The impact of observational hand hygiene auditing on consultant doctors hand hygiene behaviour.

A qualitative study

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Background

HCAI is a patient safety issue

Good hand hygiene reduces the risk of HACI

HCW’s don’t always perform optimal hand hygiene

Doctors perform more poorly than other HCW’s

Observational hand hygiene auditing of consultant doctors using the WHO (2009) “5 Moments for Hand Hygiene” with provision of individualised feedback

Compliance amongst doctors increased from 57% [95% CI: 0.54 – 0.61] in 2011 (778 opportunities) to 94% [95% CI: 0.93-0.95] in 2015 (2,319 opportunities).
Study Aim

To establish **how** observational hand hygiene auditing with individualised feedback impacts practice and to **identify factors which influenced** consultant doctors hand hygiene compliance.
Methods

Study Design:

• Descriptive qualitative study using the **Theoretical Domains Framework (TDF)**

**Validated integrated theoretical framework based on 14 domains providing logical context for implementation of change and evaluation in the healthcare setting,**

(Cane et al. 2012).

Sampling:

• Consultant doctors who had participated in the observational hand hygiene audit intervention and who received individualised feedback reports were identified.

Ethics:

• Ethical approval was granted by the Clinical Research Ethics Committee of the Cork Teaching Hospitals and signed informed consent was collected from all participants.
Methods

Data Collection and Analysis:

• A semi-structured interview guide based on the TDF was used, (Cane et al. 2012).

• A pilot interview was carried out which resulted in minor changes to the interview guide.

• Semi structured interviews were carried out which were recorded, transcribed verbatim and entered into NVivo11 qualitative data management software to support data management and analysis.

• Data were analysed by two researchers (MS & ES) using a thematic analysis approach involving; coding, identification of emergent themes and mapping themes to the appropriate theoretical domain.
### Consultant Characteristics

#### Gender

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<tbody>
<tr>
<td>Male</td>
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#### Speciality

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#### Details of Speciality

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<td>Urology</td>
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<td>Orthopaedics</td>
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<td>General surgery</td>
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<td>Cardiology</td>
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Results

TDF Domains that did not emerge as relevant to this study

Dominant TDF Domains

Relevant TDF Domains

Less Dominant Relevant TDF Domains

TDF Domains that did not emerge as relevant to this study

Results
Results - Thematic model

Dominant Theoretical Domains and Themes

- Behavioural Regulation
  - Triggering Effect of Audit and Individualised Feedback
- Knowledge
  - Individualised feedback targets knowledge deficit
- Reinforcement
  - Substandard practice needs to be addressed at a senior level
- Social Professional Role and Identity
  - Professional competitiveness motivates practice
- Environment and Context
  - Efficacy is linked with organisational culture and resources

Other relevant Theoretical Domains and Themes

- Beliefs About Consequences
  - Reduces risk of HCAI
- Memory Attention and Decision Making
  - Audit and resources trigger behaviour
- Social Influences
  - Behaviour of other HCPs and expectations of patients influence practice

Improved hand hygiene compliance
“It takes individualised feedback to indicate that maybe you are not perfect, or there are areas that you are missing” (Participant 1).

“I think people would go back... it would have a negative effect” (Participant 12).

“I noticed from earlier audits, there were certainly a few individuals that were ... outliers. They’ve come up and there’s only one or two now who are consistently below” (Participant 6).
“It may be some sort of real basic thing that the person is doing repetitively but they are not being fed back again. So, for instance, they might say you’ve got 80% compliance, but they don’t say whatever you did, x, y and z” (Participant 11).

“I can’t remember when it changed to individualised. If you said to me it was always individualised, I would have said, ‘Right, okay,’ because it’s been individualised as long as I can remember” (Participant 6).

“I think I did poorly in my first report. Honestly, I got my first report, I thought, “I don’t remember not washing my hands” …… I actually asked about this and they said, “Well you shook the patient’s hand”, I said, “That’s not touching….” So, there was a learning process in it for me”” (Participant 5).

TDF Domain
Knowledge

Poor knowledge of generic cumulative reports

Individualised feedback targets knowledge deficit

Knowledge Influences Practice
“That would be a discipline issue. I think if you thought that one of your colleagues was walking around with dirty hands when everybody else was making a huge effort to keep the things [hands] clean. When we have them [alcohol based hand rub dispensers] outside every door, they’re in every room, they are almost on every bed. What else can you do? At some point, somebody’s going to have to stand up and manage the hospital” (Participant 7).

“People scoring less than 80% on their hand hygiene audit will have their... In America, what they did was, you lost your car parking privileges, then you lost your prescribing rights, or you lost your admission privileges” (Participant 3).

“I don’t think it should be punitive because I actually think you never change practice by actually beating someone up ....... physically, emotionally or financially..... you don’t.” (Participant 11).
“Medics, by and large, are quite competitive and you would like to see your scores being good” (Participant 2).

It is “a personal rudimentary component, where nobody likes to be seen to be failing anything. That personal slight mini-humiliation if you’re not getting to a certain level, everyone, or at least all the medics I know are very competitive” (Participant 5).

“I write down … ‘I participate in hand hygiene audits and so do the hospital’” (Participant 11).

“The first thing, if I was a lawyer, it would be go to ask do they do hand washing, could I see the individuals and if they scored poorly then the patient has a huge case there that they can actually say they’ve consistently not been demonstrated to be complying” (Participant 11).
“There is a feeling that you need to perform and behave” (Participant 10).

“Two things [that influenced hand hygiene practice], one would be the cultural change and secondly would be the easy availability of the stuff [alcohol based hand rub] (Participant 8).

“It is important that we are seen to be hygienic also, so it’s important for the patients, and also the nursing staff and the ancillary staff to see that this is a thoughtful, careful hospital that is ultimately developing with the patients in their [the patients] best interest” (Participant 5).

“We have them [alcohol based hand rub] outside every door, they’re in every room, they’re almost on every bed” (Participant 7).
“I think it behoves all of us to try and reduce infection. Infection is rapidly becoming the thing that will kill most of us” (Participant 4).

“The fact that everyone is scrubbing up and everybody is doing it, there is a herd mentality in relation to this. If everybody’s doing it, we all do it” (Participant 2).

“Having plenty of dispensers; the sight of the dispenser is a reminder” (Participant 1).

“I can’t think of any other triggers. The feedback would be the single most important thing” (Participant 4).

“The visibility in doing it as in… engenders more confidence [in patients], that you think hand hygiene is important” (Participant 11).
Discussion

Hand Hygiene Compliance

Environment and Context
- Availability of resources and organisational safety culture

Knowledge
- Specific targeted education is effective

Behavioural Regulation
- Demonstrated efficacy of targeted individualised approach

Social Professional Role and Identity
- Sense of competitiveness
  - Professional improvement
  - Preventative management of potential litigation

Reinforcement
- Consequences of non conformance
  - Organisational context
Conclusion

Observational hand hygiene auditing with individualised targeted feedback is an effective quality intervention to improve hand hygiene compliance.

Efficacy is complex and relevant to a number of domains within the Theoretical Domains Framework.

The benefit of generic observational hand hygiene reports that identify areas or cumulative categories of staff is questionable with poor ability to recall such reports in this study.

Provision of individualised targeted feedback is an essential component to ensure efficacy of observational hand hygiene auditing in improving compliance.

Consideration needs to be given to how observational hand hygiene auditing is utilised as a quality improvement tool.
Potential Future Research

• Additional research to establish if healthcare workers are aware of data reported for their hospitals and, if these reports have influenced practice.

• Investigate how observational hand hygiene audit feedback is provided to healthcare workers and establish how different feedback methodologies impact on practice.
References

• Cane J, O’Connor D, Michie S. Validation of the theoretical domains framework for use in behaviour change and implementation research. *Implementation science : IS* 2012, 7(1):37

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