PRE-CONSULTATION ON THE WAY THE NORTHERN IRELAND DIABETIC EYE SCREENING PROGRAMME IS PROVIDED

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1 INTRODUCTION

This document examines a range of options for the future delivery of the Northern Ireland Diabetic Eye Screening Programme (NIDESP). It describes the advantages, and disadvantages, of each option and lists the objectives that will be used to assess these options in an option appraisal.

2 BACKGROUND

The NIDESP aims to reduce loss of vision caused by diabetic eye disease through early diagnosis and treatment. Screening is offered annually to everyone, aged 12 and over, with diabetes who has any light perception in either eye.

The screening test comprises two digital photographs of the back of each eye. Following expert examination of the photographs, people who are identified as having eye disease are referred to the hospital eye service (HES) for further assessment and treatment.

Everyone who has a normal screening test should (ideally) be screened every 12 months. The achievable standard for the programme is that 98% of eligible people with diabetes should be offered an appointment for routine digital screening occurring 6 weeks before or after their due date (i.e. after 12 months +/- 6 weeks).

In other parts of the UK diabetic eye screening also includes testing visual acuity (an eye examination that checks how well you can see different sized letters on a chart). This has not yet been introduced locally, as it requires suitable accommodation to do the test.

The programme is provided by the Belfast Health and Social Care (HSC) Trust which currently invites over 93,000 people a year. This is a significant increase from the approximately 50,000 people invited when the programme began in 2008. Indeed, the eligible population is expected to continue to increase as the number of people with diabetes continues to rise (currently by 5% per year).

3 CURRENT MODEL

Our programme is currently delivered through two different models. These are:

- A mobile screening service; and
- A fixed location screening service

Table 1 below provides details on how and where these services are provided.

Table 1: Current provision of digital photography for NIDESP

	Mobile	Fixed location
Staff	Screening technicians (employed by BHSCT)	Community optometrists (independent contractors)
Location	Each individual GP surgery	Six HSC locations
Area covered	BHSCT, NHSCT, SHSCT and SEHSCT	WHSCT

Both models have advantages and disadvantages, although there is no difference in uptake between these two models, with a regional average uptake of 68%.

3.1 Current Fixed Site Service

In the west, diabetic eye screening is provided by community optometrists at 6 fixed HSC sites. This service has consistently been able to maintain a screening interval of 12 months and is currently working well.

Advantages:

- participant choice on when to attend;
- the consistent screening interval, which meets the standard;
- the availability of suitable accommodation, with the ability to test visual acuity; and
- fixed cameras on site (these do not need to be moved from one screening site to another which reduces damage and manual labour).

Disadvantages:

- Although some people may have to travel a bit further for screening, compared with the mobile service, uptake (the percentage of people invited for screening who attend) is the same.

3.2 The Mobile Screening Service

Everywhere else in Northern Ireland, a mobile screening service is provided by screening technicians, employed by the BHSCT, at 284 GP practices. They visit each practice on a rotational basis as close to annually as possible. They transport the digital camera to the practice by van and establish a screening clinic in a room provided by the practice. The time the screening service is available at each practice is in accordance with the number of people in that practice who are eligible to be invited.

Advantages:

- Convenient for many patients.
- High patient and GP satisfaction rates were reported on surveys completed in 2015/16.
- Provides an opportunity to integrate diabetic eye screening with other diabetic care services; although this only happens in a minority of GP practices.

Disadvantages:

- Inability to maintain the screening interval (at 12 months, +/- 6 weeks). The average interval is normally longer and can be up to 18 months, or more, for some practices. This is because the NIDESP is not in control of the timely availability of suitable accommodation. This model requires practices to provide a room in their premises for a set number of days during a specific period of time. This can prove very challenging for practices, particularly as the size of the eligible screening population has nearly doubled since the programme was introduced, meaning that rooms are required for longer. This impacts other work in the practice.
- The rooms provided are often unsuitable for testing visual acuity. Visual acuity testing is helpful when making a decision about whether to refer someone to the hospital eye service.
- There is considerable pressure on primary care services and the General Practice Committee of the British Medical Association has indicated that individual practices may not be able to continue to provide accommodation to support diabetic eye screening into the future. Also the British Medical Association (BMA) in Northern Ireland has indicated that GPs here may vote to leave the HSC at some point. This adds a considerable degree of uncertainty in relation to this model.
- The screening technicians operate as lone workers and there are issues with staff satisfaction, with clinics being vulnerable to cancellation if a

technician is unavailable. A staff survey carried out in the summer of 2016 amongst the screening staff highlighted several common areas of dissatisfaction, including isolation (from both screening colleagues and within the GP practice setting), irregular working hours, lack of notice of rota and inability to plan around working week and lack of support e.g. equipment breakdowns.

- The UK National Screening Committee has recommended that, for people living with diabetes who are at lower risk of sight loss, the interval between screening tests should change from 12 months to two years (the current one year interval would remain unchanged for the remaining people at higher risk of sight loss). While this would reduce the numbers being screened each year by around a third, it will require a service that can guarantee an individual screening interval of 12 month (higher risk) or 24 months (lower risk); as opposed to one based on attempting to provide screening within each practice every 12 months. It would be vital to ensure that 24 months did not stretch out to 30 months and more. While the numbers being screened would initially reduce they would increase to the original level again in 8 or 9 years due to the year on year increase in the number of people with diabetes.
- People can only be screened in their own GP practice. People who can't attend during the time screening is being provided at their practice have to travel to "mop up" clinics at hospital sites.
- Screening efficiency is sub-optimal, as the screening technicians need to travel to multiple sites and set up the cameras each time they go to a different venue. Set up time means less time available for screening. These cameras are bulky items, which are transported in a container bigger than most fridges. There is also continuous wear and tear on the equipment due to the need to move them from practice to practice. This reduces their lifespan.

4 ALTERNATIVE MODELS

There are four possible main models of delivery of a DESP.[1] These are:

1. **Fixed location** screening services where the service is supplied at fixed HSC locations such as: local hospitals, community hospitals; health and wellbeing centres and selected GP practices.
2. **Mobile** screening services where a peripatetic service is provided at individual GP surgeries.
3. **High street optometry** based services where the central administration of the programme directs patients to accredited high street community optometrists.
4. **Mixed** services which may involve any or all of the above or other external agencies.

Call/recall, as well as secondary and referral grading (examination of the images), will continue to be provided centrally in Belfast and are a feature of all options.

4.1 Long list of options

A long list of seven options was identified (see table 4). Option two (a fixed location service) has two variants. In 2a the fixed locations would be in HSC settings (e.g. local hospitals, community hospitals, health and wellbeing centres) and suitable GP practices. In 2b the fixed locations would be identified through collaboration with Local Medical Committees (LMC). These would be in selected GP practices. In each case four fixed sites would be identified in each Trust area and as the current service in the western area is working well it would be retained.

In addition three sub-options were identified under option 7 (mixed model). These were:

- Option 7a - Individual GP practice based service for those practices who wish to maintain this service PLUS fixed location service for the others.
- Option 7b - Fixed site service based at HSC locations or large GP practices (e.g. 4 per Trust area) PLUS high street optometry service.
- Options 7c - Individual GP practice based service for those practices who wish to maintain this PLUS high street optometry service.

[1] Essential Elements in Developing a Diabetic Eye Screening Programme, version 4.4, 23 January 2012. Workbook Section 2: Models of Service Delivery. NHS Screening Programmes.

Table 2: Long list of options

Option	Description
Option 1	Existing model (a mixed model)
Option 2a	Regional fixed location service provided at HSC locations e.g. local hospitals, community hospitals, health and wellbeing centres, and suitable GP practices
Option 2b	Regional fixed location service with sites, in selected GP practices, identified in collaboration with Local Medical Committees
Option 3	Regional mobile service provided at individual GP surgeries throughout Northern Ireland
Option 4	Regional mobile service provided from mobile screening vans
Option 5	High street optometry based service provided at community optometrists' premises
Option 6	Photography screener based service provided at community optometrists' premises (i.e. BHSCT employees providing screening in community optometry premises)
Option 7a	Individual GP practice based service for those practices who wish to maintain this service PLUS fixed location service for the others
Option 7b	Fixed site service based at HSC locations or large GP practices (e.g. 4 per Trust area) PLUS high street optometry service
Option 7c	Individual GP practice based service for those practices who wish to maintain this PLUS high street optometry service

4.2 Preliminary Sift of Options

A preliminary sift was carried out following discussion and communication with stakeholders in Northern Ireland and counterparts in England and Wales. As a result of this the options in table 3 were ruled out.

Table 3: Options ruled out following preliminary sift

Option	Reason for ruling out
Option 4 Regional mobile service using specially equipped mobile screening vans	The only country that has experience of using mobile screening vans is Wales. The programme manager has advised that these vans are not cost-effective and are unpopular with patients. They are currently being decommissioned.
Option 6 Screening technician based service provided at community optometrists premise	No advantages over any other model, and not considered cost effective.

4.3 Shortlist of Options

This means that only the options shown in table 6 will be taken forward to assess against the objectives of the project.

Table 6: Short list of options

Option	Description
Option 1	Existing model
Option 2a	Regional fixed location service provided at HSC locations e.g. local hospitals, community hospitals health and wellbeing centres, and suitable GP practices
Option 2b	Regional fixed location service with sites, in selected GP practices, identified in collaboration with Local Medical Committees
Option 3	Regional mobile service provided at individual GP surgeries throughout Northern Ireland
Option 5	High-street optometry based service provided at community optometrists' premises
Option 7a	Individual GP practice based service for those practices who wish to maintain this service PLUS fixed location service for the others

Option 7b	Fixed site service based at HSC locations or large GP practices (e.g. 4 per Trust area) PLUS high street optometry service
Option 7c	Individual GP practice based service for those practices who wish to maintain this PLUS high street optometry service

4.4 Overview of Shortlisted Options

Option 1 – Existing Model

In this option the current models would remain unchanged.

Advantages	
Participants	• Convenience of attending at your GP practice • High degree of satisfaction
Primary Care	• Opportunity to integrate retinal photography with other diabetic care services • High degree of satisfaction
Standards/Service	
Disadvantages	
Participants	• Restricted choice regarding date, time and location of screening appointment
Primary Care	• Continued pressure on primary care to provide suitable accommodation
Standards/Service	• Probably unsustainable given the increasing diabetic population and its rate of growth • Unable to meet standards in particular the screening interval standard throughout Northern Ireland • Staff dissatisfaction • Continued wear and tear on equipment • Screening will continue to be organised according to participant's GP practice not by individual. • Service will be unable to introduce variable screening interval • Inability to carry out visual acuity testing

Indicative Costs

Revenue - £1.65 million Capital - £37,800

Option 2a – Regional Fixed HSC Sites

This model would provide the service at HSC locations e.g. local hospitals, community hospitals, health and wellbeing centres, and suitable GP practices. The screening technicians would provide screening clinics at 16 fixed HSC sites throughout the Belfast, Northern, Southern and South Eastern HSC Trust areas (four per Trust area). Whenever required and possible, they would work in pairs for support, making it less likely that a screening clinic would be cancelled if a screening technician was unavailable. The current model in the Western Trust area would be maintained.

Advantages	
Participants	• Choice of venue to attend for screening and could, for example, select the nearest to their home, or to their place of work • Anyone who cannot attend when invited would also be able to select where to be screened, rather than having to travel to Belfast to a "mop up" clinic.
Primary Care	• Remove pressure on primary care to provide rooms on an annual basis
Standards/Service	• Invites would be based on the individual; rather than when a practice population is due to be screened • Improved ability to meet standards, in particular screening interval • Suitable rooms are available when required • Enable the addition of visual acuity testing to the screening programme • Enable the introduction of the 24 month interval for those assessed to be at lower risk of diabetic eye disease • Improved job satisfaction for staff, particularly screener/graders • Improved efficiencies; travel, set-up and closedown times, manual handling
Disadvantages	
Participants	• Potential for increased travel for some people
Primary Care	• No longer able to integrate retinal photography with other diabetic care services
Standards/Service	

Indicative Costs

Revenue - £1.38 million Capital - £111,700

Option 2b – Regional Fixed Primary Care Sites

This model would provide the service at a selected number of suitable GP practices, identified in collaboration with LMCs. The screening technicians would provide screening clinics at 16 fixed HSC sites throughout the Belfast, Northern, Southern and South Eastern HSC Trust areas. Whenever required and possible, they would work in pairs for support, making it less likely that a screening clinic would be cancelled if a screening technician was unavailable. The current model in the Western Trust area would be maintained.

Advantages	
Participants	• choice of venue to attend for screening and could, for example, select the nearest to their home, or to their place of work • Anyone who cannot attend when invited would also be able to select where to be screened.
Primary Care	• Would remain actively engaged in the programme, although not at individual practice level.
Standards/Service	• Invites would be based on the individual; rather than when a practice population is due to be screened • Improved ability to meet standards, in particular screening interval • Suitable rooms may be available when required • Should enable the addition of visual acuity testing to the screening programme • Enable the introduction of the 24 month interval for those assessed to be at lower risk of diabetic eye disease • Improved job satisfaction for staff, particularly screener/graders • Improved efficiencies; travel, set-up and closedown times, manual handling
Disadvantages	
Participants	• Potential for increased travel
Primary Care	• No longer able to integrate retinal photography with other diabetic care services
Standards/Service	• May not be able to leave the cameras in the identified primary care accommodation permanently, meaning some degree of transportation will be required

<u>Indicative Costs</u>

Revenue - £1.38 million Capital - £111,700

Option 3 – Regional Mobile Service

This service would retain the current mobile service in the BHSCT, NHSCT, SEHSCT and SHSCT areas and expand the mobile service into the WHSCT area.

Advantages	
Participants	• Increased number of locations in the western area • Regional model, i.e. equity of service for all trust areas
Primary Care	• Opportunity to integrate retinal photography with other diabetic care services for western area GPs
Standards/Service	
Disadvantages	
Participants	• Restricted choice regarding date time and location of screening appointment
Primary Care	• Continued pressure on primary care to provide suitable accommodation
Standards/Service	• Unsustainable given the increasing diabetic population and its rate of growth • Unable to meet standards in particular the screening interval standard throughout Northern Ireland • Staff dissatisfaction • Continued wear and tear on equipment • Screening will continue to be organised according to participant's GP practice not by individual. • Service will be unable to introduce variable screening interval • Inability to carry out visual acuity testing

Indicative Costs

Revenue - £1.67 million Capital - £70,000

Option 5 – High Street Optometry Based Service

In this model screening would be carried out in around 60 community optometry practices throughout Northern Ireland.

Advantages	
Participants	• Choice of venue to attend for screening and could, for example, select the nearest to their home, or to their place of work • Anyone who cannot attend when invited would also be able to select where to be screened,
Primary Care	• Pressure removed from primary care to provide accommodation
Standards/Service	• Invites would be based on the individual; rather than when a practice population is due to be screened • Improved ability to meet the screening interval standard • Enable the addition of visual acuity testing to the screening programme • Enable the introduction of the 24 month interval for those assessed to be at lower risk of diabetic eye disease
Disadvantages	
Participants	• Screening provided in commercial premises
Primary Care	
Standards/Service	• Logistical, training, standardisation and governance issues • Cost

Indicative Costs

Revenue - £2.2 million Capital - £76,800

Option 7a – Mixed Model – Mobile and Fixed Site

This model would provide the service at those GP practices who wish to maintain the service along with a number of fixed locations in areas where there is no GP service available. This retains the disadvantages of the current mobile service.

Advantages	
Participants	• Convenience of attending at your GP practice remains for some participants
Primary Care	• Opportunity to integrate retinal photography with other diabetic care services for those practices who wish to retain the service
Standards/Service	
Disadvantages	
Participants	• Restricted choice for some regarding date, time and location of screening appointment
Primary Care	• Continued pressure on participating practices to provide suitable accommodation
Standards/Service	• Probably unsustainable given the increasing diabetic population and its rate of growth • Unable to meet the screening interval standard • Staff dissatisfaction • Continued wear and tear on equipment • Screening will continue to be organised according to participant's GP practice not by individual as we are unable to run a programme based on individual screening intervals and practice screening intervals (the IT system can't accommodate this). • Service will be unable to introduce variable screening interval • Inability to carry out visual acuity testing for some participants

Indicative Costs

Revenue - £1.65 million Capital - £37,800

Option 7b – Mixed Model – HSC Fixed Sites and High Street Optometry
This model would provide the service at a number of fixed sites and at a number of (around 30) community optometry practices.

Advantages	
Participants	• Choice of venue to attend for screening and could, for example, select the nearest to their home, or to their place of work • Anyone who cannot attend when invited would also be able to select where to be screened,
Primary Care	• Pressure removed from primary care to provide accommodation
Standards/Service	• Invites would be based on the individual; rather than when a practice population is due to be screened • Improved ability to meet the screening interval standard • Enable the addition of visual acuity testing to the screening programme • Enable the introduction of the 24 month interval for those assessed to be at lower risk of diabetic eye disease
Disadvantages	
Participants	• Screening provided in commercial premises
Primary Care	
Standards/Service	• Logistical, training, standardisation and governance issues • Cost

<u>Indicative Costs</u>
Revenue - £1.67 million Capital - £33,300

Option 7c – Mixed Model – Mobile and High Street Optometry

This model would provide the service at those GP practices who wish to maintain the service along with (around 40) high street optometry practices.

Advantages	
Participants	• Convenience of attending at your GP practice remains for some participants
Primary Care	• Opportunity to integrate retinal photography with other diabetic care services for those practices who wish to retain the service
Standards/Service	
Disadvantages	
Participants	• Restricted choice for some regarding date, time and location of screening appointment
Primary Care	• Continued pressure on participating practices to provide suitable accommodation
Standards/Service	• Probably unsustainable given the increasing diabetic population and its rate of growth • Unable to meet the screening interval standard • Staff dissatisfaction • Continued wear and tear on equipment • Screening will continue to be organised according to participant's GP practice not by individual as we are unable to run a programme based on individual screening intervals and practice screening intervals (the IT system can't accommodate this). • Service will be unable to introduce variable screening interval • Inability to carry out visual acuity testing for some participants • Cost

Indicative Costs

Revenue - £1.8 million Capital - £49,200

5. OPTION APPRAISAL OBJECTIVES

The six objectives that will be used to score the options are set out below. The bullet points beneath each objective help to explain it.

A. Accessibility

- Location and travelling time for service users
- Proximity to good road infrastructure/public transport links
- Sufficient car parking

B. Maximise patient choice

- Flexibility for patient re choice of site and timing of appointment
- Potential to facilitate evening/weekend appointments
- All members of community have equal access to services

C. Operational feasibility

- Availability of suitable accommodation
- IT requirements, including networking and support services
- Screening efficiency (i.e. number of screenings per day)
- Training efficiency/ease
- Ease of tracking and chasing patients who DNR/DNA (do not respond/attend)
- Ease of procurement and administering payments

D. Sustainability

- Sustainability of skilled workforce (i.e. facilitates staff retention)
- Resilience to staff absence

E. Quality

- Capable of meeting diabetic eye screening programme quality standards
- Screening interval based upon individual client appointment
- Facilitates quality assurance and performance management

F. Future proof

- Capable of screening an expanding population
- Capable of adapting to future change in screening programme i.e. changes to screening interval

6 WEIGHTING OF OBJECTIVES

Table 2 shows the weighting given to each option. Those considered to be more important are given more weight. In the option appraisal each short listed option will be scored against each objective.

Table 2: The weighted score for each objective

Objective	Weighting (%)
A Accessibility	10%
B Patient Choice	10%
C Operational feasibility	20%
D Sustainability	10%
E Quality	40%
F Future Proof	10%
Total	**100%**