UK Health Security Agency

Appendix 6. Monitoring and evaluation

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Contents

Introduction

The intervention level logic models (Appendix 5) contain example indicators for local monitoring and evaluation of a given intervention. Use of these or similar indicators will assist in understanding to what extent these interventions are reaching the target populations and achieving the intended outcomes, thereby informing local decisions about how delivery of interventions may need to be adjusted and adapted.

STI monitoring and evaluation framework and development of key indicators

To monitor and evaluate the impact of sexually transmitted infection (STI) control interventions overall, that is the combination of interventions deployed across the country, we have also developed an overarching monitoring and evaluation framework (Figure 1).

This STI monitoring and evaluation framework describes the outputs that would be expected if various interventions (inputs) were implemented. These outputs would in turn be expected to contribute to the overarching objectives of preventing new infections, diagnosing existing infections, managing diagnosed infections and alerting, detecting and responding to outbreaks. Achieving these objectives are, in turn, expected to contribute to the overarching aims articulated earlier in this document, that is reducing the harms from STIs and reducing inequalities associated with STIs.

The monitoring and evaluation framework also includes the aim of reducing STI incidence (rate of new infections in the population). Whilst we cannot directly measure incidence, we can measure the rate of new STI diagnoses which can be a proxy for incidence. We recognise that factors such as testing rates can influence these outcomes, so we will use other indicators, such as testing and positivity rates, to help understand observed changes in the outcome measures, in particular rates of new diagnoses.

UK Health Security Agency (UKHSA) will develop a series of proposed indicators for the STI monitoring and evaluation framework in consultation with key stakeholders. This will include indicators on each of the outputs defined in Figure 1. It is anticipated that many of these indicators will be derived from existing STI surveillance systems and other health data sets, but some indicators will likely require bespoke data collection, for example through local or national audits.

Understanding the relative contribution of different interventions to achieving our aims

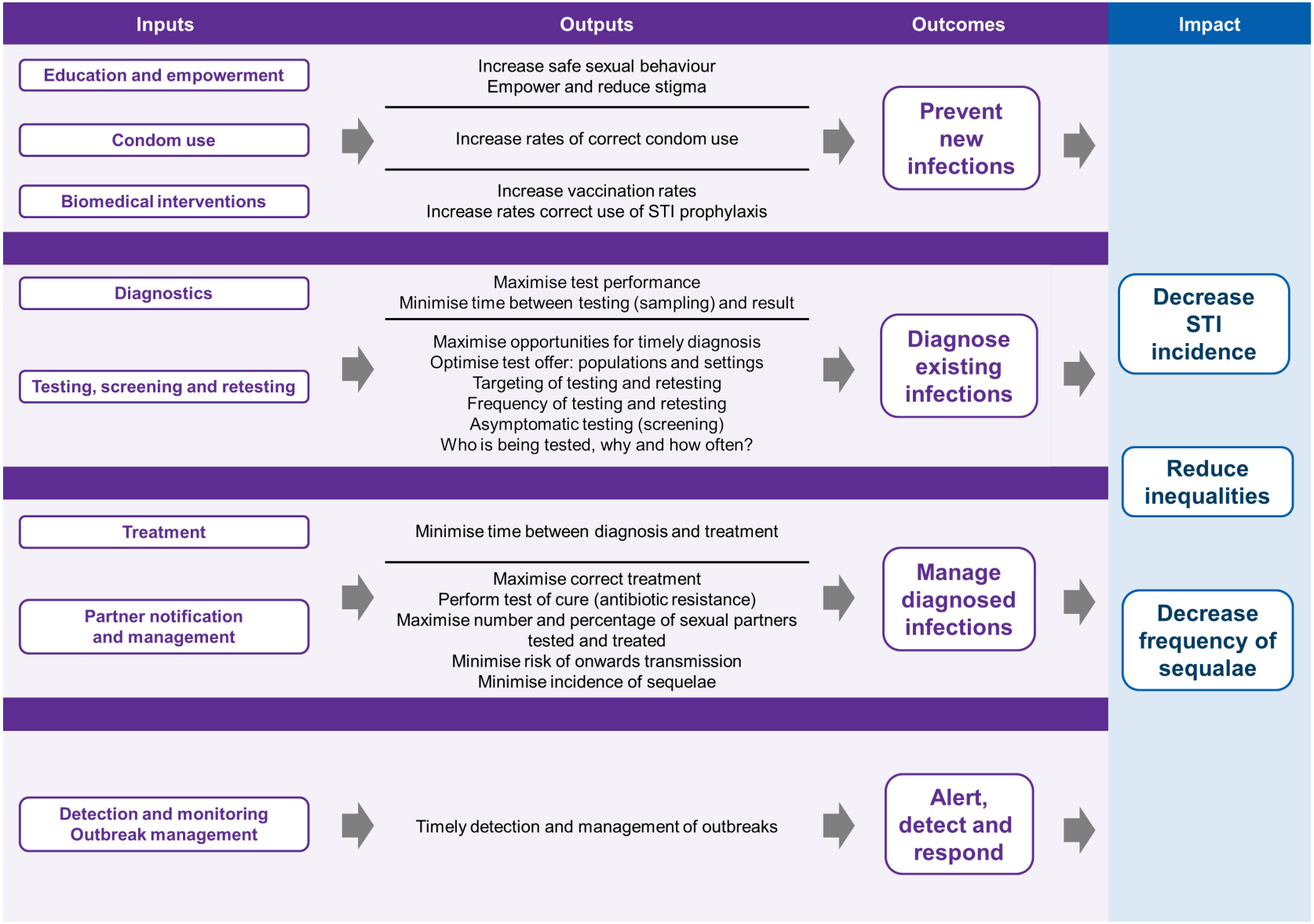
The complex interactions between the key factors determining the rate of new infections include:

- the average number of new STI infections from one case (which is determined by sexual behaviour)
- the probability of STI transmission occurring per sex act (which is influenced by interventions such as condom use and vaccination)
- the length of time the STI infection lasts (which is influenced by the length of time between infection, testing or screening, and treatment)

The purpose of STI control interventions (inputs in logic model (Figure 1)) is to either prevent new infections and/or prevent onwards transmission of infections. Safer sexual behaviour, condom use, vaccination and correct use of STI prophylaxis will impact on the rate of acquisition of new infections by decreasing the probability of transmission from someone with the infection to another person. Once someone has an STI, rapid diagnosis, treatment and partner notification will impact on duration of infection and thus reduce rates of onwards transmission, as well as reducing the risk of development of health harms from the infection (for example pelvic inflammatory disease (PID), ectopic pregnancy and congenital syphilis).

Understanding the relationship between the outputs and the desired impacts of reduced harm from STIs, reduced inequalities and reduced incidence is complex. Variations in inputs and outputs over time and geographically can go some way to help us understand these relationships. However, understanding the relative contribution of a range of interventions that are implemented concurrently is challenging. We will therefore explore the development of transmission dynamics models to better understand these relative contributions.

Figure 1. Monitoring and evaluation logic model for the STI Prioritisation Framework



Accessible text version of Figure 1. Monitoring and evaluation

The logic model describes inputs, outputs, outcomes and impact for monitoring and evaluation of the STI Prioritisation Framework. Each input relates to a number of outputs and an outcome, as described below.

Inputs linked to outputs

The input ‘Education and empowerment’ is linked to the following outputs:

- increase safe sexual behaviour
- empower and reduce stigma

The input ‘Condom use’ is linked to the following output:

- increase rates of correct condom use

The input ‘Biomedical interventions’ is linked to the following outputs:

- increase vaccination rates
- increase rates correct use of STI prophylaxis

The input ‘Diagnostics’ is linked to the following outputs:

- maximise test performance
- minimise time between testing (sampling) and result

The input ‘Testing, screening and retesting’ is linked to the following outputs:

- maximise opportunities for timely diagnosis
- optimise test offer: populations and settings
- targeting of testing and retesting
- frequency of testing and retesting
- asymptomatic testing (screening)
- who is being tested, why and how often?

The input ‘Treatment’ is linked to the following output:

- minimise time between diagnosis and treatment

The input ‘Partner notification and management’ is linked to the following outputs:

- maximise correct treatment
- perform test of cure (antibiotic resistance)

- maximise number and percentage of sexual partners tested and treated
- minimise risk of onwards transmission
- minimise incidence of sequelae

The input ‘Detection and monitoring. Outbreak management’ is linked to the following output:

- timely detection and management of outbreaks

Outputs linked to outcomes

All outputs linked to ‘Education and empowerment’, ‘Condom use’ and ‘Biomedical interventions’ are linked to the outcome ‘Prevent new infections’.

All outputs linked to ‘Diagnostics’ and ‘Testing, screening and retesting’ are linked to the outcome ‘Diagnose existing infections’.

All outputs linked to ‘Treatment’ and ‘Partner notification and management’ are linked to the outcome ‘Manage diagnosed infections’.

The output linked to ‘Detection and monitoring. Outbreak management’ is linked to the outcome ‘Alert, detect and respond’.

Outcomes linked to impact

All outcomes link to the following impacts:

- decrease STI incidence
- reduce inequalities
- decrease frequency of sequalae.

Abbreviations

Abbreviation	Meaning
PID	pelvic inflammatory disease
STI	sexually transmitted infection
STIs	sexually transmitted infections
UKHSA	UK Health Security Agency

About the UK Health Security Agency

UKHSA is responsible for protecting every member of every community from the impact of infectious diseases, chemical, biological, radiological and nuclear incidents and other health threats. We provide intellectual, scientific and operational leadership at national and local level, as well as on the global stage, to make the nation health secure.

UKHSA is an executive agency, sponsored by the Department of Health and Social Care.

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