Introduction
Home STI diagnostics create potential for online treatment. People could self-diagnose with a new infection, follow an automated online medical consultation, leading to electronic prescription of antibiotics and management of sexual partners. This could occur completely remote from traditional services. Currently there is no guidance on the development or content of online clinical consultations and, particularly, no recommendations relevant to sexual health. We describe the creation of a new framework for developing complex online clinical care pathways and its application to management of people with genital chlamydia.

Methods
We used and adapted relevant literature on online clinical consultations; protocols and proformas in use in contemporary sexual health settings; national clinical standards; knowledge from existing results services; and sexual health questionnaires. From this we developed the eClinical Care Pathway Framework consisting of a nine-step iterative process. We then applied the Framework to create the Chlamydia Online Clinical Care Pathway (Chlamydia-OCCP).

Results
Step 1: Aims of the pathway were identified including ensuring that it was safe to prescribe azithromycin using the Chlamydia-OCCP.
Step 2: Use of the Framework clarified the sequence of functional units of care, which is fundamentally different to traditional care pathways:

Traditional pathway
- History taken
- Examination
- Investigations
- Results
- Management

Online pathway
- Investigations
- Results
- History taken
- Management

Step 3: Establishment of the objective and evidence-base for each stage of the Chlamydia-OCCP to formulate a decision. Skip questions were employed so that users only had to answer questions directly relevant to the decision about their care. For example, this enabled a more focussed approach to the assessment of the safety of antibiotic prescribing. Findings and feedback from Steps 4-9 led to amendments to Step 3 in an iterative process which ensured the optimisation of the Chlamydia-OCCP.

Conclusions
By following each step of the Framework, the Chlamydia-OCCP has a different sequence to traditional care pathways and is adapted to the needs of remote testing and online care. It provides the clinical services and surveillance functions required to meet UK national standards. The Chlamydia-OCCP collects standardised easily extractable data with potential for interoperability with other systems, thus becoming a powerful tool for public health and clinical management.

About eSTI²
eSTI² (Electronic Self-Testing Instruments for Sexually Transmitted Infections) is a multi-institutional research consortium. It aims to develop a polymicrobial, rapid and accurate STI diagnostic self-test, embedded within online care pathways for management and partner notification to reduce the public health impact of STIs. This work was supported by the UK Clinical Research Collaboration (Medical Research Council) Translation Infection Research Initiative Consortium (Grant number G0901608).

Information on chlamydia is provided early in the pathway to allay anxiety before the online consultation is initiated. This is followed by collection of antibiotics from a community pharmacy as shown below:

1. STI results service
2. Infection related information
3. Symptom assessment
4. Medication and drug history
5. Medical & sexual history
6. Partner notification & empirical treatment
7. Risk assessment
8. Health promotion
9. Antibiotic collection from pharmacy
10. Health adviser telephone follow-up at 2 weeks

Step 1: Define the aims of the online clinical care pathway
Step 2: Define the functional units & their sequence within the clinical care pathway
Step 3: Draft the online clinical consultation
Step 4: Expert review
Step 5: Comprehension testing
Step 6: User-centred interface testing
Step 7: Specification development
Step 8: Usability testing and further comprehension testing
Step 9: Piloting the online clinical care pathway