



# The Review of Drugs and Treatments: Additional Costs for the Implementation of NICE TAS

A Report for the States of Guernsey Committee for Health & Social Care



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# 1 Introduction and background

#### 1.1 The Drug and Treatment Review

Solutions for Public Health (SPH) was commissioned in January 2019 to undertake a review of the policy implications and outline costs of adopting National Institute for Clinical Effectiveness (NICE) Technology Appraisal (TA) approved treatments and to provide the Committee *for* Health and Social Care with a range of commissioning options.

The scope of the review related to the direct cost of the drug or other treatment only. Any wider service delivery implications such as manpower, which may require funding when deciding on a policy of routine adoption of NICE TA-approved treatments, were out of scope.

#### 1.2 Scope of this additional work

Drug and device acquisition costs are not the only consideration when adopting NICE TA-approved treatments. Other service delivery resources need to be taken into account when implementing new treatments and pathways.

Outpatient appointments, ward attendances and associated nurse time, pharmacy services required to make up and deliver treatments, diagnostics to monitor progression and manage side-effects and hospital admissions required to treat adverse events are all factors that should all be included in the decision making process.

To support the main review SPH were asked to assess the additional impact of implementing NICE TA approved treatments and to provide an indicative estimate of associated implementation costs for the TA recommendations unfunded as at 31<sup>st</sup> December 2018, with an ICER¹ of less than £40,000 per QALY during the first year of implementation.

The modelling required to predict year 2 and onwards activity (backlog patients still receiving treatment plus new patients entering the pathways) is not feasible within the time constraints of this review and without monitoring information from initial roll out and uptake.

<sup>&</sup>lt;sup>1</sup> The primary outcome used by NICE is the quality-adjusted life year (QALY). A QALY is a single unit of health gain that combines both expected years of life gained and quality of life gained. The QALY is a 'common currency' which allows different interventions to be compared for different conditions. Where a new intervention appears to be more effective than the current comparator treatment, NICE usually compares the interventions by calculating the incremental cost- effectiveness ratio (ICER). The ICER is the ratio of the difference in the mean costs of an intervention compared with the next best alternative (which could be no action or treatment) to the differences in the mean health outcomes. ICERs are expressed as cost (in £) per QALY gained.



# 2 Methodology

The approach taken to identify the wider implications of adopting NICE TAs was to:

- identify the relevant TAs from the database produced as part of the main Drugs and Treatment Review
- prioritise those TAs which are most likely to substantially impact current service delivery capacity and capability
- review current and proposed treatment options with key professionals and service providers to identify key differences
- quantify and cost resources required over and above those in place currently

### 3 Relevant TAs

87 TAs containing a total of 92 TA recommendations with an ICER of <£40,000 per QALY, unfunded at 31<sup>st</sup> December 2019, were identified in the initial Drug and Treatment Review.

Table 1: Approved NICE TAs unfunded as at 31st December 2018 with an ICER of <£40,000 per QALY

| Specialty                       | Number of TA recommendations <sup>2</sup> | Estimated<br>Guernsey<br>patients<br>Year 1 | Estimated<br>Guernsey New<br>Patients<br>Per Annum |
|---------------------------------|-------------------------------------------|---------------------------------------------|----------------------------------------------------|
| Cancer                          | 42                                        | 46.2                                        | 40.3                                               |
| Cardiac Services                | 6                                         | 2030                                        | 240                                                |
| Colorectal Services             | 2                                         | 110                                         | 23                                                 |
| Dermatology                     | 5                                         | 12                                          | 10                                                 |
| Ear and Ophthalmology Services  | 3                                         | 21                                          | 15.2                                               |
| Endocrinology                   | 6                                         | 305                                         | 49                                                 |
| Hepatobiliary and Pancreas      | 1                                         | 2                                           | 1                                                  |
| Immunology and Allergy Services | 1                                         | 4                                           | 1                                                  |
| Infectious Diseases             | 2                                         | 2                                           | 2                                                  |
| Mental Health                   | 3                                         | 95                                          | 22                                                 |
| Neurosciences                   | 3                                         | 5                                           | 3                                                  |
| Urology                         | 1                                         | 150                                         | 40                                                 |
| Pain                            | 1                                         | 100                                         | 100                                                |
| Respiratory                     | 5                                         | 100                                         | 49                                                 |
| Rheumatology                    | 5                                         | 16                                          | 7                                                  |
| Trauma and Orthopaedics         | 5                                         | 60                                          | 60                                                 |
| Vascular Disease                | 1                                         | 15                                          | 15                                                 |
| Total                           | 92                                        | 3073.2                                      | 677.5                                              |

Source: The Review of Drugs and Treatments, SPH 2019

<sup>&</sup>lt;sup>2</sup> A TA can include more than one recommendation



Table 1 shows that the 92 TA recommendations cover 17 specialties and an estimated 3,073 patients in year 1, plus 678 new patients per annum thereafter.

#### 3.1 Prioritisation of NICE TAs for impact assessment

TA recommendations are not equal in terms of the number of patients that potentially meet the criteria for treatment, nor with regard to the potential impact on the care pathway and the infrastructure required to deliver the treatment.

Table 2 below shows that 42 (46%) of the TA recommendations are for anti-cancer treatments, but that they only cover 2% of the estimated year 1 patients. Conversely only 6 (7%) of the TA recommendations are for cardiac services, but these cover 66% of the estimated year 1 patients and there is only 1 TA recommendation for each of Urology and Pain treatments and they cover 5% and 3% of the estimated year 1 patients respectively.

Table 3 below shows the number of TA recommendations for each specialty by the type of treatment: drug – infusion, drug – injection, drug – oral, non-drug.



Table 2: Approved NICE TAs unfunded as at 31st December 2018 with an ICER of <£40,000 per QALY

| Specialty                       | Total TA recommendations | % of total TA recommendations | Total estimated patients year 1 | % of total estimated patients year 1 | Total estimated new patients per annum | % of estimated new patients per annum |
|---------------------------------|--------------------------|-------------------------------|---------------------------------|--------------------------------------|----------------------------------------|---------------------------------------|
| Cancer                          | 42                       | 46%                           | 46.2                            | 2%                                   | 40.3                                   | 6%                                    |
| Cardiac Services                | 6                        | 7%                            | 2030                            | 66%                                  | 240                                    | 35%                                   |
| Colorectal Services             | 2                        | 2%                            | 110                             | 4%                                   | 23                                     | 3%                                    |
| Dermatology                     | 5                        | 5%                            | 12                              | 0%                                   | 10                                     | 1%                                    |
| Ear and Ophthalmology Services  | 3                        | 3%                            | 21                              | 1%                                   | 15.2                                   | 2%                                    |
| Endocrinology                   | 6                        | 7%                            | 305                             | 10%                                  | 49                                     | 7%                                    |
| Hepatobiliary and Pancreas      | 1                        | 1%                            | 2                               | 0%                                   | 1                                      | 0%                                    |
| Immunology and Allergy Services | 1                        | 1%                            | 4                               | 0%                                   | 1                                      | 0%                                    |
| Infectious Diseases             | 2                        | 2%                            | 2                               | 0%                                   | 2                                      | 0%                                    |
| Mental Health                   | 3                        | 3%                            | 95                              | 3%                                   | 22                                     | 3%                                    |
| Neurosciences                   | 3                        | 3%                            | 5                               | 0%                                   | 3                                      | 0%                                    |
| Urology                         | 1                        | 1%                            | 150                             | 5%                                   | 40                                     | 6%                                    |
| Pain                            | 1                        | 1%                            | 100                             | 3%                                   | 100                                    | 15%                                   |
| Respiratory                     | 5                        | 5%                            | 100                             | 3%                                   | 49                                     | 7%                                    |
| Rheumatology                    | 5                        | 5%                            | 16                              | 1%                                   | 7                                      | 1%                                    |
| Trauma and Orthopaedics         | 5                        | 5%                            | 60                              | 2%                                   | 60                                     | 9%                                    |
| Vascular Disease                | 1                        | 1%                            | 15                              | 0%                                   | 15                                     | 2%                                    |
| TOTALS                          | 92                       | 100%                          | 3073.2                          | 100%                                 | 677.5                                  | 100%                                  |

Additional Infrastructure Costs

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Table 3: Approved NICE TAs unfunded as at 31st December 2018 with an ICER of <£40,000 per QALY by type of treatment

|                            | Dr                    | ug -Infusio                  | on                               | Dr                    | ug -Injecti                  | on                               |                       | Drug - Oral                  |                                  |                       | None drug                    |                                  |
|----------------------------|-----------------------|------------------------------|----------------------------------|-----------------------|------------------------------|----------------------------------|-----------------------|------------------------------|----------------------------------|-----------------------|------------------------------|----------------------------------|
| Specialty                  | TA<br>recommendations | Estimated patients<br>year 1 | Estimated new patients per annum | TA<br>recommendations | Estimated patients<br>year 1 | Estimated new patients per annum | TA<br>recommendations | Estimated patients<br>year 1 | Estimated new patients per annum | TA<br>recommendations | Estimated patients<br>year 1 | Estimated new patients per annum |
| Cancer                     | 22                    | 16.2                         | 16.2                             | 2                     | 2                            | 1.5                              | 18                    | 28                           | 22.5                             | -                     | -                            | -                                |
| Cardiac Services           | 1                     | 30                           | 10                               | 2                     | 400                          | 20                               | 3                     | 1600                         | 210                              | -                     | -                            | -                                |
| Colorectal Services        | -                     | -                            | -                                | -                     | -                            | -                                | 2                     | 110                          | 23                               | -                     | -                            | -                                |
| Dermatology                | -                     | -                            | -                                | 4                     | 10                           | 8                                | 1                     | 2                            | 2                                | -                     | -                            | -                                |
| Ear and Ophthalmology      |                       |                              |                                  |                       |                              |                                  |                       |                              |                                  |                       |                              |                                  |
| Services                   | -                     | -                            | -                                | 1                     | 10                           | 5                                | -                     | -                            | -                                | 2                     | 11                           | 10.2                             |
| Endocrinology              | -                     | -                            | -                                | 1                     | 5                            | 4                                | 5                     | 300                          | 45                               | -                     | -                            | -                                |
| Hepatobiliary and Pancreas | -                     | -                            | -                                |                       |                              |                                  | 1                     | 2                            | 1                                | -                     | -                            | -                                |
| Immunology and Allergy     |                       |                              |                                  | _                     |                              | 4                                |                       |                              |                                  |                       |                              |                                  |
| Services                   | -                     | -                            | -                                | 1                     | 4                            | 1                                | -                     | -                            | -                                | -                     | -                            | -                                |
| Infectious Diseases        | -                     | -                            | -                                | -                     | -                            | -                                | 2                     | 2                            | 2                                | -                     | -                            | -                                |
| Mental Health              | -                     | -                            | -                                | -                     | -                            | -                                | 3                     | 95                           | 22                               | -                     | -                            | -                                |
| Neurosciences              | 1                     | 2                            | 1                                | -                     | -                            | -                                | 2                     | 3                            | 2                                | -                     | -                            | -                                |
| Urology                    | -                     | -                            | -                                | -                     | -                            | -                                | 1                     | 150                          | 40                               | -                     | -                            | -                                |
| Pain                       | -                     | -                            | -                                | -                     | -                            | -                                | 1                     | 100                          | 100                              | -                     | -                            | -                                |
| Respiratory                | 1                     | 10                           | 2                                | 1                     | 10                           | 2                                | 3                     | 80                           | 45                               | -                     | -                            | -                                |
| Rheumatology               | -                     | -                            | -                                | 4                     | 13                           | 6                                | 1                     | 3                            | 1                                | -                     | -                            | -                                |
| Trauma and Orthopaedics    | -                     | -                            | -                                | -                     | -                            | -                                | 1                     | 50                           | 50                               | 4                     | 10                           | 10                               |
| Vascular Disease           | -                     | -                            | -                                | -                     | -                            | -                                | 1                     | 15                           | 15                               | -                     | -                            | -                                |
| Totals                     | 25                    | 58.2                         | 29.2                             | 16                    | 454                          | 47.5                             | 45                    | 2540                         | 580.6                            | 6                     | 21                           | 20.2                             |

Additional Infrastructure Costs

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To reach a realistic assessment of resource impact, each potential new treatment should ideally be considered in detail alongside the current comparator treatment given in Guernsey.

The approach to assessing the resource implications of implementation is set out in Section 4.

To be able to complete the evaluation in the time available, it was necessary to prioritise the TA recommendations to focus effort on those treatments which are most likely to require service delivery planning, and possibly additional resource, beyond that of the incremental cost of the drug therapy or device alone in the first year following implementation.

The TA recommendations were categorised into 3 groups for assessment based on how the TA-recommended treatment is administered and the estimated number of patients involved:

#### • Group 1 - oral non-chemotherapy drugs

It is generally considered that the pathway and healthcare resources required to deliver the new treatment will not be dissimilar to the current comparator treatment. The main cost associated with these treatments will be putting the supply agreements in place and setting the drugs up on pharmacy systems.

The only cost allocated to implementation for the Group 1 TA recommendations was the time taken to set up the supplier contracts and delivery arrangements.

 Group 2a – oral chemotherapy drugs, drugs by infusion, drugs by injection and non-drug treatments with 1 or more patients estimated for year 1

These recommendations are highly likely to require increased healthcare resources over and above the resources in place to deliver current treatments.

Using the approach in Section 4, the resource implications for TA recommendations were considered in as much detail as possible, given the current knowledge of the proposed new treatments and subject to the limitations and assumptions described in Section 6.

Group 2b - oral chemotherapy drugs, drugs by infusion, drugs by injection and non-drug treatments with <1 patient estimated for year 1
 <p>These recommendations would also be likely to require increased healthcare resources over and above the resources in place to deliver current treatments but it was considered that the full resource impact would not be realised until after year 1.



The resource impact for the TA recommendations in Group 2b was also assessed using the approach in Section 4 but, due to time constraints, at a lower level of detail than for Group 2a.

Group 2a consisted of 40 TA recommendations across 10 specialties, 19 of which were in cancer services. Table 4 shows the split of the TA recommendations across the 3 groups.

Table 4: TA recommendations by assessment category

| Group                                   | Number of TA recommendations |
|-----------------------------------------|------------------------------|
| 1                                       | 24                           |
| 2a                                      | 40                           |
| 2b                                      | 24                           |
| Approved for funding since January 2019 | 4                            |
| Total                                   | 92                           |

## 4 Assessment of resource requirements

# 4.1 The approach to evaluating the two treatments (current and proposed) and identifying where additional resources are required

A range of key clinical and operational staff were brought together to generate a common understanding of:

- the care pathway and delivery resources for the current treatment
- the potential care pathway and delivery resources for the new TArecommended treatment
- the differences in the resources required to deliver the two treatments
- the capability and capacity of the current services to absorb any increased requirements
- the type and extent of any additional resources required

For each TA recommendation, SPH provided information from The Review of Drugs and Treatments (SPH 2019) and from the NICE TA Guidance including:

- the intervention, indication and detailed patient criteria for which the drug or other treatment is approved by NICE.
- NICE recommended dose and schedule
- adverse events reported by NICE
- estimated numbers of patients for year one and new patients per annum



This information was reviewed by a group of clinical and operational specialists and compared to the current treatments given to the patient cohort.

Consideration was given to:

- specialty department staff availability
- · specialty department physical infrastructure, equipment and disposables
- pathology and other diagnostic services
- pharmacy services
- associated care eg treatment of adverse events and palliative care
- off island arrangements

For the TA recommendations which will introduce an increased workload the increase was quantified as far as possible for example:

- the number of additional infusions required per patient was estimated, and this estimate was applied to the number of Year 1 patients identified in the Drug and Treatment Review
- the increased number of clinic hours required in the Bulstrode Oncology Unit for new patients (currently not treated or current treatment not requiring hospital clinic attendance) was estimated along with any additional infusions per cycle and/or increased number of cycles associated with the new TArecommended treatment
- the number of additional pathology tests or scans required for diagnostics and/or monitoring of disease progression and management of side effects was also estimated

Where the current service area would not be able to deliver the increased workload without additional resources, the type and amount of resources were estimated. These estimates included:

- numbers/type of staff
- increased clinic appointment slots/theatre time
- higher volume of requests for pathology tests
- pharmacy infusion preparation etc.

#### 4.2 Findings

The discussions and analyses around current workload and future workload based on the proposed TA recommendations were informative and constructive. Although there are currently a number of unknowns, the key areas identified for additional resource were:

the volume of infusions to be prepared in the pharmacy department



- the available nurse and clinic time in the Bulstrode Oncology Unit to deliver the increased volume of infusions and management of the care pathways (monitoring for disease progression, side effects etc)
- the palliative and community care needed to support increased longevity of treatments and increased survival times/life expectancy
- the volume of requests for pathology tests for diagnostics, disease progression and side effect management
- the addition of new treatment administration methods to specialties such as Respiratory
- the requirement for off-island commissioning where treatments cannot be provided in Guernsey

#### 4.2.1 Bulstrode Unit

The area most impacted by the implementation of NICE approved TAs is the Bulstrode Oncology Unit. Although the number of cancer patients likely to be eligible for the TA-approved treatments is relatively small, the TA recommendations are predominantly for drugs administered by infusion and many of the new regimes have more infusions per cycle and more cycles than current treatments. In addition to this, the new regimes are often continued until disease progression, unlike current drugs where the number of treatment cycles is generally limited. As a result of these differences an additional 300/400 infusions per annum are expected to be required for the new anti-cancer TA approved treatments. An increase of approximately one third in clinic hours is required to accommodate the increased number of infusions and associated consultations.

We have been informed that current operational and staffing patterns do not have the capacity to deliver this increased number of infusions. To do so the Bulstrode Unit would be looking to implement specialist oncology scheduling software, to maximise utilisation, and to increase their opening hours to 8 am – 6 pm, Monday to Friday. An approximate software cost has been obtained from a supplier and included in Section 5 below. Also in Section 5 below, 33% of current pay costs has been used as an estimate of costs for extended opening hours

#### Specialist oncology scheduling software

Currently appointment scheduling is done via a manual task of checking lists and inputting in to Microsoft Outlook calendars. This requires nurse time to ensure that the patients are allocated the times appropriate to their specific treatment, for example the length of transfusion, whether the infusion has a short expiry time following manufacture or can be kept in a fridge overnight.

Applications are available specifically for oncology clinic scheduling which enable much more effective appointment scheduling. For example, using the BookWise software would:

- maximise efficiency and increase capacity by clearly showing space available
- streamline care pathways



- allow the setup of timings and rules within the system, making scheduling an administration role (not a nurse/clinician)
- identify appointment options taking into account the nursing and chair time required and regimen timings
- support the planning of capacity based on staff availability
- allow the pharmacy to view real-time activity on the unit and plan their workload appropriately
- identify all completed treatments where costs can be recouped (PAS rebates)
- help plan and follow a patient's treatment pathway to ensure patients are on track with their prescribed plan
- enable the production of reports such as drug usage, unit utilisation
- provide automated text service for appointment reminders

Adoption of a specialist booking system is an integral part of the Bulstrode Unit being able to implement new TA recommendations.

#### 4.2.2 Pharmacy

An approximate increase of 600 infusions (anti-cancer infusions plus infusions for treatments in other specialties) and 300 oral items could be experienced if all the previously identified NICE TA recommendations with an ICER of <£40,000 per QALY are implemented.

Currently the pharmacy team has the capacity to manufacture 19 items a day. It is not possible at this stage to estimate when the current capacity limit will be reached as this is dependent on the uptake pattern for the new treatments and the resultant timing of the increased infusion preparation workload.

However, it is highly likely that the pharmacy service will need to be extended early in year 1 implementation of TA recommendations. Estimated costs shown in Section 5 below are based on an additional 0.7 WTE band 8A pharmacist, 1 WTE band 5 pharmacy technician and 1 WTE band 4 pharmacy assistant with an element for increased disposables/consumables.

There is also an opportunity to consider pharmacy led oral medication clinics for appropriate patients and regimes. This has not been explored or costed in this report.

#### 4.2.3 Diagnostics

It is anticipated that increased infusion cycles, increased monitoring of disease progression and management of side effects will increase the amount of diagnostics requested from the specialties implementing NICE TA-approved treatments

#### Pharmacy

An estimate of an additional 350 requests for each of the 3 key oncology pathology tests has been used to reflect increases to workload. A unit cost has been allocated against each additional test in the estimated costs shown in Section 5 below.



A change to pathology opening hours to support the Bulstrode Unit extended hours is currently not envisaged.

There is, however, an opportunity to consider pharmacy led oral medication clinics for appropriate patients and regimes. In which case patients could have bloods done in pathology for any regimes where this is thought to be an option. This has not been explored or costed in this report.

It has not been possible to estimate additional pathology tests required from other specialties. Further increases in demand, over and above the oncology estimates included in this report, and the service capacity to deliver them will need to be monitored as implementation progresses.

#### Other diagnostics

IT has not been possible to estimate the increase in requests for other diagnostic tests (eg radiology and cardiology). Additional demand for these and the service capacity to deliver them will need to be monitored as implementation progresses

#### 4.2.4 Palliative and community care

The life extending outcomes of many of the new TA recommended treatments will result in more patients needing supportive care for longer. Currently palliative care is resourced by a part time visiting consultant. This is unlikely to be sufficient to provide adequate, appropriate care to all patients as the new TA recommendations are implemented.

Primary costs for year one, included in Section 5 below, have been calculated on the basis of employing a full time nurse (possibly split between palliative care and community nursing). As the implementation of NICE TA-approved treatments progresses and impact of longevity of treatment and extension of life on palliative care demand increases additional consultant hours may be required.

#### 4.2.5 Respiratory Services

The TA-approved recommendations for respiratory treatment include drug therapy by infusion. This service could be undertaken in a respiratory outpatient clinic. However, there is insufficient respiratory nurse time to be able to do this (part time nurse currently). An increase of 0.6 WTE band 7 nurse is required. An increase in respiratory nurse hours has already been included in the prioritisation process and the requirements of implemented TA treatments will be a core part of the job role.

#### 4.2.6 Off-island commissioning

There are a number of TA-recommended treatments which will be provided by commissioning the treatment off-island. The reasons for this include:

- the service is not currently available on-island for example, paediatric oncology, inpatient oncology
- the medicines require specialist facilities to manufacture which are not currently available on-island for example, freezing at -90C



 very low patient numbers mean that demand is insufficient to develop a local service

The majority of off-island treatment requirements from the TA recommendations in scope for this exercise are for anti-cancer treatment (70%).

A proportionate increase to current off-island chemotherapy drug costs and flights for patient transfer have been used as a basis for the impact on off-island commissioning.

#### 4.2.7 Treatment set up

All new treatments, regardless of administration method, other than those to be commissioned off-island will need to be set up and available for prescribing. This includes contacting manufacturers and suppliers, agreeing prices and contracts, and populating local systems with treatment information and protocols.

To do this for a large number of new treatments is time consuming and additional pharmacist resources will be required at the hospital and in the community. This must be taken into consideration in future workforce planning.

#### 5 Estimation of costs

SPH worked with the individual departments and the States of Guernsey Finance Team to put a provisional cost against the additional resources identified.

Table 5 gives a summary of the indicative costs by area for implementation of NICE TAs with an ICER of <£40,000 per QALY in the first year following implementation.



Table 5: Indicative cost estimates for year 1 implementation of NICE TA by ICER banding

|                                             | Bulstro                                                       | ode Unit                                                   | Pharm                                                             | acy and pathol                                | ogy                                           |                               | Other de                                              | partments                                              |                                               |
|---------------------------------------------|---------------------------------------------------------------|------------------------------------------------------------|-------------------------------------------------------------------|-----------------------------------------------|-----------------------------------------------|-------------------------------|-------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------|
|                                             | Specialist<br>oncology<br>scheduling<br>software <sup>1</sup> | Additional oncology clinic and infusion costs <sup>2</sup> | Additional pharmacy costs for drug supply set up and management 3 | Additional pharmacy infusion and oral costs 4 | Additional diagnostic test costs <sup>5</sup> | Additional off-island costs 6 | Additional<br>respiratory<br>nurse costs <sup>7</sup> | Additional palliative care and community nurse costs 8 | Additional palliative care consultant costs 8 |
| Set up/one off costs                        | £30,000                                                       |                                                            |                                                                   |                                               |                                               |                               |                                                       |                                                        |                                               |
| Cumulative costs for                        | Cumulative costs for additional implementation resources      |                                                            |                                                                   |                                               |                                               |                               |                                                       |                                                        |                                               |
| Year 1 costs ICER under £10k per QALY       |                                                               | £6,081                                                     | £8,825*                                                           | £2,671                                        | £1,578                                        | £0                            |                                                       | £5,809                                                 | £27,928                                       |
| Year 1 costs<br>ICER under £20k<br>per QALY |                                                               | £46,823                                                    | £47,737*                                                          | £2,671                                        | £12,151                                       | £1,357                        |                                                       | £31,422                                                | £151,065                                      |
| Year 1 costs<br>ICER under £30k<br>per QALY |                                                               | £187,292                                                   | £71,588*                                                          | £75,076                                       | £48,603                                       | £17,647                       | £23,034*                                              | £47,121                                                | £226,544                                      |
| Year 1 costs ICER under £40k per QALY       |                                                               | £263,000                                                   | £79,000*                                                          | £105,492                                      | £68,250                                       | £47,510                       | £31,200*                                              | £52,000                                                | £250,000                                      |

<sup>&</sup>lt;sup>1</sup> approximate software licence costs

assuming an increase of approximately one third in clinic hours required to accommodate the increased number of infusions and associated consultation - extended opening of the unit from 8am to 6pm five days per week - 33% of current pay costs

an additional 1 WTE at SO3 level is required – this is already factored in to future workforce planning with the aim to repurpose an existing post. If this is not approved through workforce planning then the funding will need to be provided from the NICE TA Implementation Programme



- based on a unit cost for each additional infusion and oral treatment over and above current treatment level calculated from the individual TA treatment schedule and estimated year 1 patient numbers (patient numbers from The Drugs and Treatment Review (SPH 2019))
- based on additional pathology tests required by oncology (approximately 350 additional requests for 3 tests). Note: additional pathology tests required from other specialties are not included and neither is the increase in requests for other diagnostic tests (eg radiology and cardiology). Additional demand for these and the service capacity to deliver them will need to be monitored as implementation progresses
- based on an increase of one third to the current off-island chemotherapy drugs budget plus return transfer for estimated patient numbers
- an additional 0.6 WTE Band 7 nurse is required this has already been included in Prioritisation plans. If this resource is not approved through the Prioritisation process then the funding will need to be provided from the NICE TA implementation programme
- based on a 1.0 WTE band 7 nurse. Primary costs for year 1 have been calculated on the basis of employing a full time nurse (possibly split between palliative care and community nursing). As the implementation of NICE TA-approved treatments progresses, and impact of longevity of treatment and extension of life on palliative care demand increases, additional consultant hours may be required. The cost of a full time on-island consultant is £250,000 which will be offset by the cost of the current part time visiting consultant

Table 6: Indicative total cost estimates for year 1 implementation of NICE TA by ICER banding

|                                          | Total cumulative budget |                                                                            | Total cumulative budget                                                                                                                                                   |  |  |
|------------------------------------------|-------------------------|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
|                                          |                         | - excluding full time palliative care consultant if assessed as not needed | <ul> <li>excluding full time palliative care consultant if assessed as not needed</li> <li>excluding items funded through Prioritisation or workforce planning</li> </ul> |  |  |
| Set up/one off costs                     | 30,000                  | £30,000                                                                    | £30,000                                                                                                                                                                   |  |  |
| Year 1 costs<br>ICER under £10k per QALY | £52,892                 | £24,964                                                                    | £16,139                                                                                                                                                                   |  |  |
| Year 1 costs<br>ICER under £20k per QALY | £293,225                | £142,161                                                                   | £94,424                                                                                                                                                                   |  |  |
| Year 1 costs<br>ICER under £30k per QALY | £696,905                | £470,361                                                                   | £375,740                                                                                                                                                                  |  |  |
| Year 1 costs<br>ICER under £40k per QALY | £896,452                | £646,452                                                                   | £536,252                                                                                                                                                                  |  |  |



# 6 Summary of findings and conclusions

It is not feasible to implement NICE TA-approved recommendations with an ICER<£40,000 per QALY without investment in service delivery areas. A high level estimation of costs for the current backlog of TAs is approximately £900,000.

This is an indicative estimate only as a basis for initial decision making. Estimates for areas already considered will need to be refined and areas excluded from consideration so far (see Section 7) will need to be investigated.

This exercise has increased understanding of the potential impact of implementing NICE TAs, the need for further detailed planning prior to implementation and the opportunities to achieve increases in efficiency and effectiveness presented.

#### 7 Exclusions and limitations

The approach described above and the subsequent findings reflect the time constraints and are subject to a number of exclusions and limitations.

#### **Exclusions from this review include:**

- the additional treatment acquisition costs over and above existing treatments (as these were included in the Drug and Treatment Review)
- consideration of the impact of NICE TA recommendations published since 1<sup>st</sup>
  January 2019 (24 new TAs as of 1<sup>st</sup> May 2019) and ongoing
- consideration of the impact of NICE TA recommendations with ICER values greater than £40,000 per additional QALY
- the potential change in private patient income arising from adoption of a greater proportion of NICE TA guidance
- training requirements for pharmacists, clinical consultants, nurses, etc in relation to the adoption of new TA-recommended treatments
- monitoring and audit for compliance with NICE TA eligibility criteria
- processes and systems for communicating policy/funding decisions and treatment approvals and for managing compliance with patient eligibility criteria, for example, BlueTeq
- e-prescribing which is being considered by a States of Guernsey Digital Improvement Programme
- other types of NICE guidance: There are 6 types of Evidence-based recommendations produced by NICE:
  - technology appraisals guidance (TA)



- highly specialised technology guidance (HST)
- guidelines covering clinical topics, medicines practice, public health and social care
- o diagnostics guidance
- o interventional procedures guidance
- o medical technologies guidance

Only NICE TAs and HSTs are within the scope of this report.

clinical effectiveness and outcomes

#### Limitations of this review include:

- patient numbers: as part of the Drugs and Treatment Review (SPH 2019)
  Guernsey clinicians provided estimates of the number of people who might be
  eligible for each TA-approved treatment and indication. The initial approach to
  apply a crude pro-rata of England patient numbers (published by NICE) was
  abandoned due to the lack of complete NICE costing templates for the TAs
- in calculating implementation costs we have used the Year 1 patient numbers from the Drug and Treatment review. These numbers reflect the backlog of eligible patients likely to present for treatment in the first year. It has not been possible to estimate what proportion of the patients treated in Year 1 are likely to continue treatment in subsequent years, so these implementation costs relate only to the first 12 months following implementation
- with a small population, demand will fluctuate for some treatments (particularly those for rarer indications) year on year to such an extent that a budget is difficult to set and manage on a year on year basis
- NICE TA information can date quite quickly, in particular in relation to the cost of the intervention and comparator, and this may result in changes to the estimated ICER value
- there will be a number of cases where the comparator drug used by NICE in calculating the ICER value compared with the TA recommended treatment, is not the treatment currently provided in Guernsey. In these cases, we cannot say what is the true ICER value



This report has been based on information and data publically available including that from NICE and the Scottish Medicines Consortium and provided by individuals and organisations consulted during the Review. Care was taken in the preparation of the information in this report and every effort has been made to ensure the information is accurate and up-to-date.

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