Rialtas na hÉireann
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Spending Review 2021

Executive Summaries – Tranche 1 Publications

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These papers has been prepared by IGEES staff across a number of Departments. The views presented in the papers do not represent the official views of each Department or Minister.

IGEES
Irish Government Economic and Evaluation Service

Contents

1. Teacher Allocations: Developing a model for Mainstream Teacher Projections

Executive Summary

- ***This paper has been jointly produced by staff in the Department of Education and Skills and Department of Public Expenditure and Reform.***

- Expenditure on pay for teachers was approx. €4.5 billion in 2019 and accounts for almost 60 per cent of the total current education budget.[1] With over 50,000 mainstream teachers across close to 4,000 schools this makes allocation of teachers a complex process to model and project.

- The 2020 Spending Review paper examined the processes and mechanisms by which mainstream teaching posts, including principals, are allocated to primary and post-primary schools and how these interact with teacher allocations in the Irish Education system. The mainstream teacher allocation process goes beyond the application of an overall teacher to pupil ratio to enrolments and is based on school level enrolments. This transmission is more direct at post-primary level, with considerably more nuances at a primary level. These nuances, which seek to allow for variation in school circumstance e.g. DEIS, small school and schools with significant enrolment growth, make the projection of teacher numbers more complicated.

- This second Spending Review paper uses analysis from the 2020 paper to develop a more detailed model of mainstream teacher allocations in the medium-term using school level enrolment projections to mimic the teacher allocation process.

- Enrolment projections are a key input to the model. This paper produces a number of scenarios which seek to disaggregate Department of Education School Planning Area projections to school level and uses these enrolment projections to project teacher numbers for the next 3 school years.

- This analysis models the different type of mainstream teacher post separately for both primary and post-primary level before aggregating to a total number of mainstream teachers to estimate the projected total change in mainstream primary and post-primary teaching posts over the 2022-2024 period.

- This project has demonstrated that the production of mainstream teacher number projections is complicated due to the operational mechanism of allocations examined in the 2020 paper, which allow for school circumstances including, DEIS schools, small schools, and those with a high growth rate in enrolments.

- Furthermore, the accuracy of these projections and hence the propensity to plan, both in terms of budgets and workforce planning, is dependent on highly detailed school level enrolment projections due to the process of mainstream teacher allocations in schools.

Key Findings

- Mainstream teacher numbers at primary level are expected to fall over the medium term as the demographic bubble moves from primary to post-primary level.

- Mainstream teacher numbers at post-primary level are expected to increase until 2024 in line with enrolment projections but at a falling rate.

The analysis has highlighted a number of areas which could improve the ability to more accurately project mainstream teacher numbers:

- At post-primary level enrolment projections are available at school level; however, at primary level they are not. The production of these should be considered.

- The analysis does not take account of the capacity limits in schools, production of school level enrolment projections which account for this could increase accuracy of the projections.

- The Department of Education Statistics Unit and Forward Planning Section (FPS) are looking at ways to refine primary school choice projections to take account of movement between School Planning Areas (SPAs) as this can be a significant issue for some areas.

- The FPS produce projections both taking account of additional residential developments and not. In the additional residential development projections migration into an SPA is taken account of while migration out of another is not, while this may be seen as appropriate in some circumstances related to provision of school places it risks an overestimation of pupils, and hence teacher numbers, when trying to project teacher allocations. For this reason the projections without additional residential development are used in this paper, however, if both movement in and out of an SPA could be taken account of the projections may be more accurate.

- The FPS has been working with the Statistics Unit to refine SPA projections. This should be continued with a view to producing a single set of near-term school-level demographic projections for the Department of Education which can be used for both the purposes of teacher allocations and capital planning. These near-term, school-level projections are complementary to the longer-term, school population projections produced by the Statistics

[1] 2020 teacher pay expenditure was c.€4.7 billion, however this included additional COVID staffing supports.

Unit. Increased consistency between these approaches should be considered to inform longer-term workforce planning and strategic needs as pupil projections drive projected teacher numbers, longer-term workforce planning, and capital expenditure on school places.

- This paper has set up a number of scenarios for mainstream teacher projections, these should be monitored and adjusted in line with outturns to refine the projections as more information is available. The timeline for the production of projections and outturn data should be examined including:
    - The availability of medium-term, school-level enrolment projections in advance of the summer to ensure this model can be updated in advance of the Budget.
    - The availability of in-year enrolment figures, which are uploaded by schools to POD and PPOD from September, at the earliest possible date.

- At present FPS enrolment projections do not fully account for students in Special Classes at primary as the purpose of the FPS projections is to identify mainstream accommodation needs. To ensure inclusion of pupils in Special Classes, and as Special Class provision increases, the FPS projections should considered including existing Special Class enrolments as appropriate.

  The paper is also based on assumptions about staffing schedules and circulars; any changes agreed by Government to staffing allocation rules or processes should be taken into account in future updates.

2. Review of the High-Tech Drug Scheme

Executive Summary

- ***This paper has been jointly produced by staff in the Department of Health and Department of Public Expenditure and Reform.***

1. This paper focuses on High-Tech Drug (HTD) expenditure, a State pharmaceutical procurement and dispensing arrangement for patients with health needs initially met in the hospital setting.
2. Expenditure and activity in the scheme are reviewed in the context of broader pharmaceutical and health activity nationally. HTD expenditure indicators and dynamics are set out, such as average treatment costs by age, sex and disease profile. The key drivers of HTD expenditure since 2012 are disaggregated and analysed.
3. The gross Exchequer impact of new drug introductions on HTD expenditure is reviewed and quantified. Whilst subject to assumptions, the *marginal* effect of new drug introductions is also estimated.
4. The proportion of non-patented generic and biosimilar medicines (non-originator medicines) in the HTD arrangement is set out. The average cost differential between originator and non-originator treatments is examined, and the success of two recent HSE non-originator promotion campaigns is detailed.
5. Policy questions such as the process through which new drugs are introduced and the exchequer impact of the arrangement are discussed, while potential cost containment measures and next steps are also explored.

Key Findings

1. State expenditure on pharmaceuticals has grown from €1.3bn in 2012 to €2.3bn in 2020, an average of 4% or €54m growth each year since 2012.
2. At a component-level the primary driver of this growth is the High-Tech Drug arrangement, which has grown at an average of 11% or €63m year-on-year, from €379m in 2012 to €794m in 2020.
3. The total number of patients funded by HTD expenditure has consistently grown in the years from 2012 to 2019, from a base of fifty-seven thousand patients in 2012 to eighty-nine thousand in 2019, an average year-on-year growth of 6.9%.
4. As the unit prices of drugs generally cannot increase due to agreement with industry, the primary driver of HTD expenditure is the introduction of new higher cost medicines, and growth in patient volume. This growth is partially offset by agreed price reductions with

industry and by the introduction of cost reducing treatments, which are most often generic or biosimilar options.

Estimated HTD Cost Driver Impact 2012 - 2021

Cost Driver	Proportional Impact on Annual Expenditure	% of Total Growth Drivers	Average Annual Impact (€)	2012-2020 Marginal Effect
Population Growth	+1.5%	13%	+€8.4m	+€60.6m
Additional Patient Volume Growth	+5.4%	49%	+€30.6m	+€220.1m
Proportional Growth in Higher Cost Treatment Areas	+0.2%	2%	+€1.3m	+€9.4m
New Drug Introductions	+4.0%	36%	+€22.5m	+€161.6m
- of which Cost Incurring	*+6.3%*	*56%*	*+€35.5m*	*+€255.2m*
- of which Cost Reducing	*-2.3%*	*-21%*	*-€13.0m*	*-€93.6m*
Total	**+11.2%**	**100%**	**+€62.9m**	**+€451.7m**

5. The dominant treatment areas in terms of expenditure are Rheumatoid Arthritis and Cancer, both of which are associated with large patient volumes and above median annual treatment costs (approximately €12,700 and €13,500 per patient per annum respectively). While the average annual cost of treating Rheumatoid Arthritis has begun to fall due to the adoption of non-originator drugs, the cost of treating Cancer continues to rise exponentially.

6. Recent years have seen increases in the number of extremely high-cost treatments (>€100,000 per annum), however for most of these the impact on overall expenditure is significantly mitigated by small patient volumes.

7. The HSE campaign to promote biosimilar alternatives in the Rheumatoid Arthritis space have yielded significant savings.

8. There is a notable trend towards increasingly complex pharmaceutical pricing arrangements between governments and the pharmaceutical industry subject to non-disclosure agreements that compromise the ability to perform an accurate cross-country comparison of pharmaceutical prices. This is advantageous from the perspective of the pharmaceutical industry, as it reduces States' ability to evaluate comparative value for money across other jurisdictions.

Steps Forward/Policy Considerations

1. The High-Tech Drug Arrangement provides treatments for serious and complex illnesses such as Cystic Fibrosis, Cancer and Rheumatoid Arthritis. While continued investment in novel treatment options is required to ensure adequate treatment of these illnesses, cost containment measures must also be considered so that expenditures remain sustainable and good value for money is achieved.

2. Based on the analysis of the data presented in Section 2 and options emerging from the policy literature, a number of possible cost containment measures could be considered in an Irish context.

    a) The Department of Health, DPER and the HSE could work to consolidate and further incorporate forecasting of multi-year expenditure commitments arising from potential allocations for investment in new medicines.

    b) Improvements to existing agreements with Industry which provide more favourable pricing terms to the Exchequer, supporting greater patient access to these drugs.

    c) Over the medium-term, the State could consider measures to promote international cooperation in pharmaceutical policy, including greater information sharing on pharmaceutical pricing and ultimately, where desirable, joint procurement. While it is too early to be definitive, the joint procurement of COVID vaccines through the EU demonstrates the potential application of this approach. Additionally, the desirability of enhanced European co-operation is highlighted in the recent EU Commission pharmaceutical strategy. This may provide the best means of overcoming the anti-transparency practices promoted by industry.

    d) Policies to promote the usage of generic and biosimilar medicines, including chemical-based prescribing, mandatory generic substitution, gainshare initiatives and the publication of a biosimilar strategy. These policies would have patient safety and prescribing practice implications, and their design must be cognisant of both.

    e) Changes to the Quality Adjusted Life Year Threshold (currently €45,000) in the drug approval process, resulting in a greater requirement for cost effectiveness from new drugs if they are to be reimbursed by State expenditure.

3. Some of the cost containment measures considered in the paper may prove challenging to implement in practice, especially where patient accessibility could be impacted by a policy change.

3. Focused Policy Assessment of *Reducing Harm, Supporting Recovery*: An analysis of expenditure and performance in the area of drug and alcohol misuse

Executive Summary

- ***This paper has been jointly produced by staff in the Department of Health and Department of Public Expenditure and Reform.***

Introduction

- *Reducing Harm, Supporting Recovery 2017 to 2025* (RHSR), continues the work of previous strategies on reducing the harms associated with substance misuse in Irish society but places a greater emphasis on supporting a health-led response to drug and alcohol use, and a further move away from a criminal justice approach. Alcohol misuse is also included in RHSR, the first-time alcohol has been included within the substance misuse strategy in an Irish context.

- The main aims of this Focused Policy Assessment (FPA) were to; profile labelled expenditure on drug and alcohol misuse; estimate unlabelled expenditure based on medical and judicial costs and lost productivity; and, examine the performance of RHSR.

- Having an estimate of the total economic burden that problem drug and alcohol use places on society, both in terms of the labelled expenditure on initiatives to ameliorate this problem, as well as the costs of dealing with the consequences of it, is a first step in generating the economic evidence base with which to evaluate public policy on substance misuse. This FPA analysed available data on labelled expenditure and sought to characterise, for the first time, drug-related unlabelled expenditure in the context of RHSR performance indicators over the period 2014-2019.

Expenditure

- The examination of labelled and unlabelled expenditure, and lost productivity costs included here, gives an indication of the scope of the economic costs of drug and alcohol misuse in Ireland.

Labelled Expenditure

- Labelled expenditure refers to planned spending targeted at drug or alcohol issues (e.g treatment of addiction), usually reported as such in public accounts. Data on labelled expenditure is collected annually by the Department of Health and provided to the HRB as part of their role within the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA). Limitations in this dataset point to the need for improved data collection for the next stage of RHSR.

- Although complete and consistent annual reporting from all reporting bodies has not yet been achieved, it is estimated that labelled expenditure on drug and alcohol misuse in Ireland exceeds €200 million per year.

- HSE Addiction Services accounted for over €100 million of labelled expenditure in 2019, with average year-on-year increases of 4% since 2014.

Unlabelled Expenditure & Productivity Costs

- Unlabelled expenditure refers to unplanned drug and alcohol related spending that is not explicitly categorised as such in public accounts (e.g. imprisonment for drug-related crime), making it more difficult to disaggregate and quantify.

- Productivity costs capture the indirect cost of lost production resulting from imprisonment, morbidity and premature death, which is an important component of the economic burden of drug and alcohol misuse from a societal perspective.

- Previous estimates of the societal cost of problem *alcohol* use have produced estimates ranging from €2.4 to €3.7 billion per year, with annual healthcare costs alone having been estimated at between €0.8 and €1.5 billion.

- This paper is the first to estimate unlabelled expenditure on problem *drug* use, finding that approximately €87 million is spent annually within hospitals, prisons, and the criminal justice system in dealing with the medical and legal consequences of drug use. Productivity losses associated with drug use are estimated to be in the region of €61 million per annum.

- Calculation of cross-sectional, annual costs fails to capture the longer-term financial implications of multi-year prison sentences or future productivity losses due to premature mortality. When a longitudinal approach is used to assess the net present value of current and future unlabelled expenditure and productivity costs due to drug misuse, the combined estimate rises to over €650 million.

Performance of RHSR

- RHSR includes 5 goals which are broken down into objectives, strategic actions and performance indicators. In total there are 50 strategic actions and 29 performance indicators. Data for 12 of the 29 performance indicators were available and sourced for a trend analysis, these are reported in Section 4. The performance of RHSR is analysed based on available data from the performance indicators listed under each of the 5 goals:

1. *Promote and protect health and wellbeing*
2. *Minimise the harms caused by the use and misuse of substances and promote rehabilitation and recovery*
3. *Address the harms of drug markets and reduce access to drugs for harmful use*
4. *Support participation of individuals, families and communities*
5. *Develop sound and comprehensive evidence-informed policies and actions*

- Limitations in the availability of data has constrained the conclusions that can be drawn on the progress made under each goal. It is clear that some indicators are moving in the right direction (for example rates of alcohol use among 10-17 year olds are reducing), some are moving in the wrong direction (for example increases in non-uptake of treatment among vulnerable groups) and for some it is difficult to determine (for example, increases in numbers in receipt of certain services could be positive if demand is being met but could also indicate increased prevalence of harmful drug use).

- This paper has also highlighted the importance of understanding demand and unmet need for treatment services as it contextualises whether these services are meeting population needs and therefore whether the strategy is achieving its objectives.

- An assessment of the status and availability of each of the 29 performance indicators was produced as part of the analysis which will inform the mid-term review of the strategy. A summary of this assessment is included in Appendix 1. Improvements in data availability and quality will support the ongoing monitoring of RHSR out to 2025 and any future evaluations in this area.

Conclusions

- The available evidence base on the costs of drug and alcohol misuse is typically limited by data availability and is estimated using varied methodological approaches. Opportunities exist to improve reporting of labelled expenditure across Government Departments, and consensus is needed on what the optimal approach is to estimating the direct and indirect costs of drug and alcohol misuse.

- Notwithstanding these limitations, our findings indicate that unlabelled expenditure and productivity costs contribute significantly to the overall economic burden of problem drug and alcohol use. Therefore they are an important component (alongside labelled expenditure) of any examination of the value of policies to address drug and alcohol misuse which relates changes in inputs (planned programmes to tackle these issues) to changes in outputs and costs.

- The performance of RHSR has been examined in terms of available data on the performance indicators under the five goals of the strategy. However, limitations in the availability and quality of data has constrained the conclusions that can be drawn. For some performance indicators, data will become available as time goes on, while others will need to be revised to be able to more accurately reflect the performance of goals in RHSR and to ensure their usefulness in future evaluations.

- It was not possible to break down labelled expenditure by the proportion which was directed towards a health led response to drug and alcohol misuse (e.g. expenditure on prevention) and that which relates to a criminal led response (e.g. expenditure on incarceration). It was similarly not possible to break down expenditure by that part which principally served each goal listed in RHSR. As such, an assessment of what was achieved for such expenditure was not possible in this FPA. Addressing the limitations of datasets and the performance indicators identified in this FPA are necessary steps for improved monitoring and future evaluation of RHSR and public expenditure on drug and alcohol programmes more generally.

- Improved ability to evaluate public expenditure would ensure that the health and wellbeing of individuals, their families and communities are best served by public policies that address the harms associated with drug and alcohol misuse.