not
- any relationship between their role and CCs (e.g. contact with CCs; involvement of CCs in HB teaching and auditing of Hand Hygiene etc.)
- their perceptions of the impact of CCs and any influencing factors on success
- their views on the future of the CCP and the role of CCs
- if they may be prepared to take part in a subsequent interview (Phase 3)

The questionnaires were mailed to the LHBCs, and a follow-up reminder was sent in the event of non-response. Data entry and analysis was undertaken as described in Section 2.3.3. The findings from this questionnaire are reported in Section 3.
2.3.5. *E mail survey of the perceptions of service managers in each HB*

In addition to seeking the views of those with more specialist Infection Control remits, we felt it was also important to try to elicit evaluations of impact from service managers who may have had some knowledge of/involvement in the development but were not necessarily instrumental in leading it. A sampling frame was constructed to target a total of 312 managers nationally. Within this frame we sought proportionate samples of managers to reflect the different size of each Health Board (based on routinely collected data on managerial staff from ISD Scotland). Distribution was achieved by asking Infection Control Managers in each Health Board to forward an e-mail invitation from us to the requisite sample of local middle managers. They were instructed to try to achieve a cross section of managers working at operational/clinical level (rather than highest strategic level). Again, the limitations of sampling in this way through third party distribution were recognised, but it was reasoned that this was a practical way of obtaining views from staff known to be faced with diverse implementation/translation challenges.

To this end the e mail message and associated web based questionnaire were made very brief. The latter sought:

- details of location and nature of service management
- rating of overall impact of the CC initiative in own area (i.e. substantial/some none noticeable/unable to say)
- brief description of the nature of the impact
- participation in a subsequent interview (Phase 3)

The web questionnaire was designed to be returned anonymously through a secure RGU webserver which generated an Excel spreadsheet of results. In view of the many other concurrent demands on Health Board’s Infection Control Managers, we did not ask for reminder e mail messages to be distributed. The findings from this questionnaire are reported in Section 3.
2.4: Methods used in Phase 2: Census questionnaire survey of Cleanliness Champions

2.4.1 Identification of CCs and logistical considerations

A key part of the evaluation involved finding out more about Cleanliness Champions’ own perceptions of implementation and impact. To this end, we undertook a large-scale questionnaire survey of all staff known to have completed the CCP. This approach used similar methods to those we developed and successfully used in the previous evaluation of the CCP as an educational programme (West et al 2006).

The latter experience, and subsequent consultations at national level (NES CC registration team) and local levels (Registering Officers for CC in Health Boards), confirmed many of the logistical challenges in accessing Cleanliness Champions. Importantly, the research team could not establish direct primary contact with CCs due to the Data Protection Act. While NES held the central record of all those who had registered, completed or withdrawn from the programme, Registering Officers within each Health Board often held more detailed information such as full work contact address. The net effect was that, as before, we would have to work with each Registering Officer to establish the most productive means of ensuring maximum survey distribution and return. For some Boards this would involve forwarding our questionnaire packages to Champions through internal mail, while for others it was preferable that NES carried out forwarding via the postal system. The latter method had produced a better response rate in our previous evaluation (46% as opposed to 34% from Health Board’s internal distribution; West et al 2006). Again this highlights the limitations associated with third party distribution systems (Gerrish and Guillaume 2006).

Consultations also confirmed that it could be very difficult to keep track of contact details for CCs who moved on. As CCs could have completed the Programme any time in the past five years, it was likely that many such staff had moved internally within Boards or left altogether. While the idea of an exclusively e-mail based survey had much superficial appeal, our consultations suggested that this would only give very partial coverage (e.g. e-mail addresses were not mandatory at registration; many nurses had not yet moved to nhs.net addresses; many e-mail addresses were known to be out of date; and some staff still lacked regular access to computers).
Our initial plan had been to send a separate questionnaire to CCs and to mentors. However it became clear during consultations with Registering Officers that the percentage of mentors who were also CCs had increased very considerably since our previous survey when it was 34%. Moreover some local Registering Officers held no contact details for mentors at all. Accordingly it was decided to have one questionnaire only for CCs, incorporating a small sub-section asking for a “mentors-eye” view where appropriate.

2.4.2 The questionnaire and its distribution
The questionnaire was developed from those used during our previous evaluation, and from the pilot testing described in Section 2.3.2. The final version comprised six sections:

1. Information about you (demographics; contextual information)
2. Your involvement with the CCP (e.g. volunteer or nominee; completion time; version used; relevance and adequacy of preparation for role? etc.)
3. Perceived type of role/practice development (self-assessment using typology)
4. Enablers and barriers for the role (key allies; influencing factors; motivation level etc.)
5. Extent and nature of impact of CCP on own working practices and those of colleagues (in terms of 7 key practice areas)
6. Perceived impact for patients (overall rating of extent and nature of any outcomes)
7. Mentoring experience (if relevant)
8. Reflections and Projections (assessment of achievements; views on future local and national development of CC; any other comments)
9. Willingness to take part in a subsequent interview (Phase 3)

Following final checks with NES and local Registering Officers/Cleanliness Champion Co-ordinators, questionnaires were sent out during August 2008 to all staff in Scotland’s 18 Health Boards who were known to have completed the CCP. A total of 5,550 questionnaires were sent out from RGU for distribution (3429 via HB Registering Officers/Cleanliness Champion Co-ordinators and 2121 via NES). However, one of the Health Boards subsequently informed us that numbers for their Board had been over-calculated and that 150 questionnaires were neither needed nor distributed. Accordingly the total number of questionnaires thought to have been distributed is 5,400, although we
know of at least one fairly large Health Board where many questionnaires seem not to have been distributed at all due to other pressures of work. Hence the denominator for calculating response rate is likely to be lower than the 5,400 figure we are using. In the knowledge that the contact details for some CCs would be out of date, we arranged for return stickers to go on the back of the postal questionnaires. Moreover, as an incentive to respond, the questionnaire offered entry into a prize draw for £100 worth of book tokens and £100 of Fair Trade Foodstuffs.

The scale and logistic demands of the above national exercise meant that it would have been difficult to repeat it in order to follow-up and remind CCs to respond. Specifically, through consultations we knew it was unlikely that many HBs would be willing to facilitate this again on our behalf by these postal means. Accordingly a second phase of the census involved asking willing HBs to draw on any existing e-mail distribution lists for CCs in order to distribute an invitation to complete a web-based version of the questionnaire. This proved feasible in seven HB regions and took place in October 2008.

2.4.3 Questionnaire analysis methods

Answers to the limited response choice questions within the survey questionnaires were entered numerically on to a pre-coded SPSS database (version 15). Routine cross-checking of data entry was carried out throughout the study and this was augmented by a further series of comprehensive checks on completion of data entry. Following this process, descriptive statistical analyses took place at the level of producing basic frequencies for each numeric variable and measures of central tendency for those that were continuous in nature.

Following further checks of internal validity, three main methods were used in order to explore relationships within the data and make inferences. Firstly cross-tabulation was used to explore associations between nominal, categorical variables. The Contingency Co-efficient figure was used to measure the strength of associations, with significance being inferred at the 5% level (i.e. p<=0.05) and expected values being generated in order to understand the direction of associations. Secondly, where data were ordinal in nature, non-parametric tests of independent samples were used as appropriate (Mann Whitney U and Kruskal-Wallis). These compare median responses based on ranking. Again
significance was inferred at p=<0.05. Thirdly where variables were continuous in nature (e.g. total time taken to complete the programme), comparison of means undertaken for sub group analysis used either the related $t$ test or the one way ANOVA procedure, as appropriate.

Answers to space-limited free-text questions within the survey questionnaire were initially entered in their entirety on the same database as “string” variables. However, through an iterative process whereby the research team read and compared these responses, a number of thematic sub-coding categories were generated for most of the free-text variables.

2.5: Methods used in Phase 3: Interviews

2.5.1 Considerations for sampling Cleanliness Champions

Phase 3 of the study aimed to interview a range of participants in order to obtain more in-depth perspectives. To this end, the CC census questionnaire invited respondents to indicate their willingness to take part in an interview. It was thus possible to identify a pool of potential cases that could offer further insights into different types of CC role and practice development, and related behaviours and impacts. As a recent Scottish HAI study (Henry et al 2006) had shown the difficulties of recruiting nurses at ward level to take part in observed audit, focus groups or questionnaire testing, we judged that offering telephone interviews to CCs might be most feasible. Moreover, this could offer a way into contacting other clinical colleagues.

The typology question in the CC questionnaire (see Table 2.1) was used as an initial sampling frame so that we might study the different types of CC development in proportion to their prevalence as reported in Phase 2 (see Figure 4.5). In this way we sought to select a total of 18 CCs to interview as indicated in Table 2.2. As statistical analysis had shown that CCs willing for interview tended to be significantly more positive on a number of factors (e.g. motivation, perceptions of impact, and perceptions of outcome) than the remainder of respondents, we deliberately adjusted our sampling slightly to give greater proportionate coverage of the less positive types of development. This is reflected in the figures in Table 2.2.
Table 2.2: Indicative initial sampling frame for interviewing CCs

<table>
<thead>
<tr>
<th>Type</th>
<th>Number of CC interviews sought</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slow/No go</td>
<td>2</td>
</tr>
<tr>
<td>Slow build</td>
<td>4</td>
</tr>
<tr>
<td>Push/pull</td>
<td>3</td>
</tr>
<tr>
<td>Forming</td>
<td>5</td>
</tr>
<tr>
<td>Transforming</td>
<td>3</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

Within this parameter we were also seeking to select the permutation of cases that offered best coverage of the following factors:

- Insight into qualified nursing staff experiences, especially AFC 6 and 7 grades
- Insights into HCA and AHP experiences
- Insights into line managers’ experiences
- Insight into domestic experiences
- Insights from a variety of settings (e.g. community, nursing care home) as well as acute
- Insights from a number of Health Boards (i.e. where different contexts and organisational approaches offer different learning opportunities)

These factors were prioritised based on the known characteristics of the CC corpus and purposive judgements intended to maximise learning (e.g. the knowledge that the CCP had been made mandatory for G grade nurses in the recent past).

A mapping was consequently made of all potential CC interviewees in terms of these factors and the overall learning potential offered. On this basis, an ordered listing of “best cases” was made and individual CCs were approached to formally seek their consent. Where consent was not forthcoming or interview was not feasible due to CC circumstances, a suitable alternative CC from the list was approached. All these CCs received further information about the interview, a consent form, and a one page questionnaire inviting them to rank order the relative influence of a number of different factors (individual; teamwork/workforce/workload related; patient/public related; or contextual/organisational). The latter tool was formative in terms of its development and was designed to supplement and inform the interview.
2.5.2 Access to colleagues

In addition to receiving the information outlined above, the selected CCs were also sent similar packages to distribute to two colleagues. These invited the colleagues to take part in a similar interview to elicit their perceptions of the CC development locally. The CCs were asked to select colleagues with differing roles based within their immediate work setting. This approach was again necessarily dependent on third party selection and support, and its related limitations are acknowledged.

2.5.3 Interview topics and formats

A schedule of core thematic areas and more specific questions was drawn up as a basis for interviewing CCs. This was informed by understandings from previous studies and the findings of Phases 1 and 2. Table 2.3 presents this core schedule.

Table 2.3: Core interview schedule for CCs

<table>
<thead>
<tr>
<th>Themes</th>
<th>Indicative questions and probes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Checking mutual understandings</td>
<td>Describing purpose and format of interview. Confidentiality reiterated and consent re-confirmed.</td>
</tr>
<tr>
<td>Re-check circumstances</td>
<td>Current role and work setting.</td>
</tr>
<tr>
<td>Enactment of CC (informed by CC’s questionnaire answers on typology, key influencing factors etc.)</td>
<td>What do you do as a CC?</td>
</tr>
<tr>
<td></td>
<td>What has it been like carrying out the role of CC in your area?</td>
</tr>
<tr>
<td></td>
<td>What has the CC development in your area been like? Was there a plan?</td>
</tr>
<tr>
<td></td>
<td>How did key factors influence enactment?</td>
</tr>
<tr>
<td></td>
<td>What support/leadership has been available?</td>
</tr>
<tr>
<td></td>
<td>How did key allies support you?</td>
</tr>
<tr>
<td></td>
<td>Do you meet with other CCs?</td>
</tr>
<tr>
<td>Gauging the impact of CC development</td>
<td>Can you share any evidence of the impact the CCP has had so far on staff attitudes/behaviours?</td>
</tr>
<tr>
<td></td>
<td>Can you share any evidence of the impact of the CCP on patients and public?</td>
</tr>
<tr>
<td></td>
<td>Can you forward any evidence to us i.e. audits results, findings?</td>
</tr>
<tr>
<td>Future CC development</td>
<td>What should happen locally within your team/setting?</td>
</tr>
<tr>
<td>Checking final understandings</td>
<td>“Replay” main points summarised from discussion: are these a reasonable interpretation?</td>
</tr>
<tr>
<td>Any other comments?</td>
<td>Invite further comments/reflections. If you had to give us one message for the evaluation, what would it be?</td>
</tr>
</tbody>
</table>
As Table 2.3 suggests, the schedule was designed to give some structure and direction to telephone interviews of relatively brief duration (15-30 minutes). This also aided concurrent note taking by the interviewer. Within these parameters, however, interviewees were encouraged to raise any other relevant issues of their choice. As the interviews were not recorded in audio format, there was careful checking of researcher interpretations with each interviewee.

This core schedule was also used, in adapted format, to interview CC’s colleagues. In this context there was particular emphasis on:

- The colleague’s own role
- Their relationship to the CC and nature of involvement
- Their understanding of CC role and development as a whole
- Processes of development and any related impacts for staff, patients and public

### 2.5.4 Visits to CCs and colleagues

In order to gain further insights, visits were made to meet five of the 18 Cleanliness Champion interviewees within their own work contexts. The aim was to cover all the five main categories in the typology so as to learn from a cross-section of different experiences. Where possible, we sought also to speak with any colleagues during these visits, and to examine any relevant data sets such as clinical audit findings. Written field notes were made during and immediately after these visits.

### 2.5.5 Interviews with key organisational contacts, Local Health Board Co-ordinators (Hand Hygiene) and clinical service managers

In addition to seeking more in-depth perspectives from CCs and their immediate colleagues, Phase 3 also involved seeking interviews with other relevant individuals. The aim was to gain further insights from key organisational contacts, Local Health Board Co-ordinators (Hand Hygiene) and clinical service managers who had indicated in their Phase 1 questionnaire responses that they might be interviewed. All in the latter group who were based within a Territorial Health Board were sent further information and a consent form for interview. Those who subsequently consented were interviewed by telephone if a mutually convenient time could be arranged.
Again, the core interview schedule described in Section 2.5.3 was customised slightly to meet the needs of these three distinct sets of interviewees. For example, managers were asked in particular about the scope of their service management role, and about the process and impact of any CC developments within their area. Written summary notes were taken during these interviews, as described in Section 2.5.3.

2.5.6 Analysis and synthesis of interview data

Analysis of interview notes and summaries made in Phase 3 involved qualitative content analysis (Bryman 2001; Priest et al 2002) and mapping in relation to thematic areas (informed by Ritchie and Lewis 2003). Summative syntheses of findings from the different sets of interviewees (e.g. CCs, colleagues, managers etc.) were then made using tables. These tables, and the use of colour coding within them (see Appendix), enabled useful overview of common and divergent experiences.
SECTION 3: FINDINGS FROM PHASE 1 (ORGANISATIONAL LEVEL PERSPECTIVES)

3.1 The organisational perspective questionnaire

Fourteen questionnaires were returned from the 19 distributed (74%).

3.1.1 Achievements and difficulties related to Health Board implementation of CC

Respondents reported a range of achievements related to the initiative. These included: setting up new structures (e.g. ICT intranet forum) and processes (e.g. CC auditing groups); improvements in the purchasing and maintenance of relevant equipment; general awareness raising of ICT issues by CCs within Boards; and a general perception that staff were now more confident in challenging poor practices. These achievements were enabled by sharing best practice, incorporating audit feedback processes and through visible support from senior staff such as Chief Executives. The most commonly cited difficulty was lack of time for all parties to devote to the initiative in the face of other concurrent work. Within this context, Charge Nurses had been required to undertake the CCP and some were seen as lacking enthusiasm.

3.1.2 Extent and nature of evidence of impact in key areas

Respondents’ perceptions of the extent of evidence of CC impact are summarised in Table 3.1. along with cited examples of its nature.
Table 3.1: Extent and nature of evidence of CC impact in key areas

<table>
<thead>
<tr>
<th></th>
<th>Substantial amount of evidence</th>
<th>Moderate amount of evidence</th>
<th>Little or no evidence</th>
<th>Unable to say</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevention and Control of Infection</td>
<td>0</td>
<td>9</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Nature:</td>
<td>“IC audit groups established within past 12 months.”</td>
<td>“Audits being carried out - local staff have the ownership and confidence of infection related issues.”</td>
<td>“Improvements in hand washing- see national audit results.”</td>
<td>“Evidence is not conclusive. Unable to make the distinction that the CCP alone has made the difference, however there appears to be correlation between numbers of CCP completed and compliance with the hand hygiene audit.”</td>
</tr>
<tr>
<td>Patient Focus and Public Involvement</td>
<td>0</td>
<td>7</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Nature:</td>
<td>“Cleanliness information tables are set up at the entrance to hospitals. HAI logo on CC ID badges and certificates of completion in ward areas.”</td>
<td>“IC awareness week, staff becoming more confident if visitor seen to be sitting on beds”</td>
<td>“Patient/ public know of our existence; more collaboration and co-operation working on this.”</td>
<td>“Have always evaluated, encouraged patients/public in infection control irrespective of CC”</td>
</tr>
<tr>
<td>Environment and Equipment</td>
<td>1</td>
<td>12</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Nature:</td>
<td>“Domestic services audit against National Cleanliness Spec. scores highly- many domestic staff are champions.”</td>
<td>“CC now de-cluttering wards/ depts., aware of what to clean with.”</td>
<td>“Greater use of personal protective equipment more through hand washing- cleaning lists now in situ.”</td>
<td>“Decontamination of equipment, better use of isolation practices.”</td>
</tr>
<tr>
<td>Education and Training</td>
<td>1</td>
<td>10</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Nature:</td>
<td>“Positive feedback from CC conference.”</td>
<td>“Built into nursing staff personal development plan, and knowledge and skills framework for nursing staff.”</td>
<td>“CC now giving local in house training to new starts/ student nurses.”</td>
<td>“Encourage mentorship with other colleagues.”</td>
</tr>
<tr>
<td>Impact on any Other Area</td>
<td>0</td>
<td>6</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Nature:</td>
<td>“Identified key personnel to take forward safer patient initiatives.”</td>
<td>“Community, public health arena through information stands and public participation.”</td>
<td>“Audit results have improved, less complaints, staff contacting ICN.”</td>
<td>“Interaction with multidisciplinary team re. all aspects of infection control.”</td>
</tr>
</tbody>
</table>
3.1.3 *Perceived prevalence of different types of CC role/practice development*

The questionnaire also asked respondents to consider which types of CC role/practice development were most prevalent within the clinical areas of their Health Board. In this way, respondents rank ordered the types listed in the typology. Subsequent aggregation of these rankings across the Boards is presented in Table 3.2.

**Table 3.2: Perceived prevalence of types of CC role/practice development**

<table>
<thead>
<tr>
<th>Most prevalent</th>
<th>Slow build</th>
</tr>
</thead>
<tbody>
<tr>
<td>2nd most prevalent</td>
<td>Push/pull</td>
</tr>
<tr>
<td>3rd most prevalent</td>
<td>Forming</td>
</tr>
<tr>
<td>4th most prevalent</td>
<td>Slow/no go</td>
</tr>
<tr>
<td>5th most prevalent</td>
<td>Transforming</td>
</tr>
</tbody>
</table>

3.1.4 *Perceptions of behaviour change*

Respondents felt that the main change in CC and colleagues’ behaviour was in hand hygiene practice and use of PPE. Increased awareness of infection control issues, knowledge and confidence were also reported to have influenced working practice in a positive manner and improved IC liaison.

3.1.5 *Perceived facilitating factors*

Support from management and peer group were clearly identified as the greatest facilitators of CC role implementation. The most prominent of these was the support of peers who valued the CC role. In one Health Board the support of the Chief Executive was highlighted. Respondents perceived a general improvement in the interaction between ICN and other staff and better networking. Other helpful organisational practices included regular update sessions for CCs, involvement in auditing and feedback, and relating the CC role to a continuous professional development strategy. In terms of personal qualities, CCs were seen to develop well when they were motivated by pride in practice and had tenacity.
3.1.6 Perceived barriers to implementing change in practice following CCP completion

Lack of confidence and poor peer support were cited as the greatest barriers. Lack of time dedicated to the course/CC role, staff shortages, and lack of managerial support were also specifically highlighted as having a negative influence.

3.2 The questionnaire to Local Health Board Co-ordinators (Hand Hygiene)

3.2.1 LHBCs and interactions with CCs

Fourteen questionnaires were returned from the 17 distributed (82%). These LHBC respondents typically came from a nursing background (12; 86%) and nine were Cleanliness Champions themselves. Their role entailed hand hygiene promotion, education, auditing and feedback, and facilitation of supporting activities. One respondent was also a CC Co-ordinator. Most LHBCs had details of the CCs in their Health Board, but several said that these were incomplete or not up to date. Their contact with clinically based CCs was usually at least weekly in frequency.

Ten of the LHBCs (71%) said that CCs were helping them with teaching/training aspects of hand hygiene. In nine cases (64%) this involved audit activity:

“undertaking hand hygiene covert audits using 10 minute a day method based on HH care bundle and SPSP models”

“They accompany the ICNs and I on the HH audits (HPS) and in some areas self audit”

However five LHBCs (36%) said that CCs were not explicitly linking in this way:

“although some undertake local HH audits the results are not fed back to me”

“difficult to gauge as we have trained a number of staff to audit within the clinical areas but may or may not be CCs”

The above comments highlight the concurrent hand hygiene auditing activities taking place in clinical settings, and related difficulty in generalising about CC involvement.
3.2.2 LHBCs’ perceptions of the CCP and impact of CCs

LHBCs were generally very positive about the CCP:

“The CCP has been the best clinically based programme I have worked with in my 32 yrs in the NHS. It covers all aspects of infection control and is adapted to suit all”

They felt that having a CC in clinical teams helped to improve general awareness of ICP issues, particularly hand hygiene and environment (e.g. linen handling). Four specifically mentioned challenging behaviour:

“Where we do have recognised/ known CC there has been a cultural shift in staff being confident to challenge or to be the "expert" in that ward”

However, there was a widespread perception that organisational support at different levels was needed to help this to happen and develop further:

“If they are enabled by the SCN they are able to improve attitudes”

“this programme has raised morale and empowered ancillary and support staff - to build on this we need to link closely to SPSP aims of quality delivery 24/7”

“I have been trying unsuccessfully to amalgamate the hand hygiene campaign and the CC for months”

“CCs could be utilised much more effectively with better local systems in place and agreement at management level to allow CCs to be "freed up" from other clinical duties and for this to be given weight and value at both managerial and ward level”

“I think they are a valuable asset to the HB, but so often their hands are tied in that they have the inability to convey all their expertise to other healthcare professionals-due to excessive workload in their clinical areas”

“Personally I feel this course could offer so much more. There are some excellent CCs who have made a real impact in their areas. Others do the course- get signed off- retain little knowledge and didn't share/implement CC work in practice”

“I think that the CC initially inspired by the training package, but due to lack of follow-up on their training course, their interest and enthusiasm quickly diminishes”
The need for regular updates for CCs and networking days was widely seen as a priority for local and national action. Many felt that lack of time was a major barrier to success and that Health Boards had to “ring-fence” time for CCs and to give more formal recognition/reward for their achievements.

3.3 The questionnaire to service managers

One hundred and eight service managers (35%) responded to the invitation to complete the web based questionnaire. Responses came from 13 different Health Boards and these managers worked in a very diverse range of roles and settings. Seventy two managers (67%) felt that the CC development had resulted in some positive impact, with a further 21 (19%) believing this impact was substantial. Nine managers perceived no noticeable impact. None felt there had been negative impact.

Many managers gave examples of positive impacts locally:

“provides support services staff, supervisors and managers with more in depth knowledge of infection control, resulting in improvements in cleanliness standards and excellent waste management and portering management protocols and procedures”
Divisional Domestic Services Manager managing Domestic Services and other support services in 4 acute hospitals (approx 750 staff and 40 supervisors and 6 managers)

“Cleanliness champions get together on regular basis and cascade information to remainder of their teams in wards. Participate in audit and action plans put in place to address any challenges. Staff are much more aware of the importance of small changes making huge differences. Cleanliness champions are actively engaging in the SPSP and the skills and knowledge acquired following completion of the cleanliness champions module has given them the confidence to challenge in a positive manner”
Clinical Nurse Manager (6 acute medical wards and 2 renal units across 2 district general hospitals)

“Outbreaks have been managed in a more effective manner, reducing severity with regards to client base”
Ward Manager, Care of the Elderly Psychiatry

“28 staff have completed programme. More aware of infection control practices. Raise awareness of variances in practice. Local HAI group set up with nurse, ahp, admin representation. Also pilot group established supported by IC Nurse to look at specific areas for audit”
Senior Nurse, Urban Community Health Care Partnership
“Staff seem more aware of the need to monitor what is going on. The difficulty is residential care home who provide a lot of care now and the education within them. Lots of pockets of hand rub and staff having gel in their cars and in patients houses. Lots of gel available around the hospital and things visible to the public. Staff are using more personal protective gear gloves aprons etc. Although still questionable the use of aprons?”
Clinical Team Leader, Community Nursing

“Able to order elbow operated taps and proper mattresses”
Charge Nurse, Specialist Treatment Unit

However, managers had some reservations:

“High level of raised awareness amongst clinical groups - no definitive indications of impact on patient care”.
Health Services Manager, Island Setting

“raises issue for ward staff which would otherwise have gone unnoticed. Infection control teams not able to give the support required by ward managers. Ward managers will now be expected to mentor the more junior staff and not infection control teams which is disappointing. I believe it will be even more positive for junior trained and all untrained staff”
Lead Nurse, orthopaedic wards spanning 3 urban acute hospitals

“The impact has been minimal. The Band 7 Ward Managers who undertook the training were very familiar with their roles and responsibilities in relation to Infection Control prior to undertaking the course. There was a greater value in training the Band 2 Nursing Assistant who has developed a greater awareness of infection control and has used this effectively particularly in the promotion of hand hygiene.”
Lead Nurse, ITU/HD wards spanning 2 urban hospitals
SECTION 4: FINDINGS FROM PHASE 2 CENSUS OF CLEANLINESS CHAMPIONS

4.1 Response rate

As described in Section 2.4.2, the maximum number of questionnaires distributed to Cleanliness Champions (i.e. those who had completed the CCP) was 5,400. A total of 1387 completed questionnaires were returned to RGU. Thus the response rate for useable questionnaires was 26% (1387/5400). In addition, 125 other questionnaires were returned uncompleted (58 returned to NES, 8 to RGU and a total of 61 to four different HBs). As explained in Section 2.4.2, it is very likely that many more questionnaires were never actually received by CCs (e.g. those who had changed address). Accordingly the true response rate is likely to be higher than 26%. The response rate for those distributed by NES was 32%, while the response rate for those distributed through CC Co-ordinators was 20%. Interestingly this differential (12%) is exactly the same as that found the first time we used these methods (West et al 2006).

4.2 Key characteristics of respondents and representativeness of CCs as a whole

The vast majority of respondents were female (91%). There was typically very extensive experience of ongoing employment in healthcare settings (median time = 25 years). Moreover, respondents had typically been based in their current workplace setting for a lengthy period (median time = 10 years).

The median age of respondents was 46 (range = 19-65 years). This corresponds exactly with the median age of the total known population of CCs (as collated by NES from every initial registration form).

Table 4.1 shows the occupational groups that respondents stated they belonged to. In order to provide comparison, the far right column presents a breakdown of the occupational groupings within the total known population of CCs.
Table 4.1: CC respondents by occupational group

<table>
<thead>
<tr>
<th>Occupational group</th>
<th>Number of respondents</th>
<th>% of total respondents in our census</th>
<th>% of total known population of CCs (NES*)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurse</td>
<td>1068</td>
<td>77%</td>
<td>74%</td>
</tr>
<tr>
<td>Midwife</td>
<td>109</td>
<td>8%</td>
<td>Not known</td>
</tr>
<tr>
<td>Healthcare Assistant/Nursing Auxiliary/Clinical Support Worker</td>
<td>66</td>
<td>5%</td>
<td>10%</td>
</tr>
<tr>
<td>Domestic/Housekeeper/Catering</td>
<td>41</td>
<td>3%</td>
<td>5%</td>
</tr>
<tr>
<td>Allied Health Professional (e.g. Physiotherapist, O.T, Radiographer)</td>
<td>31</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Ambulance staff</td>
<td>7</td>
<td>0.5%</td>
<td>0.5%</td>
</tr>
<tr>
<td>Doctor</td>
<td>7</td>
<td>0.5%</td>
<td>1%</td>
</tr>
<tr>
<td>Dental Worker</td>
<td>4</td>
<td>0.3%</td>
<td>2%</td>
</tr>
<tr>
<td>Other (e.g. Administrator, Receptionist, Lab worker)</td>
<td>35</td>
<td>3%</td>
<td>6%</td>
</tr>
<tr>
<td>No response to this question</td>
<td>19</td>
<td>1%</td>
<td>N/A</td>
</tr>
</tbody>
</table>

* Based on figures from NES Information Services at start of our census (August 2008)

Thus nurses comprised around three quarters of all respondents, reflecting the characteristics of the known population very closely. Moreover, the proportion of AFC grade 7/G grade nurses in our sample was almost exactly the same as that in the known population (41% in our sample; 40% in NES figures). Table 4.2 presents overview of respondents’ workplace settings.

Table 4.2: CC respondents by workplace setting

<table>
<thead>
<tr>
<th>Workplace</th>
<th>Number of respondents</th>
<th>% of total respondents in our census</th>
<th>% of total known population of CCs (NES*)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute hospital</td>
<td>816</td>
<td>59%</td>
<td>64%</td>
</tr>
<tr>
<td>Community hospital</td>
<td>176</td>
<td>13%</td>
<td>28%</td>
</tr>
<tr>
<td>Health centre/GP practice</td>
<td>144</td>
<td>10%</td>
<td>0.5%</td>
</tr>
<tr>
<td>Nursing/care home</td>
<td>16</td>
<td>1%</td>
<td>8%</td>
</tr>
<tr>
<td>Other (e.g. job based in range of settings)</td>
<td>205</td>
<td>15%</td>
<td>N/A</td>
</tr>
<tr>
<td>No response to this question</td>
<td>27</td>
<td>2%</td>
<td>N/A</td>
</tr>
</tbody>
</table>

* Based on figures from NES Information Services at start of our census (August 2008)

Again, our census respondents closely reflect the workplace profile evident in the basic CC data held by NES. As such, the two data sets appear very similar in terms of occupational groupings, senior nurse grading, workplace settings and age profile (i.e. all the characteristics available for comparison through NES). This strongly suggests that our sample is likely to be substantially representative of the total known population of Cleanliness Champions.
4.3 Respondents involvement with the CCP

Almost two thirds of respondents (844; 61%) had been nominated to do the programme or undertook it as mandatory. Thirty eight percent (527 respondents) had volunteered to do it. Although median completion time for both of these groups was 12 weeks, mean completion times for volunteers were significantly longer than for those in the nominated/mandatory category (p = 0.001). There was a huge range in completion times within the overall sample (from 1 week to 200 weeks).

Figure 4.1 gives a breakdown of when respondents completed the CCP.

Figure 4.1: Year completed the CCP.
Respondents’ use of the different versions of programme delivery is presented in Figure 4.2.

**Figure 4.2: Versions of programme delivery used by respondents**

![Pie chart showing the distribution of programme delivery versions used by respondents.]

Figure 4.3 shows respondents’ perceptions of the relevance of the programme for their own practice.

**Figure 4.3: Perceived relevance of programme for practice**

![Bar chart showing the percentage of respondents per relevance level.]

The minority who felt that relevance was limited or lacking typically felt that they already knew the content presented or that the programme focused on the acute sector too much. Within this overall picture of widespread satisfaction for CCs, volunteers reported
higher relevance significantly more than those in the nominated/mandatory category (p = 0.00).

Figure 4.4 shows perceptions of how well the programme prepared CCs for the development of their role.

**Figure 4.4: How well programme prepared CCs for their role**

<table>
<thead>
<tr>
<th>How well did the CCP prepare you for the CC role?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very well</td>
</tr>
<tr>
<td>Well</td>
</tr>
<tr>
<td>Adequately</td>
</tr>
<tr>
<td>Inadequately</td>
</tr>
</tbody>
</table>

As Figure 4.4 shows, only a few CCs felt that educational preparation was inadequate. Reasons given for this were: (i) the course was disjointed and did not specify what the role of the CC was; (ii) the role of CC was too time consuming; or (iii) there was a lack of resources and support to enact the CC role. Again, within this overall picture of satisfaction with the programme, volunteers reported significantly better role preparation compared to those in the nominated/mandatory category (p = 0.00).

Just over a third of respondents (532; 38%) had been acting as mentors to others undertaking the CCP. For the vast majority this had involved mentoring between 1 to 5 students. However a few respondents (39; 7%) had mentored over 11 students during their time as a CC.
4.4 Types of CC role/practice development

Figure 4.5 presents the types of role/practice development that respondents saw as most closely reflecting their own experience.

Figure 4.5: Types of CC role/practice development

The other types of development described by CCs mostly reflected circumstances where they were working alone or had a non-clinical role.

4.5 Enablers for the CC role

The main factor that CCs felt helped them to enact their role was peer support/team work. Over a third of respondents (520; 37%) commented on this positively. For example, citing her key allies as ICT, district nurses, the work co-ordinator, and social work managers, a community nursing sister highlighted:

“my team co-ordinators willingness/ encouragement for me to share information - the social work managers interest in improving standards for all staff”

Support from senior staff and/or ICT was often reported as making a big difference. In the words of a nursing assistant who listed her care home team leader as a key ally:

“the knowledge to make small but vital changes in the workplace - given information on where and how to get relevant equipment”
Table 4.3 lists the key allies identified by respondents.

Table 4.3: CCs’ key allies

<table>
<thead>
<tr>
<th>Key allies</th>
<th>Number of times cited</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurses</td>
<td>459</td>
<td>33%</td>
</tr>
<tr>
<td>ICN</td>
<td>314</td>
<td>23%</td>
</tr>
<tr>
<td>Charge Nurse/Sister</td>
<td>232</td>
<td>17%</td>
</tr>
<tr>
<td>Managers</td>
<td>207</td>
<td>15%</td>
</tr>
<tr>
<td>Clinical Support Worker/Auxiliaries</td>
<td>175</td>
<td>13%</td>
</tr>
<tr>
<td>Domestic</td>
<td>98</td>
<td>7%</td>
</tr>
<tr>
<td>CCs</td>
<td>61</td>
<td>4%</td>
</tr>
<tr>
<td>Consultant</td>
<td>29</td>
<td>2%</td>
</tr>
<tr>
<td>Clinical Governance Group</td>
<td>18</td>
<td>1%</td>
</tr>
<tr>
<td>Link Nurse</td>
<td>16</td>
<td>1%</td>
</tr>
<tr>
<td>Hand Hygiene Co-ordinator</td>
<td>13</td>
<td>1%</td>
</tr>
</tbody>
</table>

Personal traits and motivation were also extensively seen as important:

“my confident personality and not giving up”
Staff Nurse, Acute Hospital

Figure 4.6 presents CCs’ reports of current motivation level.

Figure 4.6: Self reported motivation level of CCs
Over half of the respondents (813; 59%) indicated that personal or professional factors motivated their CC practice:

“I am personally a very organised tidy person, I set and expect high standards from all. I am very motivated, enthusiastic with regards to infection control”
Nurse Practitioner, Acute Hospital

“To be an effective nurse and delivering the best care possible to my patients, despite working in an environment when care is constantly compromised due to bed shortages
Ward Manager, Acute Hospital

“Evidence that poor IC measures has detrimental effect on patients and staff”
Staff Nurse, Acute Hospital

For some the sense of a renaissance in standards was helpful:

“Over the years I have seen how standards in hospitals have dropped, from cleaning wards to washing hands - at last awareness and improvements are now happening”
Nurse, Acute Hospital

For many, the CCP itself proved motivating:

“I wanted to do the HAI and doing all the modules gave me lots of information more knowledge and confidence and of course the importance of HAI”
Nursing Assistant, Acute Hospital

“Through education and audit process highlighted deficits therefore initiate change -felt personal and professional satisfaction for making a difference and improving practice”
Nurse, Acute Hospital

“I monitor workplace cleaning and the cleaning champion has empowered me, I feel I could deliver small sessions on IC”
Hotel Services Supervisor, Community Hospital
4.6 Barriers for the CC role

The main factor that CCs felt hindered them in enacting their role was colleagues’ attitudes/lack of peer support. Over a third of respondents (523; 38%) highlighted this as problematic:

“Obstruction from colleagues, we have always done it like this attitude - staff failing even to adhere to basics”
Charge Nurse, Acute Hospital

“Lack of commitment and understanding by some staff members, visitors and service users, despite training”
Care Home Manager

“Some people don’t listen and don’t understand when we try to explain the importance of cleanliness in the workplace”
Domestic, Community Hospital

In this context, the CC role could be difficult to sustain

“Staff fed up of infection control education”
Senior Charge Nurse, Acute Hospital

Poor facilities were also cited as a barrier by many respondents (295; 21%):

“Poor facilities- water too hot, 2 taps not single, staff saying they constantly report problems, ordering/getting appropriate products from stores an issue/difficult. Also high shock at level of HAIs now and apathy around this”
Practice Education Facilitator, Community setting

“Ward environment e.g. lack of adequate storage, lack of washing basins”
Senior Charge Nurse, Community Hospital

“Working mainly in patients houses we can only advise good cleanliness practice, we cannot enforce it. Carers - we do not work with them often therefore difficult to impart relevant CC information”
District Nurse, Community

“Infection control on ward needs to be encouraged by the nurse in charge. Not enough equipment e.g. hoist slings. Poor laundry facilities”
Physiotherapy Team Leader, Rehabilitation Hospital

Lack of time was another factor which made role enactment difficult for some (157; 11%).
“Lack of time/competition from other commitments”
District Nurse Team Leader, Health Centre

“Other staff being too busy to conform to the basic rules of cleanliness”
Clinical Support Worker, Acute Hospital

Medical staff were mentioned by a number of CCs (148; 11%) as being a barrier to development:

“Not everyone ensuring the correct standards and practice, particularly consultants”
Clinical Lead Midwife, Acute Hospital

“Medical staff ignorance and ignoring policy”
Charge Nurse, Acute Hospital

However, in some cases a rationale for non-compliance had been voiced.

“Medical staff refusing due to lack of good data”
Charge Nurse, Acute Hospital
4.7 Impact on CCs’ own working practices

CCs were asked to rate the impact that completing the CCP had on seven key aspects of personal working practice. Table 4.4 gives details of responses.

Table 4.4: Perceived impact on personal working practices

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Substantial improvement due to CC.</th>
<th>Slight improvement due to CC.</th>
<th>No change due to CC.</th>
<th>Deterioration due to CC.</th>
<th>Unable to say/ not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>My awareness of infection control practice</td>
<td>692 (50%)</td>
<td>532 (38%)</td>
<td>149 (11%)</td>
<td>1 (0.1%)</td>
<td>2 (0.1%)</td>
</tr>
<tr>
<td>My hand hygiene practice</td>
<td>609 (44%)</td>
<td>428 (31%)</td>
<td>339 (24%)</td>
<td>0</td>
<td>1 (0.1%)</td>
</tr>
<tr>
<td>Environment and equipment aspects (e.g. decontamination; sharps/waste disposal; PPE)</td>
<td>446 (32%)</td>
<td>523 (38%)</td>
<td>373 (27%)</td>
<td>0</td>
<td>17 (1%)</td>
</tr>
<tr>
<td>My sharing of good practice with others (e.g. through role modelling; teaching; challenging)</td>
<td>584 (42%)</td>
<td>580 (42%)</td>
<td>193 (14%)</td>
<td>0</td>
<td>8 (0.6%)</td>
</tr>
<tr>
<td>My relationships with colleagues at work</td>
<td>168 (12%)</td>
<td>248 (18%)</td>
<td>909 (66%)</td>
<td>18 (1%)</td>
<td>18 (1%)</td>
</tr>
<tr>
<td>My involving of patients and the public in HAI prevention and control practice</td>
<td>312 (23%)</td>
<td>534 (39%)</td>
<td>439 (32%)</td>
<td>2 (0.1%)</td>
<td>60 (4%)</td>
</tr>
<tr>
<td>My evaluation of practice (e.g. through monitoring and audit)</td>
<td>377 (27%)</td>
<td>534 (39%)</td>
<td>393 (28%)</td>
<td>2 (0.1%)</td>
<td>50 (4%)</td>
</tr>
</tbody>
</table>

CCs were asked what, if anything, had changed in relation to each of these seven key aspects. Increased awareness was the biggest reported change and many different aspects of practice were highlighted in relation to this, ranging from generic issues through to specific practices:

“I am more critical of myself and therefore weigh up risk better than before”
Nurse, Acute Hospital
“Made me more aware of my own actions and of others. I knew some as worked with ICN in ward and was involved then”
Auxiliary Nurse, Acute Hospital

“More aware of the hospital practices as a whole as regards to just my own dept”
Central Decontamination Unit Operator, Sterile Services, Acute Hospital

“I read guidelines and articles that I would not otherwise have been aware of”
Clinical Manager/Emergency Nurse Practitioner, Acute Hospital

“An awareness of the chain of infection has led me to look at cleanliness of equipment far more than prior to the CC course”
Cardiac Physiotherapist, Acute Hospital

“Hand hygiene improved dramatically- also monitor staff hand hygiene and lead through example”
Nurse Team Leader, Health Centre/GP Practice

Indeed increased thoroughness with hand hygiene was described by 554 respondents (40%) and role modelling was often mentioned in this context. Other aspects of sharing practice that CCs frequently reported were teaching sessions (305; 22%) and challenging/leading others (211; 15%):

“As a role model I feel most colleagues accept good practice being highlighted. I think it will become easier as more people complete the course”
Staff Nurse, Acute Hospital

“Becoming more assertive with teaching and challenging peoples practices”
Nurse - Acute Hospital

“CC has given me the knowledge and confidence to educate others and challenge and advise if poor practice continues”
Acting hospital nurse manager, Community Hospital

Change in environmental and equipment practice often focused on sharps, use of PPE and waste disposal:

“Gloves for urine testing. Making sure sharps bin close by when using needles etc”
Midwife, Community Hospital

“More aware of the cost implications in the disposal of clinical waste”
Ward Manager, Acute Hospital

The area where there was least change reported was in relationships with work colleagues. Typically this was because the new CC role had not been problematic in terms of interpersonal relationships.

“No change, we all help one another”
Clinical Support Worker, Surgical Outpatients

However, 18 respondents reported deterioration, and others had reason not to rock the boat:

“Much the same. If I was to challenge colleagues my relationships in the ward would deteriorate”
Healthcare Assistant, Acute Hospital

Although around a third of respondents had made no change in involving the patients and the public, some (220; 16%) described specific efforts with hand hygiene and education:

“Encourage patients/relatives to use hand gel. Stopped relatives from sitting on beds”
Nurse, Acute Hospital

“Have more knowledge of subject, able to relay the info better to the public”
Ward Manager, Community Hospital

Comments in relation to evaluation of practice were generally positive:

“Much more aware. Regular walk through dept to ensure standards remain high”
Ward Manager, Day Hospital

“I have a greater understanding of audit process and due to knowledge gained on the course more aware of practice”
Senior Charge Nurse, Acute Hospital

“Implementation of in-house environmental audits monthly – better than relying on annual IC team one and other bits”
Charge Nurse, Acute Hospital

Nevertheless, 30 respondents said that they never did audit and others highlighted problems:

“ongoing laborious task and difficult to do regularly due to pressure of workload/time constraints and staffing levels”
Charge Nurse, Community Health Setting
4.8 Impact on colleagues’ working practices

CCs were also asked to rate the impact that having a CC(s) in the team had made on colleagues’ working practices. Table 4.5 gives details of responses in relation to the same seven key practices.

Table 4.5: Perceived impact on colleagues’ working practices

<table>
<thead>
<tr>
<th>Substantial improvement due to CC.</th>
<th>Slight improvement due to CC.</th>
<th>No change</th>
<th>Deterioration due to CC.</th>
<th>Unable to say/not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awareness of infection control practice</td>
<td>507 (37%)</td>
<td>645 (47%)</td>
<td>179 (13%)</td>
<td>0</td>
</tr>
<tr>
<td>Hand hygiene practice</td>
<td>567 (41%)</td>
<td>519 (37%)</td>
<td>246 (18%)</td>
<td>0</td>
</tr>
<tr>
<td>Environment and equipment aspects (e.g. decontamination; sharps/waste disposal; PPE)</td>
<td>375 (27%)</td>
<td>567 (41%)</td>
<td>357 (26%)</td>
<td>1 (0.1%)</td>
</tr>
<tr>
<td>Sharing of good practice with others (e.g. through role modelling; teaching; challenging)</td>
<td>372 (27%)</td>
<td>641 (46%)</td>
<td>295 (21%)</td>
<td>1 (0.1%)</td>
</tr>
<tr>
<td>Relationships with colleagues at work</td>
<td>186 (13%)</td>
<td>331 (24%)</td>
<td>763 (55%)</td>
<td>19 (1%)</td>
</tr>
<tr>
<td>Involving of patients and the public in HAI prevention and control practice</td>
<td>296 (21%)</td>
<td>522 (38%)</td>
<td>429 (31%)</td>
<td>1 (0.1%)</td>
</tr>
<tr>
<td>Evaluation of practice (e.g. through monitoring and audit)</td>
<td>283 (20%)</td>
<td>481 (35%)</td>
<td>472 (34%)</td>
<td>5 (0.4%)</td>
</tr>
</tbody>
</table>

As Table 4.5 shows, the overall pattern of findings was broadly similar to those for individual impact. Comments about what had changed gave particular insights into team working and contextual issues:

“We have a number of Cleanliness Champions within the team (R.N.’s and Auxiliary staff) and this enables ’real time / on site’ training and practice.”

53
“Colleagues more aware of good practice and doing it. This is also due to hand hygiene cascade trainers.”
Senior Charge Nurse, Acute Hospital

“Lots of training sessions, glitter box sessions. All staff included- catering, domestic, portering , nurses etc.”
Ward Manager, Community Hospital

“Nursing auxiliaries especially now more aware of risks and best practice.”
Senior Staff Nurse

“Some team members come on board others resistant. Need stamina to persist and be practice.”
Health Visitor, Health Centre/GP Practice

“I have noted some CSWs/ trained nurses now challenging other colleagues/ nursing and non nursing when they note bad practice.”
Charge Nurse, Acute Hospital

“Staff are more vocal around this topic, communication has improved.”
Ward Manager, Acute Hospital

“Measures brought in to help staff to be conscious of spread of infection. Infection rates weekly are displayed on notice board.”
Specialist Charge Nurse, Acute Hospital

“HH audit results have improved dramatically with only the medical staff and ancillary staff lowering results.”
Ward manager, Acute Hospital

“Colleagues do share information on good practice. Noticed more during and immediately after course, less so now.”
Nurse, Health Centre/GP Practice

“Staff are now confident when presented with questions from patients and visitors”
Staff Nurse, Acute Hospital

“Borrowed hand hygiene machine that shows areas missed and invited patients and visitors to try.”
Staff nurse, Acute Hospital

“Staff challenge more- have more confidence to ask people not to drop litter, sit on beds, touch wounds etc.”
Charge Nurse, Acute Hospital
However, some CCs struggled to effect change:

“Staff routinely only listen to infection control nurse and not CC. Most staff also wear gloves and aprons around the unit and patient area without changing.”
Staff Nurse, Acute Hospital -

“Had one hand hygiene check session, mixed reaction - outrage to acceptance.”
Health visitor, Health Centre/GP Practice

“More "blame" between team members for incorrect disposal etc..
Health Visitor, Health Centre/GP Practice

“Low staff moral with press coverage of recent months despite very hard working to improve the service.”
Deputy Ward Manager, Community Hospital

“Some disagreements about overkill in psychiatric setting where hand hygiene is felt to be taking over the ward.”
Nurse, Acute Hospital

“I don't think the public or patients are aware of the CC.”
Hotel Services Supervisor, Community Hospital

“Not had time to audit or monitor due to busy workloads and many other audits on going in departments safety patient initiative, correct site surgery et al.”
Charge Nurse, Acute Hospital
4.9 Perceived impact for patients

CCs were asked to rate the overall impact of the CC development on patient care in their workplace. Figure 4.7 presents these ratings.

Figure 4.7: Rating of impact for patients

![Impact on patient care due to CC](image)

Comments about impact on patient care, and related outcomes, primarily related to reducing levels of HAIs (475; 34%). Some respondents mentioned improvements in outcomes for specific infections:

“MRSA and C Difficile charts show substantial improvement”
Nurse, Acute Hospital

Others cited improvements more generally at the level of symptoms:

“Personally I feel we have had less residents with D and V due to hand hygiene being increased/ staff awareness of barrier nursing.”
RMN, Nursing/Care Home

Indeed, many (256; 18%) saw improved hand hygiene as impacting directly on patient care. However, respondents were often cautious about attributing improvements directly or entirely to the impact of Cleanliness Champions:
“Infection control policy in this hospital were good to begin with- cc development augmented this. Decreased incidence of HAI.”
Nurse, Acute Hospital

“General is that MRSA rates are decreasing.”
Charge Nurse, Acute Hospital

“Staff acting quicker/more efficiently in obtaining swabs/specimens etc from pts rather than waiting on medical staff to ask for them. This is due to the CC Role and ongoing education and updates with our clinical area.”
Nurse, Acute Hospital

“No direct change at present but changes to staff attitudes and behaviour.”
Nurse, Acute Hospital

153 (11%) comments indicated that there was no direct impact from the CC on patient care.
4.10 CCs’ reflections and projections

Figure 4.8 shows respondents’ views of their achievements since becoming Cleanliness Champions.

**Figure 4.8: Achievements in relation to expectations**

CCs were asked for suggestions about what should happen now at local level to develop/sustain the CC role. In this regard the need for CC updates and involvement with ICT was highlighted by many respondents (447; 32%):

“*Refresher course to review skills and knowledge and policy update possibly even to keep staff fresh and interested and up to date.*”
Nurse, Health Centre/GP Practice

“*Group meetings where person from every dept. can bring forward any issues in relation to HAI.*”
Domestic/ Housekeeper/ Catering, Acute Hospital

“*Regular updates, regular contact with ICN, regular contact about policies and procedures.*”
Nurse, Acute Hospital

“*Listening to the needs of local champions and setting up forums.*”
Nurse, Acute Hospital

“*People have to be empowered to take areas of concern forward at local level knowing that advice and help from ICT is available.*”
Decontamination officer, Area Wide
The other main theme in comments was the need for more staff to do the CCP (518; 37%)

“Continue to roll out programme and embed knowledge in practice - all grades of staff from all spectrums. We also need a lead individual to work at coalface to challenge, support and educate - we had one but as ICN consultant, she has been removed to look at more strategic issues.”
Senior Charge Nurse, Acute Hospital

“Course is too cumbersome. Needs tailored to different areas of work. All staff should go on it but it should be simplified and not on lone learning but in a class room teaching situation. We don’t have time in working day to do online learning. Staff need time away from office and do a lot of the updating otherwise caseload priorities take over.”
District Nursing Sister, Health Centre/GP Practice

Nurses in particular saw a need for HCAs and domestics to be more involved:

“Only senior staff and students and students doing CC. I feel auxiliary staff should do CC as they have the most patients contact.”
Staff Nurse, Community Hospital

“Within the organisation I work in I know of no assistants who have completed the course. I truly feel that the domestics fill initial role in fighting infection within our wards and units. In many cases they work without direct supervision, if they are armed with the knowledge of who, what, where, when and why we should see a huge improvement.”
Charge Nurse

“I have 2 nursing auxiliaries who are CC. They are the ones who remind visitors to wash/gel hands. They are working with patients (closely) i.e. toileting, bathing and they are the ones who have made a significant impact on the IC reductions in my ward.”
Charge Nurse, Acute Hospital

“The nursing staff were targeted. As a G grade nurse it is assumed I have an influential role where in fact I feel the course needed to be targeted at unqualified and ward based staff. Staff who are in contact with patients need to be given the training and by delivering it off-site the impact might be quite high. I visit hospital wards and still regularly see open doors on rooms marked isolation. Staff moving from one patient to another with no evidence of hand washing. I feel medical staff need to participate fuller.”
Nurse, Acute Hospital

“If I am honest I completed the CCP because it was mandatory. I felt the focus should not have been put on the senior nurses but in all areas and this was poor practice to make mandatory for senior nurses and not HCA etc.”
Nurse, Acute
CCs were also asked for suggestions about what should happen now at national level to develop/sustain the CC role. In this regard 90 respondents (6%) saw a need for more public awareness of CCs:

“I was not aware so many had completed the programme- need increased media input.”
Nurse, Acute Hospital

“All we seem to hear are bad hospital reviews re infection- we need to promote the good practice as well as the bad.”
Physiotherapist, Acute Hospital

“Continue to inform how and ask everyone to support the fight against infection. Develop and fund ongoing education and development for CC role.”
Nurse, PHCT Wide

“More recognition of the role so that the public become more aware of our role and maybe get better response to ward level practice. Overall very worthwhile makes my job as nursing assistant more valuable. I feel it should be available to all nursing staff then hopefully everybody would take CC more seriously.”
Nursing Assistant, Acute Hospital

“Keep momentum going. Publicity- integrated into medical education/curriculum, in fact into any health care worker”
Charge Nurse - Acute Hospital

In considering the bigger picture, respondents shared a range of concerns:

“Continued and sustained support- this is not a short term fix and there’s no point in ticking boxes to keep the big picture looking rosy”
Charge Nurse, Acute Hospital

“5000 CC in Scotland in great - but no use if medical staff not interested in adhering to your requests/processes - this needs to be addressed.”
Ward Manager, Acute Hospital

“Very disappointed at long term outcomes. I feel CC prog. was another tick box and forget about them. I am shocked to hear there are 5000 in Scotland, where are they? Why are we not supporting each other in our development? Why have we not got a web site etc? What further training up date is available? I feel I have been left to paddle my own canoe which I am doing to the best of my ability.”
Staff Nurse, Acute Hospital

Underlying many of the comments on national progress was a tension between the above idea of the CC as a distinct role and the expectation of it being universally embedded:
“The role needs to become integral in everyone’s job description working in health care, especially senior managers, doctors. Participation in audit, and the review of practice it involves, is a great method of learning.”

Infection Control Nurse, Acute Hospital
4.11 Trends and associations within the data set

From the previous sub-sections a substantially positive picture of the impact of the CC role has emerged, as viewed by CCs themselves. Within this picture, however, varying progress in role enactment can be seen. This is summarised in the typology results (Figure 4.5). Analysis of relationships between variables in the census questionnaire shows that these types of role/practice development are discriminated well. For example, analyses of typology sub-groups in relation to each of the seven key areas of practice (see Sections 4.7 and 4.8) always show significant differences and ranking is always in the expected order (Kruskall Wallis test). This further confirms the validity of the typology.

There was significant positive correlation between more developed role/practice type and citing more key allies (p = 0.00).

Level of motivation also emerged as an important factor, showing significant positive correlation with citing more key allies (p = 0.00). Indeed high motivation was significantly associated with more positive responses on a wide range of key variables (e.g. typology; impact on seven key areas of practice; overall impact on patient care).

Another variable that emerged as important was whether the CC had undertaken the programme as a volunteer or on a nominated/mandatory basis. Voluntary participation was significantly associated with more positive responses on the wide range of variables alluded to above.

A sub-trend was also apparent in relation to AFC Band 6 nursing staff. While they remained positive towards the relevance of the programme, role preparation, typology and the overall impact on patient care, they were significantly less positive than each of the other nursing bands in these areas.

Finally, just over a third of respondents (497; 36%) indicated that they might be willing to take part in a subsequent interview. As indicated in Section 2.5.1, it was found that these CCs tended to be significantly more positive across a number of factors (e.g. motivation, perceptions of impact etc.) than other respondents. Accordingly, we made adjustment for this in our sampling frame for recruiting interviewees (see Table 2.2) by increasing proportionate coverage of less positive types of CC development. Summary findings from the interviews with CCs and other colleagues are presented now in the next section of the report.
SECTION 5: FINDINGS FROM PHASE 3 INTERVIEWS

5.1 Interviews with Cleanliness Champions

Phase 3 of the study aimed to interview a cross-section of CCs with different experiences of role/practice development. As explained in Section 2.5.1, mapping and ordering of best potential cases was undertaken with a view to achieving 18 interviews. In practice, a total of 79 CCs needed to be invited before this number could be achieved. This was due to consent forms not being returned. Table 5.1 shows the eventual match achieved with the initial sampling frame.

Table 5.1: Numbers of CCs interviewed

<table>
<thead>
<tr>
<th>Type</th>
<th>Target for CC interviews</th>
<th>No. of CC interviews achieved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slow/No go</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Slow build</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Push/pull</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Forming</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Transforming</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18</strong></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

The 18 CCs were mostly nurses (7 were AFC Band 6, 5 were AFC Band 7, 1 was AFC Band 5, 1 was a G grade and 1 was F grade). The other three interviewees were, respectively: a nursing auxiliary, a domestic and a consultant (medical). Fourteen were based in acute settings with the remainder based in community settings. Interviewees came from seven different Health Boards.

Tables summarising the main themes to emerge within and across these interviews with CCs are presented in the Appendix section. These facilitate overview of common and divergent experiences. Drawing on this data, the main points to emerge across the CC interviews were:

- The impact of CC is primarily on hand hygiene, use of PPE and environmental improvements
• Involvement in audit is very variable – many CCs have none, some have a lot
• Many CCs have no update sessions or liaison/linkage with relevant others like managers, ICT or other CCs (although some positive examples were shared)
• Experiences of support and barriers are varied (as expected from the typology findings)
• Many CCs felt that all staff should be trained as CCs but there was particular need for auxiliary and domestic staff to do the programme

5.2 Interviews with Cleanliness Champions’ colleagues

As explained in Section 2.5.1, the CCs who were invited in Phase 3 for interview were also asked to forward interview invitations to two colleagues within their immediate workplace setting. As 79 CCs were approached, this potentially meant that 158 invitations were distributed to colleagues. However it is very unlikely that this number was actually forwarded in practice. Only 14 colleagues returned interview consent forms and in over half of these cases it subsequently proved impossible to arrange a mutually convenient time for interview.

Six colleagues were interviewed, four of whom were nurses. Two interviewees worked in community settings and four in acute settings. Interviewees came from five different Health Boards.

As the summary tables presented in Appendix 1 show, the findings from these interviews were broadly similar to those with the CCs themselves. In particular they confirmed:

• The perception of CC impacting on hand hygiene, PPE and environment
• Limited CC involvement in audit and related lack of engagement of colleagues
• Tendency to want AFC Band 2 and 5 staff to train as CCs

In one of the interviews it was clear that the colleague had very little knowledge of CC role enactment.
5.3 Interviews with Clinical Service Managers

Of the 108 clinical service managers who returned a questionnaire (see Section 3.3), 27 had indicated that they might take part in an interview. All were subsequently invited to take part and eleven returned consent forms. The eleven managers who were interviewed came from seven different HBs and from diverse settings such as Intensive Care, Primary Care Child and Family Services, Long Term Care, and Accident and Emergency.

The findings from the interviews (see Appendix ) to some extent reflect this range of contexts and concerns. However there were also a number of clear, common themes. In summary:

- Perceptions of impact of the CC role varied from none at all through to specific practical improvements to hand hygiene, PPE and the environment
- Few CCs were known to have involvement in audit
- Many CCs had no update sessions or liaison/linkage with relevant others like managers, ICT or other CCs (although some positive examples were shared)
- Varied perceptions about support for CCs
- Many saw a need to train more CCs, especially more junior grades

Interestingly these perceptions are very consistent with those of CCs themselves and their colleagues. However a distinctive new theme emerged from the interviews with managers, namely:

- CC potential not being optimised due to a lack of role definition, aims and responsibilities
5.4 Interviews with Local Health Board Co-ordinators (Hand Hygiene)

Of the 14 LHBCs who returned a questionnaire, 11 indicated that they might take part in an interview. All were subsequently invited to take part. Four returned consent forms and were interviewed.

The findings from the interviews are presented in the Appendix. In summary, there were:

- Perceptions that the CC role is having limited or no impact
- Variable experiences of CC involvement in audit
- Few CCs seen to be involved in update sessions or liaison/linkage with relevant others like managers, ICT or other CCs
- Varied perceptions about support for CCs
- Aspirations to train more CCs, especially domestics and ancillary staff
- Those who felt that all staff should train as CCs (with ability to select modules) and those who felt that CCs should be selected carefully
- CC potential not being optimised due to a lack of role definition, aims and responsibilities

5.5 Interviews with key organisational contacts

Of the 14 key organisational contacts who returned a questionnaire, 8 indicated that they might take part in an interview. Three returned consent forms and were interviewed. The interviewees were either senior members of ICTs or Cleanliness Champion Co-ordinators.

The findings from the interviews (Appendix) showed:

- Perceptions that the CC role is impacting on awareness and knowledge
- Some examples of ICT and HB processes that supported CC involvement in audit
- ICT involvement in initiatives to liaise and link with managers and CCs, but limitations on capacity to provide updates
- Value of training ancillary staff and doctors as CCs, but need to adapt programme to meet their needs and not make it mandatory
- Need to clarify CC role and recognise pressures from concurrent initiatives
5.6. Visits to Cleanliness Champions in workplace settings

Five visits were made to meet with individual CCs within their workplace settings. Each of these CCs had already participated in a previous telephone interview and was willing to be visited. The five CCs were selected to give coverage of the five main types of role/practice development. Two were based in large hospitals and three were based in community settings. Four were qualified nurses while the other was an auxiliary nurse. The five CCs came from three different Health Boards.

The visits yielded further insights into context and practice. As it is not possible in the confines of this report to present five different case studies, one particular case is summarised through a visit narrative. This “Push – Pull” case has been chosen as it is set in a typical hospital context and encapsulates many of the facilitators and barriers experienced by CCs trying to develop the role. While some minor details have been changed to avoid identification of the setting and any individuals, substantive aspects are unaltered.

The city hospital was an architectural battlefield where Edwardian grandeur, 1970’s functionality and state-of-the-art portacabins jostled for space. On the long walk to the ward, every other door and corridor wall had a poster urging visitors to wash hands. On arrival outside the ward an electronic sign at the door re-enforced the “Clean Hands” message. Confusingly, no means of doing so was provided. It later transpired that the gel holder had broken and was being replaced. Inside, each of the six bedded rooms had gel dispensers prominently displayed at the door, alongside posters showing “The 5 moments for Hand Hygiene”. No particular information about Cleanliness Champions was visible.

Paul, the nursing auxiliary and Cleanliness Champion, gave more information about the ward and his involvement. The ward had 24 beds and functioned as a rehabilitation unit for elderly people. Having worked here for 20 years, he felt that infection control had improved overall but could still be a lot better. The Ward Sister had nominated him for the CCP and he had completed it two years ago, taking five months to do so. He had enjoyed the learning and found it very relevant to practice. It also had personal resonance, as a family member had recently contracted an infection while in hospital.

The Ward Sister was his key ally and had supported him to develop aspects of everyday practice in conjunction with the other staff. Unfortunately the Sister’s long-term leave of absence due to illness had restricted this working partnership. The main initiatives that Paul had taken forward were:

- Re-organisation of ward environment to more explicitly distinguish clean from dirty areas
- Stopping the use of communal hair rollers; getting portable hand gel containers for staff; getting elbow-operated taps installed
• Introduction of an equipment cleaning schedule, including the use of green “I am clean” stickers after cleaning commodes between patient usage. A spot check in the toilet of a six bedded area showed that most commodes had these on but one recently used one did not

• Instigating an environmental audit focusing on cleaning behind radiators and other locations that were observed to be dirty. This had entailed a major negotiation with the estates department but had been successful

All these developments had involved gaining support from other ward staff. Some staff had resented this at first but most had come round and were trying to make these improvements work. This was helped by the recent introduction of a daily hand hygiene audit. As part of the Scottish Patient Safety initiative, a different member of nursing staff would (covertly) assume the auditor role each day. During normal work the auditor would observe for ten minutes the total number of hand hygiene opportunities taken by colleagues in relation to the 5 key moments guidance. Paul felt this was working well as the results were fed back quickly to staff in a supportive but standards-driven way. The aspect that staff most often neglected was cleaning hands after touching patient surroundings.

Support from the ICT was generally good, with a team member often being visible on the ward. However, after a recent outbreak of diarrhoea and vomiting on the ward, some advice was perceived as being rather inconsistent. Paul wasn’t aware of specific infection rate statistics for the ward, but he thought these might be fed back at Sister level. Nevertheless, he felt that the main impact of the CC development in his ward was in lessening spread of diarrhoea and vomiting, and C Difficile (which patients sometimes came in with). He also felt that outbreaks were better managed generally in the last two years.

During the visit Paul afforded the chance to talk in an informal way to several other members of staff who happened to be nearby and had a minute to spare. The unit physiotherapist said that she didn’t know what a Cleanliness Champion was, but that she felt practice was particularly good in this ward. A visiting Medical Support Nurse agreed with this assessment, adding that local wards varied considerably in the extent to which they made good infection control practice visible. A student nurse said that he had done the CCP as part of his training but that he hadn’t learned much new through it. He felt this was due to him having had considerable nursing auxiliary experience before starting nurse training. The Staff Nurse in charge of the ward on the day had been doing the CCP for 18 months but felt that she hadn’t had the support to get it finished. Although she felt disgruntled about this, she felt that the ward had made a lot of improvements in ICP practice in the last two years. This was endorsed by several other auxiliary nurses.

The auxiliaries all agreed, however, that educating patients and the public was a constant, daily struggle. As if to re-enforce this point, at the end of the visit, a young man came in with a very young baby and went to sit with his elderly relative. While this hospital environment was not ideal for a young baby, this had to be balanced with the possible joy for a new grandmother struggling on a journey of rehabilitation. In a sense this typified the push – pull nature of everyday decision making faced by Cleanliness Champions and colleagues. In summing up progress, Paul felt that he had made a substantial personal contribution to infection control practice through the CC role, but that there was still a lot of scope for further team development of practice and more related impact.
SECTION 6: DISCUSSION OF FINDINGS

Having presented the findings of the evaluation in detail, it is now useful to provide an integrative discussion of their meaning and significance, with reference to other relevant literature. To set this in perspective, the limitations of the study are now addressed.

6.1 Limitations of the study

The main limitation of this national study is clearly its reliance on the perceptions of various groups of NHS staff about the impact of Cleanliness Champions. Ideally, gauging the impact of an educational programme on practice would involve systematic observation of practice behaviours and the related collation of robust indicators of impact on patient care. Some of the reasons for the absence of these methods have been alluded to in Section 2 of the report, but further explanation is necessary.

Although desirable, systematic observation of the clinical behaviours of Cleanliness Champions and their colleagues on a national scale is fraught with methodological difficulties of enactment and interpretation. Firstly, as the HPS Hand Hygiene Audits have shown, the achievement of standardised observations by non-participant observers requires considerable investment in audit staff infrastructure and education processes. Even with this input, risks of bias and difficulties of comparison between contexts are well acknowledged (HPS 2009). Moreover, as Henry et al (2006) report, practical difficulties with recruitment to clinically based HAI studies are likely to be substantial. Our findings in Section 5 of this report confirm this, even at the level of gaining participation in interviews.

Secondly, when observing CC-relevant practice behaviours such as compliance with equipment cleaning, it is not necessarily clear what constitutes realistic optimal performance. Although, instinctively, 100% compliance would be desired, this is not necessarily relevant and achievable for every staff group. The Scottish Government is clear in its 90% or more compliance target for hand hygiene, but several international reports (e.g. Pittet et al 2000) show very widespread (and often much lower) compliance data for hand hygiene even after targeted campaigns (e.g. Grayson et al 2008). Therefore the definition of each good practice standard is contestable and may vary for different practice behaviours.
Lastly, and perhaps most importantly, the particular impact of the Cleanliness Champion Programme and enacted role on the practice being observed would be hard to ascertain in the absence of baseline data of compliance pre-Cleanliness Champions and/or a controlled study.

In summary, the difficulties of isolating, measuring and attributing influence (and/or lack of it) on clinical behaviour are very considerable. Thus it seemed wiser to focus this time-limited national study on the achievable. As Section 2.3.1 indicates, the use of proxy indicators of behaviour such as alcohol-based gel use were also considered, but ruled out following consultation and consideration of confounding concurrent influences. More distal indicators, such as patient rates of MRSA and C Difficile, were ruled out on the same basis. Examination of infection rate graphs for Health Boards suggested that reliable inference about the impact of Cleanliness Champions would be inherently problematic.

These points are of more than academic interest. In effect, they highlight a central question: what impact is an educational intervention such as Cleanliness Champions expected to make? To return to the objectives in Section 1.2, the aim is primarily for CCs to recognise risk, role model good practice and to positively influence others. As such, it made sense to try to elicit perceptions from a range of CCs and colleagues.

The other limitation to recognise is the 26% response rate to the census survey of CCs. As Section 2.4.1 indicates, factors such as CC turnover/attrition and third party distribution of questionnaires mitigate against high response, and such difficulties are well documented (Curtis and Redmond 2009; Gerrish and Guillaume 2006). Nevertheless, Section 4.2 presents considerable evidence that our sample is highly representative in a number of ways of the total population of Cleanliness Champions in Scotland. Furthermore, comparative analyses with data from the previous educational evaluation show that less than a third of the respondents to that survey could have subsequently participated in the 2008 impact evaluation. Therefore the impact survey has elicited perceptions primarily from a different, more recent, group of Cleanliness Champions. This is important because, as the next subsection argues, a substantially positive picture of the Cleanliness Champions Programme and its enactment has persisted, despite mandatory participation becoming more prevalent.
6.2 What more has been learned about the Cleanliness Champions Programme?

The previous evaluation (West et al 2006) found that the educational programme was viewed very positively by most respondents. This was remarkable, as many of these staff had difficulty getting time at work to complete the programme. From the current survey, and from other consultations, it is clear that many Health Boards have addressed this problem by introducing more intensive, classroom based, group learning approaches. This has also:

- addressed needs stemming from the mandatory participation of G Grade/AFC 7 nurses
- contributed to the reduction in average completion time for the CCP and to achieving target numbers of Cleanliness Champions within Health Boards

Within this context, it is important to note that the CCP itself continues to be widely viewed as relevant in terms of its content and preparatory value. However, some respondents still feel that the programme would benefit from customisation to meet the needs of particular occupational groups. Some also complained of lack of time to complete the programme, but this was a much more minor theme.

Although volunteers tended to be significantly more positive in their responses, those who did the CCP on a nominated/mandatory basis were also typically positive about their experiences. This is important as it suggests that the introduction of the national mandate for G grade/AFC 7 nurses to be Cleanliness Champions has not led to widespread dissatisfaction.

Thus, in a number of ways, the Cleanliness Champions Programme remains a distinctive educational success story. At the time of our 2008 survey there were almost 5,500 Cleanliness Champions in Scotland, with that total rising to over 7,500 by April 2009. When the associated mentoring contribution of various staff is also taken into account, it can be seen that the Cleanliness Champions initiative has attracted substantial, sustained commitment from a wide range of NHS personnel. Indeed it is difficult to think of a comparable educational development on this scale across NHS Scotland. In England over 125,000 staff have now registered on the NHS Core Learning Programme Unit’s free at point of access on-line infection prevention and control training programme (C. Gingell
personal correspondence; and Pellowe 2007). At time of writing two educational evaluation studies are underway.

It will be particularly interesting to find out more about the uptake and use of the English programme by different occupational groups. The Cleanliness Champions initiative remains predominantly populated by one particular profession. In fact the proportion of nurses has increased in the last three years due to the mandatory participation of G grade nurses. Concurrently, the dominance of the acute sector has diminished somewhat, with more Cleanliness Champions now active in community settings.

6.3 What has been learned about the impact of the Cleanliness Champions Programme?

The first two objectives of this evaluation focused on changes in behaviours and clinical practices. Our data clearly suggests that the main impact of the Cleanliness Champions initiative has been on:

- CCs’ own awareness and knowledge of infection prevention and control
- CCs’ own hand hygiene practice
- CCs’ practice in relation to equipment and environmental aspects, such as sharps disposal, personal protection and securing improvements to sinks, flooring etc.
- Through CCs’ sharing of good practice, related improvements to some colleagues' awareness, knowledge and behaviours in the aspects mentioned above

These changes are best thought of as proximal, positive and practical in nature i.e. they are closely related to the particular clinical foci of the CCP and are recognised as relevant and legitimate activities for a Cleanliness Champion. Perceptions of related improvements in evaluation of practice were fairly widespread. However, Cleanliness Champions' involvement in audit was variable and was by no means noted frequently by colleagues. Similar variation was seen in terms of involving patients and the public. Interestingly, recent evaluation of the National Clean Your Hands Campaign in England (Slade et al 2007) has noted evidence of less impact in this area of patient empowerment.

Variation in the nature and extent of the main impacts highlighted above was to be expected. This is summarised in the typology of role/practice development. The evaluation also sought some explanation for this variation by considering barriers and
facilitators for implementing change. The factors that were most influential in enabling change were clearly:

- Peer support from colleagues in the immediate work setting. The recruitment of key allies to support enactment of a CC role was seen as most important
- Support from other colleagues, most notably Infection Control Nurses and service managers
- The motivation and drive of the individual Cleanliness Champion, related to personal and professional factors

Barriers were cited less frequently than enablers, reflecting the generally positive tone of the vast majority of participants in the evaluation. Unsurprisingly, lack of peer support emerged as the most significant barrier, and medical staff were most frequently mentioned in this context. This perpetuates a theme that emerged in the previous evaluation, and it is clear that there is still a lot of work to be done to convince medical colleagues of the value accruing from the sort of small scale practical changes that Cleanliness Champions can enable. However, during the evaluation a number of staff commented positively on the attitudes and practice of newly qualified doctors who had undertaken Cleanliness Champions as part of their undergraduate education.

Although lack of time was mentioned as a problem by some participants, it is significant that many more saw lack of equipment and poor environmental facilities as hindering progress. This reflects a theme that has emerged as very important in recent enquiries into infection outbreaks (e.g. Smith, Henry and Phillips 2008) and it was clear that many CCs were trying to optimise good practice within difficult contexts by securing small scale environmental improvements to sinks, flooring, ward fabric and cleaning routines.

Whatever the scope of development stemming from the introduction of a Cleanliness Champion to the workplace setting, it was almost never seen as resulting in negative consequences for patients. At worst, there was no real impact. Much more commonly there was perception of slight, or more substantial, improvement to patient care. However there was often caution about directly linking process improvements to more distal outcomes. While many CCs and colleagues believed their activities to be contributing significantly to preventing and controlling infection, there was widespread recognition that many other factors concurrently influence levels of infection.
6.4 Why has the Cleanliness Champions initiative impacted as it has in practice?

Before moving on to consider the implications of these findings for action, it is useful to reflect briefly on why the Cleanliness Champions initiative as a whole has developed and impacted in the way that it has. Returning to the framework for analysis presented in Figure 2.1, it can be argued that as a national educational development (Parts 1-3) Cleanliness Champions has successfully established a coherent, distinctive programme that has been useful to a very large cohort of NHS staff. The main role of Health Boards (Part 3, far right) in this has been to secure staff enrolment and support their progression through the programme. To date, however, there has not been similar coherence in translating Cleanliness Champions as a practice development (Parts 3-4).

In effect, after completing the programme, most Cleanliness Champions have been left to their own devices to envision and enact a practice role within the parameters indicated by NES (see Table 1.2). Consequently, individual Champions have considered what is necessary and/or feasible in their own work context, according to their own level of motivation and support from colleagues (who in turn have varied understandings and expectations of what a Cleanliness Champion might do). Considered in sociological terms, this makes the CC role weak as it lacks substantive form (e.g. professional domain), identity (e.g. associated cultural meanings), and set (relations to others in terms of expectations of function, status and power).

Viewed in this light, the varied enactment seen in the typology (Figures 2.2 and 4.5) is easy to understand. What is perhaps surprising under such circumstances, however, is the amount of positive development reported. This speaks of the positive motivation of Cleanliness Champions and the support of key allies such as clinical colleagues, service managers and Infection Control Teams. This has been a striking feature throughout this policy to practice development (e.g. see West et al 2006) and without such “on-the-ground” commitment, progress could not have been sustained.

Viewed from a slightly more distanced organisational standpoint (see Figure 2.2, Part 3, far right), there was rather less sense of the CC role forming, and informing, practice development (see Table 3.2). Typically key organisational contacts, LHBCs and managers were positive about Cleanliness Champions but there was often a sense of:
• not quite knowing where CCs fitted in terms of organisational structures and processes (e.g. between ICT and service management domains)
• not quite knowing what CCs should be doing in terms of their individual role and its relation to the plethora of other concurrent HAI initiatives (e.g. whether and how they should be auditing)
• not quite knowing what a Health Board should do with this large, but rather amorphous and diffuse, group (e.g. how to support and harness benefits of numbers)

The three points above relate to two fundamental questions at the heart of the initiative:

• if infection prevention and control is really everyone’s business and integral to everyone’s practice, is there really a need for a distinct Cleanliness Champion role (and, if so, what should it look like)?
• how many Cleanliness Champions would be enough, and when should the initiative stop?

These questions will now be addressed in considering ideas for action.

6.5 What might be the best way forward?

It is useful to start from participants’ own perceptions of what is needed. As the findings show, there is widespread support for continued roll out of the CCP to more NHS staff. One distinctive theme recurred. This was the particular gains that could be realised by recruiting more Healthcare Assistants and Domestic staff to the programme. It was striking that this observation came from a wide range of staff who felt that it made sense to focus on those with particular proximity to patients and their immediate environment.

As evaluators we concur strongly with this aspiration. In the original educational evaluation of the CCP (West et al 2006) we reported that these groups of staff were often particularly enthused by the educational experience. They were also prominent amongst examples of positive practice development in the present evaluation. Given that a relatively large number of senior clinical nurses are now Cleanliness Champions, and that this role is now at the confluence of a torrent of different quality improvement workstreams (RCN 2009; SGHD 2008; NES 2008), it would make sense to shift focus
towards recruitment efforts at more junior level. In this way key practice partnerships between senior and junior staff CCs can be fostered. The Charge Nurse and Auxiliary alliance offers creative scope and there is also particular opportunity now to engage in this way with Domestic staff (Liyanage and Egbu 2006).

The potential benefits are manifold. As the evaluation has found, the impact of Cleanliness Champions is typically neither swift nor dramatic. Rather it is usually small scale and pragmatic. As the case study in Section 5.6 suggests, it is not the world of perpetual perfect practice. It is the world of striving for some improvement. Cumulative progress may involve steps forward and steps back, with intra-team challenges, infection outbreaks and bad publicity. In this context it makes sense to invest in the talents of front-line staff who can be supported by senior staff who know about the Champions Programme and its aspirations.

In turn this should enable more meaningful local definition and enactment of an associated role. With over 7,500 Cleanliness Champions now working in a huge variety of settings in Scotland it is not realistic to try to impose a more tightly defined role description by central dictat. Rather the CC role and associated practice development should be shaped in reference to local needs and priorities through consultation between Champions, peers, managers and ICTs. This might be best taken forward by local consultation exercises at unit level within Health Boards.

Such local initiatives would need some investment of time and effort by Health Boards and their staff. Given the multitude of other competing priorities, this will not be easy. However, there is a particular opportunity now to take stock of progress at local level so as to maximise the benefit from the time, energy and money already invested in Cleanliness Champions. One of the specific benefits would be to optimise linkage with Infection Control Teams. As the evaluation has shown there is a lot of scope to develop the local role of Champions in terms of audits, feedback of results and forward planning. Such work is very congruent with the aims of the Scottish Patient Safety Programme (see http://www.patientsafetyalliance.scot.nhs.uk/programme ).

One Health Board provided a particularly useful example of how this might be realised. In this region CCs were a key part of local groups who carried out regular audits using tools made available on the intranet. Results were presented to ICTs and the case for any
changes discussed and advocated to key managers as appropriate by the ICT. CCs were involved in feedback and related actions for development. This was supported by the Board through the direct leadership of a Chief Executive and senior team who publicly espoused the value of Cleanliness Champions.

The benefit of integrating Cleanliness Champions with other quality initiatives and linking with ICTs to enact improvements through the audit cycle is stressed in another Scottish Health Board who have been proactive in evaluating the initiative (Green and Thomas 2008). This report shows the potential for local studies to inform analysis at organisational and managerial level. This process is highlighted as crucial for infection control co-ordination (Griffiths, Renz and Rafferty 2008).

Indeed, in the course of developing and evaluating the Cleanliness Champions initiative a number of valuable exemplars of productive role enactment and local practices have been collated. Where possible, it would be useful to make these accessible to other Champions and their colleagues to show what can be done. In a sense the CC role is what the local team wants it to be, but national support through website resources, for example, can be a useful point of reference. Such nationally collated resources could be used as part of locally run educational updates and peer support opportunities for Cleanliness Champions. The evaluation showed that many Cleanliness Champions feel a need for the latter support, especially those who completed several years previously. Some Health Boards have been proactive in addressing this need but others have not.

Finally, many participants in the evaluation felt there was a need for much more publicity at a national level to highlight the achievements of Champions to the wider public. This could to some extent counterbalance the negative press associated with infection outbreaks.
6.6: Conclusion

During the past decade the Cleanliness Champions Programme has evolved into a substantive positive influence on the prevention and control of HAIs in Scotland. In the next five years the need for NHS staff to undertake the CCP may diminish due to its incorporation into undergraduate preparation and due to more widespread integration of its good practice principles throughout service delivery settings. In the meantime, this evaluation suggests that continued benefits can be realised by promoting the programme and supporting enactment of a Cleanliness Champion role.
SECTION 7: RECOMMENDATIONS

Based on the findings of this evaluation, and the related considerations in Section 6, the following recommendations are made:

1. Given the evidence of substantial positive perceptions of the impact of Cleanliness Champions on clinical practice,

   it is recommended that the Cleanliness Champions Programme continues to be promoted and developed in Scotland

2. Given widespread recognition of the patient care benefits to be gained from more front-line staff undertaking the programme,

   it is recommended that particular emphasis is now placed on recruiting more Healthcare Assistants, Domestic Staff, and those Band 5 Staff Nurses who did not undertake the CCP before qualifying

   The value of pairing senior and more junior members of staff as Cleanliness Champions in each clinical area is strongly suggested.

3. Given the evidence that the potential benefits of Cleanliness Champions are not being fully realised in many Health Boards,

   it is recommended that Health Boards enact processes to develop and integrate the Cleanliness Champions’ role more fully into local infection control planning and practice

   These processes should include:

   - Local consultation with Cleanliness Champions about the current nature and scope of their activities
   - Agreeing appropriate role/practice development, with reference to local needs and priorities, and exemplar Cleanliness Champion cases
• Optimising linkage with Infection Control Teams through these processes, and through inclusion in audits, feedback of results, and forward planning
• Provision of educational update and peer support opportunities for Cleanliness Champions
REFERENCES


Royal College of Nursing (2009) Breaking down barriers, driving up standards. The role of ward sister and charge nurse. London: RCN. (http://www.rcn.org.uk/development/publications)


## APPENDIX

### Cleanliness Champions Interviews: Mapping of Themes

<table>
<thead>
<tr>
<th>Liaison (wider)</th>
<th>Support</th>
<th>Audit</th>
<th>Impact</th>
<th>Ideas for future</th>
<th>Education/teaching</th>
<th>Barriers</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 s/ng</td>
<td>Not able to make meetings due to shift pattern and staffing levels</td>
<td>No support from manager who is also CC, therefore no support from staff.</td>
<td>None done</td>
<td>None</td>
<td>Defined role. Support from ICT to be seen on the ward floor. Train all healthcare staff.</td>
<td>Teach all. Teach students and change culture re cleaning.</td>
</tr>
<tr>
<td>17 s/ng</td>
<td>No liaison with other CC, manager or ICN.</td>
<td>No support from nurses on ward. No support from domestics. Support from catering staff.</td>
<td>No audit done.</td>
<td>Catering - change timing of food coming out of the oven. Colour coded mops. Role model for staff. Domestics - role model and colour coded mops, but no impact.</td>
<td>All domestics on shortened course. Better support from ICT and manager needed. More CCs so not working in isolation. Better resources.</td>
<td>Have managed to teach catering staff. Found audit on the course difficult to complete because needed nursing staff help and no team spirit made this difficult to achieve.</td>
</tr>
<tr>
<td>66 s/ng</td>
<td>None</td>
<td>Support from ICT and microbiologist when needed.</td>
<td>Nursing staff do audits and results made shared, however external auditors would ensure accuracy.</td>
<td>Some impact noted, but ? due to CC or general awareness.</td>
<td>Train all staff. Choosing relevant modules. Screen all pts on or prior to admission.</td>
<td>People to choose modules relevant to them and all staff at all levels to do some. Even consultants</td>
</tr>
<tr>
<td>37 sb</td>
<td>No liaison, minutes only.</td>
<td>Manager supportive and some staff.</td>
<td>Involved in some when requested by ICT</td>
<td>HH and some knowledge sharing.</td>
<td>Train all staff. Charge nurses only there as support. Stage training for different groups.</td>
<td>Most staff receptive. Success depends on CC communication skills and staff receptiveness.</td>
</tr>
<tr>
<td>57 sb</td>
<td>Liaison with other CC vital. No updates or link group Info.</td>
<td>Other CC. ICT.</td>
<td>None done since course.</td>
<td>HH, environmental impact, awareness.</td>
<td>More CCs in each area. Link groups. Assertiveness training.</td>
<td>Taught well, but no indications to how to implement role. Acute focus.</td>
</tr>
<tr>
<td>55</td>
<td>ICN feedback</td>
<td>Managerial</td>
<td>Audits are good</td>
<td>Moved fridge, Back up training</td>
<td>Protected time</td>
<td>Time, resources. Consultants barrier. Building.</td>
</tr>
<tr>
<td>85</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>75</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>sb</td>
<td>updates. No liaison with other CCs. Support and ICN support. Consultants undermine process. Tool, but do too many. Get outside auditor to release time and increase accuracy. HH, small things, but large changes needed and no resources. with resources. Get all cleanliness initiatives under same name - make more impact. needed. Make course shorter and mandatory for ALL NHS staff. Best staff to train auxiliaries and staff nurses with managerial support. Too many initiatives.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>74</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>pp</td>
<td>No liaison with other CCs. Daily liaison Managerial, ICT and Domestic Supervisor good. No CC specific ones. Train working. Sinks in every room. Posters. Train CSWs - most effective. Up dates and Day course too intensive - give out folder in advance to Drs. - HH and PPE.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>49</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>sb</td>
<td>No liaison. No updates. No support for role. ICT and manager focus not on GP surgeries. No audit, although domestics in GP surgery monitoring HH and feeding back. New bins, improved HH among some nursing staff. All staff wear aprons now. Role model to patients and domestics. Challenge techniques and assertiveness training in course. Clear identification as CC. Have taught Pts with success. Course good and relevant. Teach all staff - esp. band 2 and 5 nurses. Course good and relevant. Teach all staff - esp. band 2 &amp; 5 nurses best to enact. Being based in a GP surgery. GPs only focusing on targets and finance.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>pp</td>
<td>No liaison, found it hard being the only CC in dept. Need support forum. Managerial support essential in order to enact role. No audits done. ICT do audits if need identified. Multi-disciplinary teaching sessions. PPE and HH, but needs constant re-enforcing. Support forum. Train all staff - esp. band 2 and 5 nurses. Course good and relevant. Teach all staff - band 2 &amp; 5 nurses best to enact. Time. Isolation - only CC. Lack of forum.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Page</td>
<td>Staff</td>
<td>Managerial</td>
<td>Environmental</td>
<td>Domestic</td>
<td>Able to teach staff</td>
<td>High staff turnover, poor resources and especially short of nurses and domestics</td>
</tr>
<tr>
<td>------</td>
<td>-------</td>
<td>------------</td>
<td>---------------</td>
<td>----------</td>
<td>---------------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>27 pp</td>
<td>Been at 1 update in 2 years. No dissemination of audit results to staff.</td>
<td>Staff resented change but came round when understood reasons for changes. ICN seen on floor.</td>
<td>Staff doing HH audits. CC doing the eleven audit that are in the training pack on a monthly rota.</td>
<td>Have made small changes - rearranging the ward, cleaning programme, elbow taps, gels.</td>
<td>More resources to back up initiative. More CCs esp domestics,</td>
<td>Teach assertiveness skills. Teach all staff. Teach all domestics esp.</td>
</tr>
<tr>
<td>38 f</td>
<td>None</td>
<td>None - time issues but would be a useful tool.</td>
<td>Environmental changes, staff teaching. Increased awareness. Posters in toilets.</td>
<td>Domestics and auxiliaries should do the course.</td>
<td>Able to teach staff.</td>
<td>Time. Resources - take ages just to get gloves.</td>
</tr>
<tr>
<td>11 f</td>
<td>ICT will help if you phone them. Casual contact with fellow CCs.</td>
<td>Managerial support and ICT support good and essential.</td>
<td>No regular audits, but have used audit to justify needs. Audit a good tool.</td>
<td>Treatment rooms standardised. Use of PPE all staff and domestics. Use of PPE in pts homes. HH improvement</td>
<td>Get more CCs trained who are clinically based-band 5/6. Use audit effectively.</td>
<td>Shared building with council- different standards</td>
</tr>
<tr>
<td>9 f</td>
<td>No liaison. Good leadership at ward level essential for the success.</td>
<td>None, managers in other building. ICT not seen unless there is a problem.</td>
<td>HH and PPE audit ongoing. Environmental audits take place.</td>
<td>Changed central line management. HH improved for pts and staff.</td>
<td>Higher profile of programme. CSW most effective group to train.</td>
<td>Make sure staff understand aims and philosophy behind the programme and then enthusiasm will be better.</td>
</tr>
<tr>
<td>68 f</td>
<td>Initial updates, but fizzled out. Now none.</td>
<td>Managerial and domestic support good.</td>
<td>Used audit to provide evidence to Drs to change HH and tie wearing</td>
<td>Increased use of PPE and colour coded aprons. Drs not wearing ties. Increased</td>
<td>Train auxiliaries.- do most work. Train all NHS staff.</td>
<td>Senior trained nurses not supportive of change.</td>
</tr>
<tr>
<td>No.</td>
<td>Description</td>
<td>Details</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----</td>
<td>-------------</td>
<td>---------</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15 t</td>
<td>Communication with ICT much improved after course. No formal liaison events, but conference in region later this year.</td>
<td>Nurse Director and all managers except OT seen to be supportive. No formal audit undertaken by CC after initial course. ICT do all audits. Increased liaison with ICT and improvement in personal standards, which is cascaded down. Band 2 and 5 make the biggest impact. Train all staff. Develop advanced course for band 7s. 4 day course with protected study time for all staff. Resources. Down to the personality of the CC at the end of the day.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>70 t</td>
<td>Attended one meeting. Have not gone to others advertised. Do not liaise with CCs outside the dept.</td>
<td>Support from domestic supervisor. ICT and Nurse Directorate. CCs do monthly HH audits and feedback results. Carpet to lino. Cracked toilet seat repaired. Elbow use taps installed. Train all staff esp. band 3. None really, some staff reluctant at start.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13 t</td>
<td>Forums and link groups - none.</td>
<td>Excellent support from managers. None done specifically by CCS. ICT do. CCs managed to cascade knowledge down to other staff. Focus on HAI has made floor to board communication better. Support groups/forums. Good idea to train up whatever grade in predominant in clinical area. Competing demands of mandatory courses. No protected time.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liaison (wider)</td>
<td>Support</td>
<td>Audit</td>
<td>Impact</td>
<td>Ideas for future</td>
<td>Education/teaching</td>
<td>Barriers</td>
</tr>
<tr>
<td>----------------</td>
<td>---------</td>
<td>-------</td>
<td>--------</td>
<td>------------------</td>
<td>--------------------</td>
<td>----------</td>
</tr>
<tr>
<td>49B</td>
<td>Staff supportive of CC</td>
<td>No audits in M/C</td>
<td>GP use of PPE and HH. New bins</td>
<td>Higher grade staff in community would make more impact with GPs.</td>
<td>Open out, but GPs may not send staff because no incentive.</td>
<td>CC not working in NHS property. Time to communicate with colleagues.</td>
</tr>
<tr>
<td>25A</td>
<td>Liaison with ICT</td>
<td>Multi-disciplinary Managerial support good. ICT support good.</td>
<td>No audits. Something to be addressed in the future.</td>
<td>Future audit needed. Train band 2 and 6. Address HH and PPE issues.</td>
<td></td>
<td>Time to release clinical staff. Nature of environment (water and electricity don’t mix)</td>
</tr>
<tr>
<td>15B</td>
<td>ICN good support and visits area frequently</td>
<td>All staff CCs- self supporting. ICN good.</td>
<td>HH done regularly- audit. Drs separately.</td>
<td>Policies adhered to- moving to new building soon.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>45B</td>
<td>Close team, supportive of CC role.</td>
<td>Charge nurse (CC) does audits with ICT and domestic supervisors monthly.</td>
<td>Hand gel beside every pt bed. Single room utilised to isolate vulnerable pts and fast track the admission process.</td>
<td>4 more nurses to start CCP in Sept.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>57B</td>
<td>30 in team . Very supportive team.</td>
<td>Do not see the results of and screening/ audits</td>
<td>Disposable items, adherence to sharps policy, but mainly HH</td>
<td>Visible senior managerial support - assisting for CC who finds it difficult to influence colleagues</td>
<td></td>
<td>Doctors- failure to adhere to HH policies.</td>
</tr>
<tr>
<td>73A</td>
<td>None</td>
<td>None. Colleague not even aware of who the CC is on the ward.</td>
<td>Domestic Supervisor does, but it is unknown what she is auditing</td>
<td>None</td>
<td></td>
<td>No gels - have moved to a new premises and have no sluice and although each pt has an en-suite toilet, there is no increase in domestic hours.</td>
</tr>
<tr>
<td>Time</td>
<td>Liaison (wider)</td>
<td>Support</td>
<td>Audit</td>
<td>Impact</td>
<td>Ideas for future</td>
<td>Education/teaching</td>
</tr>
<tr>
<td>------</td>
<td>----------------</td>
<td>---------</td>
<td>-------</td>
<td>--------</td>
<td>-----------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>1M</td>
<td>CCs meet as a group, but no ICT support.</td>
<td>In wards auxiliaries may not have support.</td>
<td>CCs do a lot of audits- HH</td>
<td>Staff attitudes/challenging</td>
<td>Greater concentration of CCs more impact</td>
<td>Needs to be more AHPs</td>
</tr>
<tr>
<td>2M</td>
<td>CC’s don’t meet as a group. Ward manager meets with ICN.</td>
<td>Managers and ICN do audits.</td>
<td>CC influenced future planning of ward fabric.</td>
<td>Updates for CCs.</td>
<td>CC’s involved in teaching HH, C.Diff and SIPS.</td>
<td>Time restraints.</td>
</tr>
<tr>
<td>3M</td>
<td>Little.</td>
<td>No support from ICT. None from manager.</td>
<td>Done by IC.</td>
<td>More posters.</td>
<td>Role of CC defined. More auxiliaries needed.</td>
<td>Only 2/15 trained staff CCs-wanted to train grade C, more appropriate.</td>
</tr>
<tr>
<td>4M</td>
<td>Can’t get to meetings-1 annual day needed.</td>
<td>More senior support needed. Good relationship with IC.</td>
<td>HH only.</td>
<td>HH only.</td>
<td>G grade support, junior staff train as CC.</td>
<td>CC’s teach ward staff and domestic.</td>
</tr>
<tr>
<td>6M</td>
<td>No liaison at present.</td>
<td>CCs do no audits.</td>
<td>Nothing specific</td>
<td>Greater co-ordination needed round all audits</td>
<td>Train ancillary and grade 2 and refresh CCs</td>
<td>Lack of role and responsibilities. Wrong staff trained initially.</td>
</tr>
<tr>
<td>5M</td>
<td>None at present</td>
<td>CCs not doing audit.</td>
<td>Raised awareness. HH, posters and gel improved.</td>
<td>External auditors needed.</td>
<td>Teach band 6 then cascade down to all staff Good Programme</td>
<td>CCs not used as a resource because no aims and role definition. Resources poor especially laundry and environment.</td>
</tr>
<tr>
<td>8M</td>
<td>None at present</td>
<td>Greater degree of support from ICT needed.</td>
<td>None done by CCs</td>
<td>Standards high and monitored already by senior nurse therefore no change.</td>
<td>Train band 2, student nurses, SHOs and domestics</td>
<td>Good programme.</td>
</tr>
<tr>
<td>11M</td>
<td>Two CCs liaise with ICT on the mainland.</td>
<td>All staff have some input into CC. self supporting, ICT mainland</td>
<td>Ongoing HH. C.diff and MRSA weekly (mainland ICT).</td>
<td>Staff awareness-esp. use of gels and HH.</td>
<td>Should be a role that is developed- should be part of normal practice-integrated, commonplace and fully supported.</td>
<td>Registration and time element of course slow. Needs dedicated training time.</td>
</tr>
<tr>
<td>10M</td>
<td>No liaison.</td>
<td>Manager active</td>
<td>Audits done</td>
<td>Improved HH.</td>
<td>Link and support</td>
<td>No time to teach others.</td>
</tr>
<tr>
<td>7M</td>
<td>There are groups with poor attendance. IC Link nurses in the future to liaise between IC and CC.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>----</td>
<td>---------------------------------------------------------------------------------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CC need support by having a defined role and responsibilities. Will be supported by IC Link nurses in the future.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CCs do not participate in audits at present. ICT do.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>None that can be attributed to CC. Did raise issue of HAI initially in a structured way.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>IC Link nurses to co-ordinate between CCs and IC. All IC Link nurses to have done CCP in future.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Have a stepped programme designed for different academic levels. Open to all staff and enable staff to take out the modules they want.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No role definition. No aims, no needs identified.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>9M</th>
<th>3 study days per year- well attended.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CC do monthly HH audit only. IC do the rest.</td>
</tr>
<tr>
<td></td>
<td>Personal improvement must lead to impact, but nothing specific. Greater no of CCs on ward does not improve impact.</td>
</tr>
<tr>
<td></td>
<td>CC advisory forum to be developed locally.</td>
</tr>
<tr>
<td></td>
<td>Many non-completers-audit is stumbling point. Keep course as a whole.</td>
</tr>
<tr>
<td></td>
<td>Inability to share knowledge and challenge. Lack of defined role and responsibilities.</td>
</tr>
<tr>
<td>Interviews with LHBCs (Hand Hygiene): Mapping of themes</td>
<td></td>
</tr>
<tr>
<td>--------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Liaison (wider)</strong></td>
<td><strong>Support</strong></td>
</tr>
<tr>
<td>HH5</td>
<td>No communication-need annual study day.</td>
</tr>
<tr>
<td>8HH</td>
<td>None</td>
</tr>
<tr>
<td>12HH</td>
<td>3 monthly meeting for CCs. Senior CC meets with IC.</td>
</tr>
<tr>
<td>2HH</td>
<td>None at present.</td>
</tr>
<tr>
<td>Interviews with Key Organisational Contacts: Mapping of themes</td>
<td></td>
</tr>
<tr>
<td>---------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Liaison (wider)</strong></td>
<td><strong>Support</strong></td>
</tr>
<tr>
<td>---------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>1</td>
<td>3 monthly link groups. Annual update run by ICT, but not enough places.</td>
</tr>
<tr>
<td>2</td>
<td>Excellent liaison with ICT and managers.</td>
</tr>
<tr>
<td>3</td>
<td>ICT setting up link group that is needed.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Key to themes

**Gold** - positive team, support and impact
**Grey** - Infection Control Team impact
**Sea green** - no audits taking place or difficulties with audit
**Lilac** - audits done
**Red** - audit process carried out, but not by CCs. Staff might not get to see the results
**Black** - suggestions for the future
**Pink** - limited/no wider liaison (e.g. with ICT or CC’s outwith department)
**Lime** – limited/no support within proximal team and related limitations on impact
**Plum** - need for defined aim/role/responsibility for CC, and/or wrong staff trained initially
**Green** - time restriction
**Brown** - environment/resource changes, positive or negative
**Blue** - impact of medical staff
**Orange** - changes in hand hygiene, use of PPE, sharps bins
**Sky Blue** - change in policies or procedures
An Evaluation of the Impact of the
NHS Education for Scotland Cleanliness
Champions Programme on Clinical Practice

Full Report