

**Original citation:**

Eaton, Sue, Biggerstaff, Deborah, Pink, Joshua, Petrou, Stavros, Osipenko, Leeza, Gibbs, Jo, Estcourt, Claudia, Sadiq, Tariq and Szczepura, Ala (2016) Factors affecting young people's preferences for emerging technologies for chlamydia testing and treatment : a discrete choice experiment in England. In: Public Health Science 2016, Cardiff, UK, 25 Nov 2016. Published in: The Lancet, 388 (Supplement 2). S44.

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Conference papers for WRAP submitted by Dr Deborah Biggerstaff

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1) Paper accepted for The Lancet Public Health conference, September, 2016

Title: A discrete choice experiment involving 1,230 young people across England to identify factors that influence young people's preferences for emerging technologies for Chlamydia testing and treatment.

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Background:

Technological advances offer opportunities to redesign existing chlamydia screening/testing and treatment pathways. The potential exists to improve screening uptake (current range 11%-49%) and the proportion of positives successfully treated (range 56%-100%). Innovations underway include self-tests networked through mobile phones, which could be combined with online clinical care and other non-face-to-face care pathways. Evidence of young people's preferences should be key to informing optimal service re-design.

Aim: To quantify factors influencing young people's preferences for emerging Chlamydia testing and treatment pathway options.

## Methods:

Discrete choice experiment (DCE). Methods used to select attributes and levels included (i) a systematic literature review of stated preference studies for STI testing and treatment published prior to 31 December 2015. Included studies were published in English, included one or more aspect of mainstream STI testing and treatment for any STI, undertaken in an OECD high income country. Key search terms included stated preference, stated choice, DCE, contingent valuation, and conjoint analysis. (ii) four focus groups using staged recruitment to include spread in age range (16-24 years) and other demographic characteristics; (iii) four expert groups including clinicians and researchers. The draft questionnaire tested in a pilot (n=9). The final questionnaire (including 25 pairwise choices with opt-out) was completed online by a national panel of 16-24 year olds across England (YouthSight). Analysis used multinomial logit models and included validity checks.

## Findings:

1,230 respondents (response rate 73%). The strongest attribute influencing preferences was Chlamydia test accuracy (OR 3.24, 95% CI 3.13 – 3.36), followed by time to result (OR 1.81, 95% CI 1.71-1.91). Respondents showed a preference for remote Chlamydia testing options (self-testing, self-sampling and postal testing) over attendance at a testing location. A general preference for online (OR 1.21, 95% CI 1.15-1.28) versus traditional GP (OR 1.18 (95% CI 1.12-1.24)/pharmacy (OR 1.15, 95% CI 1.10-1.22)/clinic services (OR 1) was observed for accessing treatment. Little difference observed between face-to-face (OR 1), telephone (OR 0.95, 95% CI 0.90-1), instant messaging (OR 1.03, 95% CI 0.98-1.07) or email (OR 1.05, 95% CI 1-1.10) methods of access. No significant difference in preferences for antibiotic provision e.g. collection from pharmacy (OR 1.07, 95% CI 1.02-1.13) versus postal delivery (home OR 1.01, 95% CI 0.96-1.06, collection point OR 1.03, 95% CI 0.98-1.08).

## Interpretation:

This DCE is the first to systematically identify attributes of chlamydia testing and treatment important to young people using primary research and then survey a national pre-defined sample to quantify preferences. DCE coefficients can help estimate uptake probabilities for re-designed chlamydia pathways. Although this DCE was conducted using an online population, which may limit generalizability to other populations, findings could assist technology developers, policy makers, commissioners and service providers to optimise the adoption of emerging technologies and service re-design.

Word Count: 448

## Funding Source

This Doctoral Fellowship is supported by the Medical Research Council under the UKCRC Translational Infection Research (TIR) Initiative, (Grant Number G0901608).

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#### Contribution of Authors

Sue Eaton – PhD Student, conceived and undertook the research

Dr Deborah Biggerstaff – PhD Supervisor

Dr Joshua Pink - Specialist advice on DCE Design & Analysis

Prof Stavros Petrou – PhD Supervisor

Dr Leeza Osipenko – PhD Supervisor

Dr Jo Gibbs – Clinical input into development of DCE materials (eSTI2 Consortium)

Prof Claudia S Estcourt - Clinical input into development of DCE materials (eSTI2 Consortium)

Dr S Tariq Sadiq - eSTI2 Consortium Principal Investigator

Prof Ala Szczepura – PhD Supervisor (eSTI2 Consortium HTA Lead)

#### Competing Interests

Sue Eaton – None

Dr Deborah Biggerstaff – None

Dr Joshua Pink - None

Prof Stavros Petrou – None

Dr Leeza Osipenko – None

Dr Jo Gibbs – None

Prof Claudia S Estcourt - None

Dr S Tariq Sadiq - None

Prof Ala Szczepura – None