



fuse

The Centre for Translational
Research in Public Health

Measuring the impact of financial incentives on the implementation of screening and brief alcohol interventions (SBI) in UK primary care

Dr Amy O'Donnell

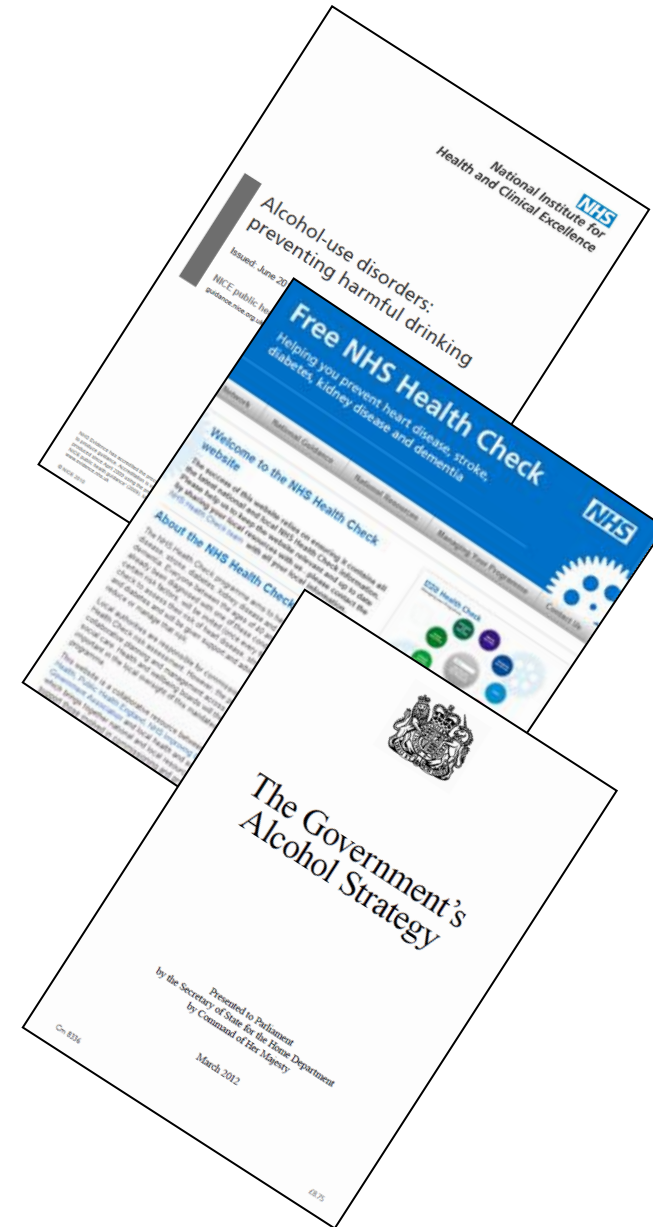
Institute of Health and Society

Newcastle University, UK

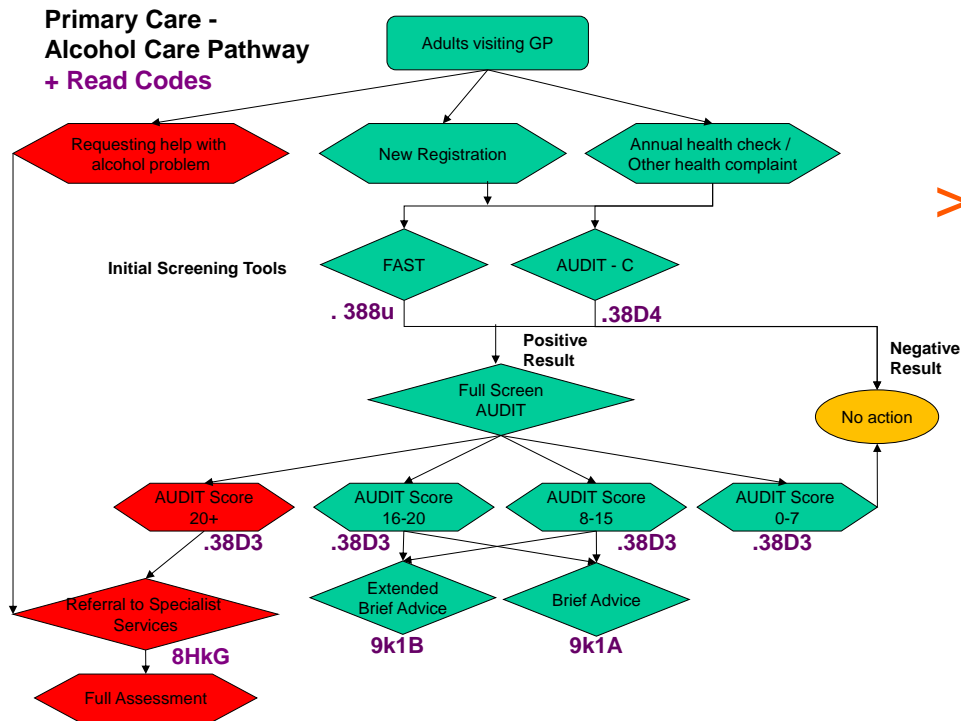
amy.odonnell@newcastle.ac.uk

Incentivising SBI implementation in UK primary health care

- > Despite robust evidence of effectiveness, delivery of ASBI remains sporadic.
- > Range of implementation barriers.
- > Recent interventions in UK:
 - Policy endorsements: NICE guidelines; UK 2012 Alcohol Strategy.
 - Alcohol consumption questions: Chronic disease reviews; NHS Health Checks for 40+.
 - Financial incentives: Directed Enhanced Service (DES); Local Enhanced Service (LES).



Measuring SBI implementation in routine primary care



> UK GP Read code records represent a key source of standardised practice data.

> DES / LES SBI payment require general practices to provide annual audit of:

- No. newly registered patients aged 16+ screened using AUDIT-C/FAST;
- No. AUDIT-C/FAST positive patients screened with full AUDIT;
- No. AUDIT positive (score 8+) patients receiving BA / BI;
- No. AUDIT positive (score 20+) patients referred to specialist services.

Using SBI Read code data: opportunities; challenges

Advantages:

- > Cost-effective and non-intrusive data source
- > Available in multiple-settings; and for many patients
- > Little used in research
- > Well-suited to audit and evaluation studies

Disadvantages:

- > Suitability of Electronic Medical Record (EMR) data for research
- > Many coders + varied coding systems = heterogeneous coding practices
- > Routine data as proxy measure of delivery?
- > Distorting impact of incentivising routine data recording.

Completeness... Correctness... Currency

RELEVANCY???

Research question

“Does routinely collected data represent a sufficiently accurate research tool to study the impact of financial incentives on the implementation of screening and brief alcohol interventions (SBI) in UK primary care?”

Key study objectives:

1. To quantitatively compare and contrast the rate of SBI delivery across a sample of general practices in North East England using routine Read Code data.
2. To qualitatively understand the barriers and facilitators impacting on GPs recording and delivery of screening and brief alcohol interventions in primary care settings.



fuse

The Centre for Translational
Research in Public Health

(1) Quantitative comparison of recorded SBI delivery rates in routine general practice

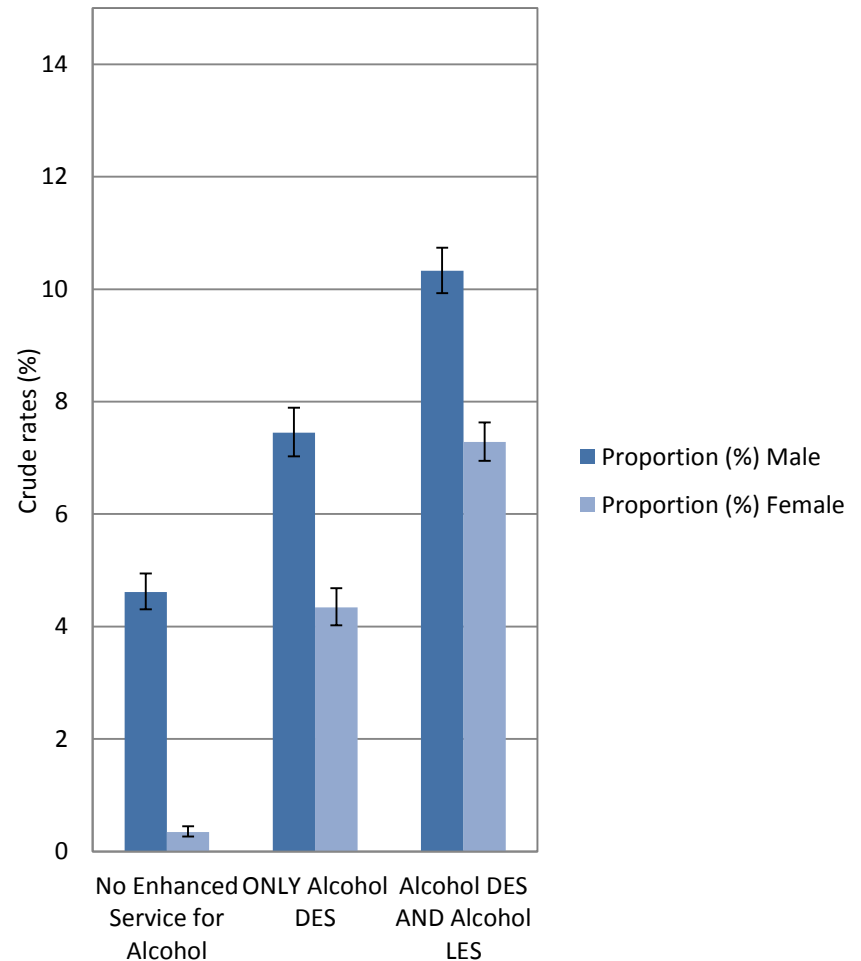
| NHS Organisation | Smaller than average practice size ($\leq 6,499$) | | Larger than average practice size ($\geq 6,500$) | | Multi-site practice group | |
|------------------------|---|---------------------|--|---------------------|---------------------------|---------------------|
| | Enhanced Service | No Enhanced Service | Enhanced Service | No Enhanced Service | Enhanced Service | No Enhanced Service |
| North of Tyne | 2 | 1 | 2 | 2 | 1 | 1 |
| South of Tyne and Wear | 5 | 0 | 2 | 0 | 0 | 0 |

- > Extracted aggregated Read code rates of:
 - Hazardous and harmful alcohol consumption
 - AUD screening (generally using FAST, AUDIT-C or AUDIT)
 - Delivery of brief advice / brief intervention / extended intervention.
- > Cochran's Q test to assess heterogeneity in recorded delivery rates

Rates of patients recorded as drinking at hazardous and harmful levels (by enhanced service status)

Rates ranged from:

- > No enhanced service: 4.61% males (CI: 4.30-4.95) / 0.35% females (CI: 0.27-0.45)
- > DES only: 7.45% males (CI: 7.03-7.89); 4.34% females (CI: 4.02-4.68)
- > DES & LES: 10.33% males (CI: 9.93-10.74); 7.28% females (CI: 6.95-7.63)
- > Males: $p < 0.001$; females: $p < 0.001$



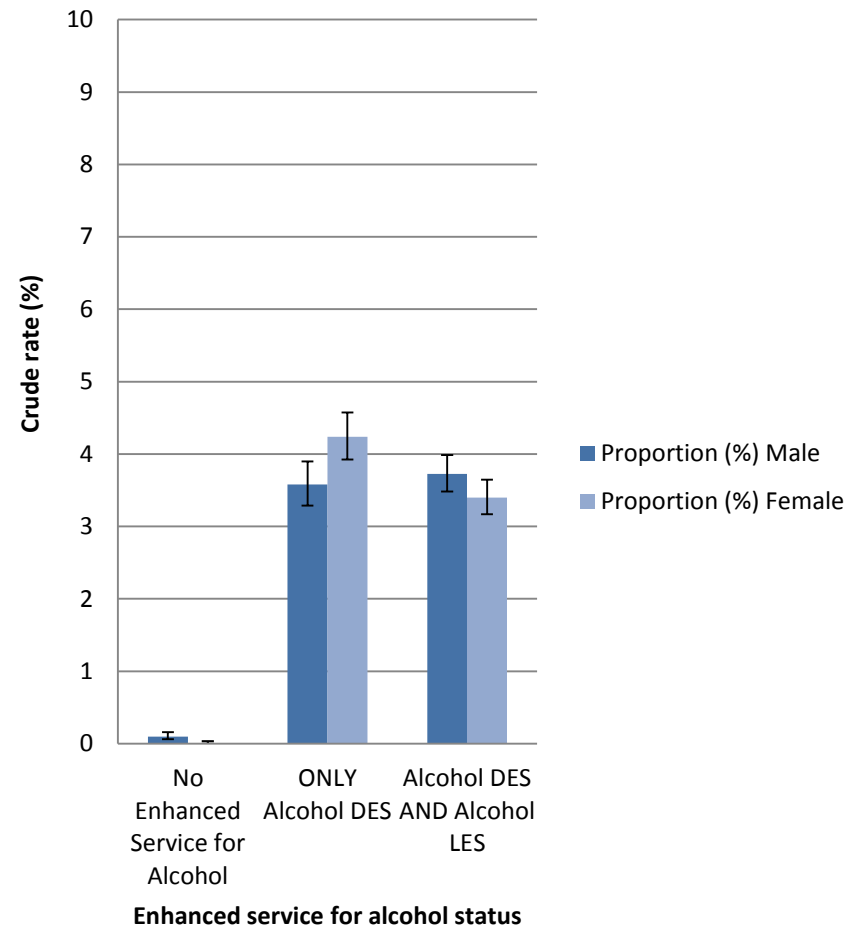
fuse

The Centre for Translational
Research in Public Health

Rates of AUD screening using FAST or AUDIT-C (by enhanced service status)

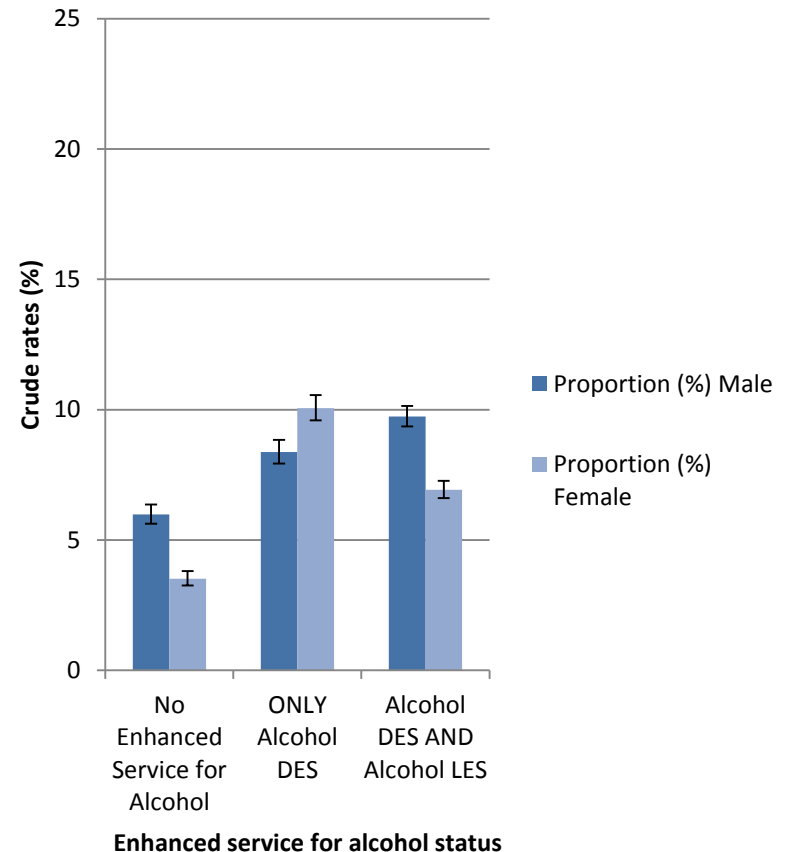
Rates ranged from:

- > No enhanced service: 0.09% males (CI: 0.06-0.16) ; 0.01% females (CI: 0.00-0.03)
- > DES only: 3.58% males (CI: 3.29-3.90); 4.24% females (CI: 3.93-4.58)
- > DES & LES: 3.73% males (CI: 3.48-3.99); 3.40% females (CI: 3.17-3.64)
- > Males: $p < 0.001$; Females: $p < 0.001$.



Rates of delivery of any level of alcohol intervention (by enhanced service status)

- > No enhanced service: male: 5.98%, (CI: 5.63-6.35); female: 3.52% (CI: 3.25-3.80).
- > Highest for male patients in practices signed up to both a local and national enhanced service (9.74%, CI: 9.36-10.14)
- > For female patients, more activity had been recorded in practices only signed up to a national enhanced service (10.06%, CI: 9.59-10.55)
- > Male: $p < 0.001$; female: $p < 0.001$.



fuse

The Centre for Translational
Research in Public Health

(2) GPs' perspectives on what shapes their recording of screening and brief alcohol interventions

> Aim: to understand the barriers and facilitators impacting on GPs' recording of SBI in routine primary care.

> Interviews explored:

- Experiences of delivering alcohol SBI in primary care
- Views on using GP Read codes
- Views on measuring performance in health

| | | N (14) | % |
|-------------------------|--|--------|----|
| Gender | Male | 7 | 50 |
| | Female | 7 | 50 |
| Experience in practice | >5 years | 4 | 29 |
| | 5-15 years | 3 | 21 |
| | >15 years | 7 | 50 |
| Employment status | Partner | 7 | 50 |
| | Salaried GP | 6 | 43 |
| | Registrar | 1 | 7 |
| Location | North of Tyne NHS | 7 | 50 |
| | Newcastle PCT | 3 | 21 |
| | North Tyneside PCT | 3 | 21 |
| | Northumberland PCT | 1 | 7 |
| | South of Tyne and Wear NHS | 7 | 50 |
| | Gateshead PCT | 4 | 29 |
| | South Tyneside PCT | 0 | 0 |
| | Sunderland PCT | 3 | 21 |
| Enhanced service status | No Enhanced Service | 3 | 21 |
| | Directed Enhanced Service | 4 | 29 |
| | Directed Enhanced Service & Local Enhanced Service | 7 | 50 |
| Practice IMD Quintile | 1st (most deprived) | 5 | 36 |
| | 2 nd | 3 | 21 |
| | 3 rd | 2 | 14 |
| | 4 th | 4 | 29 |
| | 5th (least deprived) | 0 | 0 |

Theme 1: The design and functionality of GP practice IT systems

- > Challenge of navigating through the Read code system;
- > General aversion to coding templates;
- > Simple, quantifiable = more code-able;
- > Lack of coding applicability to common *complex* general practice situations.

"...you are never quite sure whether it is that one that you have to use...if they took away everything that they didn't want us to use from the entire system, it will be very helpful."

GP4, female, directed enhanced service

"Doctors, by their very nature, do not like templates...You know, it's just a cultural thing. We feel hemmed in, I think."

GP8, male, directed/local enhanced service



fuse

The Centre for Translational
Research in Public Health

Theme 2: Coding as a reflection of the hierarchy of incentive schemes

- > Financial incentives drive coding BUT not all incentive schemes are created equal;
- > DES/LES results in prioritised recording of screening over other components of SBI;
- > Nurses and healthcare assistants more responsible for DES/LES coding.

“We have better systems in the practice to make sure that the QOF data is collected and there are more reminders on the screen if it’s not done. Back office staff will chase people up and things like that for QOF data”

GP2, male, directed enhanced service



fuse

The Centre for Translational
Research in Public Health

Theme 3: Individual coding practices and local-level screening processes – a synergistic relationship

- > Nurse-led screening tended to be delivered / coded more consistently;
- > GP-led more ad hoc, strong reliance on consumption measures, tailored according to patient 'need';
- > Coding 'Catch 22' whereby unsystematic delivery of SBI engendered unsystematic recording practices, and vice versa.

Interviewer: *Thinking about when you deliver either an intervention that's sort of based on a formal tool or kind of any more ad hoc activity, would you tend to record that? Would you Read code that conversation?*

Respondent: *If I'd used a tool yes.*

Interviewer: *If you hadn't used a tool?*

Respondent: *I wouldn't Read code.*

Interviewer: *You wouldn't Read code it? You'd free text?*

Respondent: *Yes.*

GP2, male, directed enhanced service

Theme 4: The acceptability and feasibility of brief alcohol interventions

- > Lack of belief in universal effectiveness of BA/BI;
- > Belief that patients have to be 'ready to change' (with readiness assessed informally by GP)
- > Relates to previous theme: (in)formal intervention -> (in)formal coding

"I'm realistic, it doesn't work every time... that's one of the mysteries, you don't quite know who it's gonna work with, or when it's gonna work."

GP7, male, directed / local enhanced service

"I suppose one of the key things I feel with alcohol to some extent is, I suppose people have to be wanting to change before you can take them too far down the road of an intervention."

GP2, male, directed enhanced service



fuse

The Centre for Translational
Research in Public Health

Theme 5: Role of the GP within the patient-centred consultation

- > Primary concern is to ‘put the patient’s agenda first’ - coding the encounter is secondary;
- > Many GPs expressed preference for free text as opposed to (Read) codified data – whereas Read codes seen as ‘suited’ to task-based work of nurses;
- > Thus coding practices presented as professionally delineated.

“I don’t like codes; you know...I’m a clinician, I love the clinical encounter... the commitment [is] to what has gone on with the patient”

GP7, male, directed/local enhanced service

“...most of the information to be honest that I would value is free texted; if you took the free text away, I would be lost.”

GP8, male, directed/local enhanced service

Summary: Quality of SBI Read code data

Dimensions of data quality

Completeness

- Nurse-delivered alcohol screening / consumption data reasonably complete
- GP-delivered ASBI activity less so

Correctness

- Little evidence of 'gaming'
- Low code awareness / aversion to coding templates.

Currency

- Heavy GP reliance on free-texting undermines data accessibility;
- Coding templates positioned as restrictive and counter-cultural.

Relevancy

- Evidence of 'rational-reality' gap between:
 - what information GPs feel is important to code;
 - what recorded information is prioritised by financial incentive schemes;
 - the type of information facilitated by the Read code system itself.



Conclusion: “Does routinely collected data represent a sufficiently accurate research tool to study the impact of financial incentives on the implementation of SBI in UK primary care?”

- > Financial incentives do seem to have stimulated increased alcohol preventative work in UK primary health care, primarily screening activity.
- > Quality of the available alcohol Read code data is deficient across a number of key dimensions .
- > Range of factors shape GPs delivery and recording of interventions and must be considered in developing more appropriate measures of SBI implementation in the future.



The Centre for Translational
Research in Public Health

Acknowledgements

Supervisory team:

- Professor Eileen Kaner, Institute of Health & society, Newcastle University
- Dr Katie Houghton, Institute of Health & society, Newcastle University
- Dr David Chappel, School for Public Health (Northern Deanery)
- Colin Shevills, BALANCE (North East England Alcohol Office)

Funding:

- UK Economic and Social Research Council
- Fuse (The Centre for Translational Research in Public Health)