

Title: PROPOSAL FOR SUPPLEMENTARY PRESCRIBING BY DIETITIANS IA No: 5194 Lead department or agency: NHS England Other departments or agencies: Department of Health, MHRA, British Dietetic Association, Devolved administrations	Impact Assessment (IA)		
	Date: 01/02/2015		
	Stage: Consultation		
	Source of intervention: Domestic		
	Type of measure: Other		
Contact for enquiries: enquiries@ahp.nhs.net			

Summary: Intervention and Options	RPC Opinion: Not Applicable
--	------------------------------------

Cost of Preferred (or more likely) Option			
Total Net Present Value	Business Net Present Value	Net cost to business per year (EANCB on 2009 prices)	In scope of One-In, Two-Out? Measure qualifies as
£24m	£m	£m	No NA

What is the problem under consideration? Why is government intervention necessary?

Access to medicines is restricted by legislation to professionals who have the required education, training and experience to prescribe safely. Supply of medicines is constrained by a lack of access to these professionals, leading to avoidable morbidity and disease progression and constraining the effectiveness of services and multidisciplinary teams (MDTs). There is a drive for more efficient services to be designed around patients' needs, making it easier to access the medicines they need. There is potential for enhanced quality of care, improved patient outcomes and cost savings if appropriately trained advanced level dietitians could undertake supplementary prescribing alongside independent prescribers as part of MDTs.

What are the policy objectives and the intended effects?

The objectives are a) to increase the proportion of patients who can be prescribed medicines, agreed in a clinical management plan, by an advanced dietitian, b) to optimise the use of medicines in patients with long-term conditions, c) to reduce unnecessary use of health care services solely to access medicines, and d) to free up other healthcare professionals, in particular doctors, for patients who require their skills. The intended effects are: fewer unnecessary appointments and consultations (GP or hospital) to manage ill-health, improved management of long-term conditions, and improved patient experience.

What policy options have been considered, including any alternatives to regulation? Please justify preferred option (further details in Evidence Base)

Option 1 – No Change
 Option 2 – Supplementary Prescribing

Will the policy be reviewed? It will be reviewed. If applicable, set review date: Month/Year					
Does implementation go beyond minimum EU requirements?			No		
Are any of these organisations in scope? If Micros not exempted set out reason in Evidence Base.	Micro No	< 20 Yes/No	Small Yes/No	Medium Yes/No	Large Yes/No
What is the CO ₂ equivalent change in greenhouse gas emissions? (Million tonnes CO ₂ equivalent)			Traded:		Non-traded:

I have read the Impact Assessment and I am satisfied that, given the available evidence, it represents a reasonable view of the likely costs, benefits and impact of the leading options.

Signed by the responsible
 SELECT SIGNATORY: _____ Date: _____

Summary: Analysis & Evidence

Policy Option 1

Description:

FULL ECONOMIC ASSESSMENT

Price Base Year 2014	PV Base Year 2014	Time Period Years 10	Net Benefit (Present Value (PV)) (£m)		
			Low: £24m	High: £51.2	Best Estimate: £24m

COSTS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	Optional	Optional	Optional
High	Optional	Optional	Optional
Best Estimate			£12.9m

Description and scale of key monetised costs by 'main affected groups'

Costs of training for the education programme for supplementary prescribing undertaken by advanced dietitians where there is an identified service need. The financial cost would be met in general by employer or education commissioners although they may be met by individuals or non-NHS organisations if working within the independent sector. Cost of staff backfill to cover time away on training courses.

Other key non-monetised costs by 'main affected groups'

Enhanced clinical supervision, marginal increase only.
Time away from work for unnecessary GP or hospital appointments

BENEFITS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low	Optional	Optional	£36.9m
High	Optional	Optional	£64m
Best Estimate			£36.9m

Description and scale of key monetised benefits by 'main affected groups'

Reduction in GP appointments
Reduction in hospital admissions
Reduction in outpatient appointments

Other key non-monetised benefits by 'main affected groups'

Reduction in wastage from suboptimal type and dose of medicines for patients with long-term conditions.
Reduced wastage from parenteral nutrition formulations supplied and not used due to delay in changing formulation/prescription. Reduced delays in obtaining optimal treatment and improved patient experience by allowing advanced dietitians to offer advice, treatment plan and medicines managed simultaneously.
Prevention of disease progression and improved management of long-term conditions

Key assumptions/sensitivities/risks

Non-compliance by patients as well as errors by prescribers – Advanced dietitians have extensive experience of medicines management through current mechanisms within their specialist area of practice. Access to adequate information to make prescribing decisions. Communication of prescribing decisions (including decision not to prescribe) to others involved in the patients care, such as the patient's GP.

Discount rate

3.5%

BUSINESS ASSESSMENT (Option 1)

Direct impact on business (Equivalent Annual) £m:			In scope of OITO?	Measure qualifies as
Costs:	Benefits:	Net:	No	NA

Evidence Base (for summary sheets)

Policy Background

The *Review of Prescribing, Supply and Administration of Medicines*¹ in 1999, chaired by Dr June Crown, proposed that prescribing rights be extended to a range of health professionals in order to improve services to patients, make better use of the skills of professional staff, and thus make a significant contribution to the modernisation of the health service. Following the review, revised regulations have enabled an expansion of non-medical prescribing so that experienced nurses, optometrists, pharmacists, physiotherapists and podiatrists can train to independently prescribe medicines within their clinical competence.

*Equity and Excellence: Liberating the NHS*² stated that the government is committed to putting patients and the public at the heart of everything they do. Introducing supplementary prescribing by advanced dietitians enables them to maximise their ability to improve the patients care, experience and safety.

Supplementary prescribing by eligible dietitians is consistent with the government's *NHS Outcomes Framework (2013/14)*³ to focus on improved outcomes for all, and the *5 Year Forward View*⁴, as this highlights that the traditional divide between primary care, community services and hospitals has been largely unaltered since the birth of the NHS, and that this is increasingly a barrier to the personalised and coordinated health service patients need.

Supplementary prescribing by eligible dietitians also supports the achievement of a number of ambitions across the devolved administrations such as *Transforming Your Care: A Review of Health and Social care in Northern Ireland*⁵, *Transforming Your Care: Strategic Implementation Plan*⁶, *Improving Outcomes by Shifting the Balance of Care: Improvement Framework*⁷, *Achieving Sustainable Quality in Scotland's Healthcare: A '20:20' Vision*⁸, *Together for Health: A Five Year Vision for the NHS in Wales*⁹ and *Achieving Excellence: The Quality Delivery Plan for the NHS in Wales*¹⁰. These documents set out the vision for the future of the NHS which no longer sees expertise constrained by traditional boundaries, fragmented services, or patients having to visit multiple professionals for multiple appointments. The *Five Year Forward View*¹¹ states that in the next five years the NHS will need to dissolve these traditional boundaries, and services will be redesigned and new models of care developed.

Problems with the current mechanisms for supplying and administering medicines by dietitians

¹ Department of Health (1999) *Review of Prescribing, Supply & Administration of Medicines*, London.

² Department of Health (2010) *Equity and Excellence: Liberating the NHS*. London

³ Department of Health (2012) *NHS Outcomes Framework (2013/14)*. London

⁴ NHS England (2014) *Five Year Forward View*, London

⁵ Northern Ireland Department of Health, Social Services and Public Safety (2011) *Transforming Your Care: A Review of Health and Social Care in Northern Ireland*, Belfast

⁶ Northern Ireland Department of Health, Social Services and Public Safety (2013) *Transforming Your Care: Strategic Implementation Plan*, Belfast

⁷ NHS Scotland (2009) *Improving Outcomes by Shifting the Balance of Care: Improvement Framework*, Edinburgh

⁸ NHS Scotland (2011) *Achieving Sustainable Quality in Scotland's Healthcare: A '20:20' Vision*, Edinburgh

⁹ NHS Wales (2011) *Together for Health: A Five Year Vision for the NHS in Wales*, Cardiff

¹⁰ NHS Wales (2012) *Achieving Excellence: The Quality Delivery Plan for the NHS in Wales*, Cardiff

¹¹ NHS England (2014) *Five Year Forward View*, London

The need to monitor and adjust preparations and doses is a key feature of long-term conditions where diet and nutrition impact on and are impacted by the changing symptoms and progression of the disease. The requirement of continual clinical review to optimise care and prevent deterioration of health means that access to a healthcare professional that can adjust and change medicines is required.

Currently, advanced dietitians are not able to prescribe medicines which can result in suboptimal care due to not having timely access to the medicines they require. This can delay optimal nutritional intake and exacerbate long-term conditions. The current system of patient-group directions (PGDs) and patient-specific directions (PSDs) is not intended for use in long-term conditions where frequent changes in dose and preparation will be required. However they are being used for this purpose and, there are efficiencies to be gained by reducing the number of PGDs and PSDs required. PGDs have to be updated regularly (at least every two years or when there is a change of staff in a department). PSDs require to be reviewed and signature by a doctor, which takes time away from direct patient care. If the doctor and the dietitian are not present together, another appointment is required to access a supply of medicines. By this time the PSD may already require amendment, and can potentially delay timely treatment. Additionally the patient may still be required to attend a GP appointment to obtain an ongoing prescription.

Equity of access is also constrained by the current system of PGDs and PSDs. A dietitian employed across different hospitals may be named on a PGD in one hospital and not in another, as hospitals have locally derived PGDs, and so may differ from each other. These systems of access to medicines can create health inequalities across geographical areas.

Rationale for intervention

There is scope to increase the efficiency, safety, effectiveness and experience of health care provided to patients with long-term conditions, by extending supplementary prescribing to advanced dietitians. The long-term conditions outlined in the next section illustrate that there is scope to reduce unnecessary GP and hospital appointments, time that is currently required to initiate or manage treatment with medicines, as well as to titrate medicines more accurately against diet and lifestyle, as the patients' needs change over time.

Clinical scenarios have been identified where there are clear and identifiable mechanisms for improving health and well-being, and reducing health service costs by extending supplementary prescribing to advanced dietitians.

Example 1: Renal consultants refer their patients to an advanced dietitian to assess the patient's diet and advice on the optimum phosphate binder medication and dosage in relation to this. Poor phosphate management may result in a higher risk of fractures in weakened bones and a hardening of the blood vessels (cardiovascular disease), leading to heart failure. The current system requires the patient's consultant or GP to initiate and adjust medicines as advised by the dietitian. This can delay optimal therapy between the appointment with a dietitian and obtaining a prescription. With supplementary prescribing rights the dietitian would be able to prescribe medications where appropriate in a timely manner for the patient against an agreed clinical management plan (CMP) for dispensing at a local pharmacy without re-referral back to a prescribing physician.

Example 2: The key treatment to prevent the complications of diabetes such as diabetic retinopathy and limb amputation is diet and medication. Currently, the advanced diabetes dietitian assesses the patient's diet and lifestyle and then writes to the GP to request a prescription, recommending insulin type and optimal dosage. The patient can be waiting days for this prescription. This has to be done every time the condition changes or the disease progresses. With supplementary prescribing by advanced dietitians, a CMP would be agreed with the

consultant or GP, and hence any subsequent amendments to the patient's prescriptions could be managed in a more accurate and timely way, with fewer requirements for consultant and/or GP appointments.

Example 3: Patients with intestinal failure (IF) require intravenous nutrition and rely on parenteral nutrition (PN) to survive. Advanced nutrition support dietitians undertake nutritional assessments for patients requiring PN and calculate the nutritional requirements. The PN prescription will need adjusting over the course of the patient's clinical/disease condition. Each time this happens, the dietitian is required to contact the consultant to arrange a prescription change. Supplementary prescribing by advanced dietitians could prevent delay in optimal nutrition, and reduce the risk of metabolic complications. It may also reduce the number of unused PN bags (which currently cost around £100 per bag) if the prescription needs to change following dietetic review.

Example 4: Patients with cystic fibrosis (CF) are required to take prescribed digestive enzymes from birth to help them digest food and get the nutrients they need, with every meal and snack. They also need to take vitamin supplements. Some of the symptoms of poorly managed CF are abdominal cramping, pain, nausea, constipation and diarrhoea. Advanced CF dietitians already manage patients who require pancreatic enzyme replacement therapy (PERT) and vitamins. However, a doctor is required to prescribe the PERT/vitamin preparations and any associated changes necessary as the condition progresses. Adjustment of PERT medication is common to treat CF and prevent hospital admission to manage acute symptoms. Currently the dietitian needs to request a prescription from the GP which can lead to delays in optimal therapy, exacerbation of symptoms, and increasing the risk of hospital admission. With supplementary prescribing, a clinical management plan would be developed at diagnosis, and the advanced dietitian could manage the PERT medication in relation to the patient's diet and lifestyle more timely and accurately.

Economic case:

Allowing advanced dietitians to prescribe medicines under a pre-agreed plan with an independent prescribing clinician, could free up health care resources and improve health. Overall efficiencies will be achieved if the cost savings outweigh the health risk of doing so. Currently the number of prescribing healthcare professionals is in short supply, and as such, it may improve patients' welfare at an acceptable cost to increase the range of healthcare professionals who can take on this role

Policy objective

Currently advanced dietitians have a high level of undergraduate and postgraduate knowledge and experience of medicines and their interaction with diet and lifestyle.

The objective of introducing supplementary prescribing for advanced dietitians is to:

- a) increase the range of healthcare professionals who can prescribe medicines to patients with long-term conditions where diet, lifestyle and medicines are a key feature of disease management;
- b) reduce unnecessary health care contacts solely to access medication;
- c) reduce avoidable episodes of ill-health and admissions through more timely access to medicines;
- d) enhance patients' experience of health care ;
- e) fully utilise the skills of the advanced dietetic workforce, and in the longer term, facilitate service redesign.

Description of options considered

Option 1 No Change

It is conventional to include a 'no change' option in an impact assessment. This option is to maintain the status quo and has costs and benefits of zero. Patient group directions (PGDs) and patient-specific directions (PSDs) would continue to provide limited patient and financial benefit due to the broad scope of dietetics and the limited scope of PGDs/PSDs.

Option 2 Introduce supplementary prescribing for dietitians

The potential benefits of option 2 are defined by expert clinical opinion as follows:

- Reduction in GP appointment required to access prescriptions
- Health benefit to patient from reduced prescriptions and improved medicine adherence
- Improved patient care and safety thereby reducing A&E admissions resulting from acute exacerbations of the patient's long term condition.
- Improved access to healthcare for all, especially in rural settings and the elderly
- Potential increase in self-referral to dietitians in conditions such as obesity management streamlining the patient care pathway further
- Improved patient care by fully utilising specialist dietetic skills
- Reduced requirements for follow-up by a consultant solely to access a prescription or other healthcare professional
- Improved patient experience of health care
- Reduced patient's time away from work to attend GP practice for prescription

Monetised and non-monetised costs and benefits of each option (including administrative burden);

Overview of costs and benefits associated with all options

Costs:

All options apart from Option 1 ('No Change') will require advanced dietitians to be appropriately trained in supplementary prescribing which incurs a cost per participant. Training will require participants to be away from work for up to 26 days.

The cost of backfilling staff time needed for supplementary prescribing training and education is included as a monetised cost even though staff backfill may not occur.

Additional risks associated with supplementary prescribing are not quantified due to the lack of data. Actions to mitigate additional risk are addressed in the section below.

Benefits:

Cost savings would result from a reduction in GP appointments, telephone consultations and hospital admissions.

Health benefits from improvements in health due to marginally earlier access to a prescription (hours or days) have not been quantified as they are speculative.

Cost savings and health benefits associated with changes in service configuration have not been quantified as the assumptions required to monetise these benefits are speculative.

Reduced time off work to attend health care appointments has not been included due to a lack of evidence of how many people would require time off work among patients who use these services.

Monetised costs

Training costs

Based on the British Dietetic Association (BDA) database, the expert view of dietetic service managers and current Health and Social Care Information Centre (HSCIC) data, it is estimated that 1354 (30% of the dietetic workforce within the NHS) are currently working at an advanced practice level or above. Given the number of specialist tertiary and children's centres and community services in the NHS, it is anticipated that 620 dietitians (50% of advanced practitioners) will be eligible, and have an identified role to regularly use supplementary prescribing, which is part of the eligibility criteria for training in supplementary prescribing. It is estimated that, approximately 60 dietitians will be trained in year one and the same number for the next 2-10 years, which is 600 advanced practitioners trained over ten years (Appendix table 1).

From the British Dietetic Association database and expert opinion, approximately 10% of advanced practitioners will move on to other roles a year. Advanced dietitians moving across the country would be able to take their supplementary prescribing annotation on the Health and Care Professions Council (HCPC) register with them. The total discounted ten-year cost of training was estimated to be £904,000 (Appendix, table 2).

Staff backfill costs

There is a cost of backfilling posts while staff attend supplementary prescribing training courses. Although staff may not be replaced while on training, there is an economic value of their lost time as it will be reflected in diminished service provision or otherwise; this cost is proxied by assuming full back-cover. The training programme is estimated to take advanced practitioners out of service for approximately 26 days of the year and, it is assumed that these posts would be filled by Band 6 dietitians who would be required to cover a 7.5 hour shift. The hourly cost of staff covering colleague's absence is assumed to be lower as overheads do not have to be included as there are no (or marginal) capital or management costs. The total discounted 10-year financial cost of staff backfill was estimated to be £2.3 million (Appendix, table 2).

Total financial costs and opportunity costs

The total discounted financial 10-year cost of training courses and staff replacement was estimated to be £3.2 million (Appendix, table 2).

Given the NHS budget constraint, both the cost of the training and the cost of staff backfill will inevitably displace health services that would have been provided to patients; this is the opportunity cost of the proposal. Following current DH guidance, the opportunity cost is calculated at one Quality Adjusted Life Years (QALY) per £15,000. The stream of QALYs foregone is then discounted at a rate of 1.5% per year. The social value of the displaced QALYs is re-monetised at a value of £60,000 per QALY, representing the social value of a QALY (what people are on average willing to spend to improve their healthy life expectancy by one QALY).

DH guidance advises that each QALY could also generate on average £14,000 of wider societal benefit (for example by reducing dependency). However in this consultation draft, the wider societal benefit has not been calculated.

The total ten-year discounted opportunity cost of training and staff backfill was estimated to be £12.9 million (Appendix, table 3).

Non-monetised costs

Enhanced clinical supervision – there will be mandatory requirement for clinical supervision/mentoring from a doctor in order to successfully complete the supplementary prescribing course. Thereafter, as part of ongoing CPD advanced dietitians will be required to have supervision and appraisals which relate to their prescribing practice. Advanced dietitians have a duty to evidence CPD and their competence to practice to their employer as a mandatory feature of HCPC regulation.

Additional face-to-face time to see patients – This will not be required as medicines preparation and dosage will be discussed with patients as usual and will be integral to the consultation.

Re-registration - this would be undertaken as part of continuing professional development under HCPC regulations. One advanced dietitian per tertiary dietetic service per region would be trained at any one time, so workloads could be shared among the team while that individual is on training leave. Appointments would be redistributed around the team either as appointments, initial telephone, or written advice.

Salary increment as a result of training in supplementary prescribing - It is not expected that an automatic increase will result from the completion of training to be a supplementary prescriber. Some advanced dietitians who have completed training may move into new roles or take on new responsibilities depending on the needs of the service, and why a role for supplementary prescribers was identified in the first place. On its own, supplementary prescribing may not be sufficient grounds for a salary upgrade.

Monetised benefits

The monetised benefits of enhanced prescribing for dietitians are defined in terms of cost savings to the NHS. There are quantifiable health care resource savings that could be realised from extending supplementary prescribing rights to advanced dietitians. No published evidence could be identified that estimated the avoidable health service use that would result from advanced dietitians prescribing medicines. Therefore the analysis was undertaken using very conservative estimates gathered by the British Dietetic Association from the expert clinical opinion of their members, and based on current advanced dietetic activities.

Reduction in demand for follow-up GP/consultant appointments after seeing a dietitian, solely to obtain a prescription.

Estimates were calculated assuming one to two referrals by an advanced dietitian to a GP for a patient to access a prescription only. This is approximately 1354 unnecessary GP appointments across the NHS per week at a cost of £37 per appointment (Appendix, table 4).

To estimate the ten-year costs for a proportion of advanced dietitians, first the theoretical health service impact had to be calculated as if all advanced dietitians were supplementary prescribers (Appendix, table 4); then, the actual yearly cost could be calculated by multiplying

this value by the cumulative proportion of advanced dietitians who had completed their training as supplementary prescribers,

The discounted total ten-year financial cost was between £4.2 million and £8.4 million depending on how many unnecessary GP appointments could be avoided per week (Appendix, table 5).

Reduction in demand for telephone discussion between a hospital doctor and the dietitian solely to be able to request consent for a new, or change in, prescription from the GP, for specific patients managed through a consultant. Estimates were calculated assuming that, in the management of the dietetic needs of patients with cystic fibrosis for example, there would be approximately one contact every two to four weeks between an independent prescribing clinician (for example a registrar) and an advanced dietitian to request a change in prescription or dose of a medication due to an alteration in the nutritional needs of the patient identified by the advanced dietitian (Appendix, table 6).

The discounted total ten-year financial saving was estimated to be between £295,000 and £590,000 depending on how many unnecessary telephone discussions could be avoided every month (Appendix, table 7).

Reduction in hospital admissions for avoidable acute episodes of illness resulting from delayed access to medicines.

For patients with cystic fibrosis, it was estimated that one inpatient admission could be avoided every three months per advanced practitioner as a result of supplementary prescribing by advanced dietitians, with associated improvements in medical and nutritional management (Appendix table 8).

The discounted ten-year financial saving was between £3.5 million and £4.9 million (Appendix, table 9).

Total financial savings and opportunity cost of savings in health service utilisation

Under these assumptions, the total 10-year discounted benefit from health service use avoided was between £8 million and £13.9 million (Appendix, table 10). Calculations and assumptions used to arrive at these estimates are presented alongside the tables presented in the appendix.

Following current DH guidance, the opportunity cost is calculated at one Quality Adjusted Life Years (QALY) per £15,000. The stream of QALYs foregone is then discounted at a rate of 1.5% per year. The social value of the displaced QALYs is re-monetised at a value of £60,000 per QALY, representing the social value of a QALY (what people are on average willing to spend to improve their healthy life expectancy by one QALY).

DH guidance advises that each QALY could also generate on average £14,000 of wider societal benefit (for example by reducing dependency). However in this consultation draft, the wider societal benefit has not been calculated.

The discounted opportunity cost (social value of the savings in health care utilisation) over ten years was estimated to be between £36.9 million and £64 million with a best estimate of £36.9 million reflecting more conservative assumptions in the calculations (Appendix, table 10).

Non-monetised benefits

Health improvement as a result of more timely response to episodes of ill-health in patients with long-term conditions.

Reduction in wasted prescriptions as a result of earlier titration of medicines.

Redesign of services such as community diabetes clinics, which have the potential to be delivered by a range of different healthcare professionals rather than relying on GP/hospital consultant to be present solely to prescribe medications.

Patient services delivered over extended hours, that is evenings and weekends providing the patient with a greater degree of flexibility and choice.

Net present value

The net present value is calculated as the difference between the social value (opportunity costs) of the health service savings and the social value of the costs. This estimate does not take into account any change to service configuration which could potentially bring about greater costs or savings.

The net present value of the change in legislation not taking into account any change to service configuration is between £24 million and £51.2 million, reflecting the wide uncertainty in the estimates. The best guess estimate is the lower value, reflecting the more conservative assumptions in the calculations (Appendix, table 11).

Longer term changes in local service configuration

The development of supplementary prescribing by advanced dietitians could lead to dietitian-led review clinics for the management of diabetes and other long-term conditions. This could reduce costs of service delivery; improve health and increase choice, as well as access and patient experience.

Rationale and evidence that justify the level of analysis used in the IA (proportionality approach);

The current quantification of benefits as cost saving is unlikely to capture the full benefit of advanced dietitians being able to supplementary prescribe medicines which may improve health outcomes in the long-term. Inclusion of health benefits would increase cost-effectiveness of supplementary prescribing by advanced dietitians which is already shown to be cost-effective under the best estimate scenarios. No evidence on the impact of extending supplementary prescribing of medicines to dietitians has been identified in the literature, and therefore health outcomes were not included in the analysis.

Risks and assumptions;

Risk of working outside competence

Advanced practice dietitians with supplementary prescribing rights who have successfully completed an HCPC approved training programme will only be able to prescribe those medicines listed in the clinical management plan which has been developed in partnership with the doctor.

Only dietitians working at an advanced practitioner level will be eligible to train as a supplementary prescriber where there is an identified need to regularly use supplementary prescribing within their role. The present multi-professional non-medical prescribing training

is provided as an integrated Higher Education programme for independent and supplementary prescribers. It is the relevant legislative framework which defines the mechanism(s) available to each profession and thus the assessment of course participants. The Health and Care Professions Council (HCPC) has the authority to approve education programmes for the provision of dietitian supplementary prescribing training. A *Draft Outline Curriculum Framework for Education Programmes to Prepare Dietitians as Supplementary Prescribers* has been developed. Eligible dietitians would need to demonstrate at least three years post-qualification experience in relevant clinical area, working at an advanced practitioner or equivalent level, and practising in an environment where there is an identified need for the individual to regularly use supplementary prescribing,

Risk of unsafe, inappropriate and over-prescribing:

There are minimal risks associated with supplementary prescribing as a prescribing clinician will already have identified a patients' need for medicines and started treatment. A theoretical risk is that a supplementary prescriber could change the dose or quantity of a medicine inappropriately leading to less effective or unsafe treatment. To alleviate this risk, a dietitian supplementary prescriber would be responsible (in line with practice guidance) for identifying what medication the patient is currently taking including over-the-counter and herbal preparations before prescribing medicines. They should take steps to ensure they have access to the primary source of prescribing information, which is likely to be the Summary Care Record, or equivalent. Supplementary prescribing is not an activity that occurs in isolation.

Dietitians working at advanced practice level are highly skilled specialists who have developed their own specific scope of practice which represents a narrow aspect of clinical practice. For example, an advanced practice dietitian who undertakes nutritional assessment, treatment and review, will specialise in a particular long term condition, for example, diabetes, chronic kidney disease or cystic fibrosis. Their level of knowledge makes them acknowledged experts in the field within the multidisciplinary team. Having such practitioners prescribing mitigates the risk of prescribing errors.

Risk of poor communication of prescribing decisions between health care professionals

Prescribing information must be shared with other health professionals who need to know the information for the benefit of the patient and this will include the patient's GP. Where possible, the dietitian should have access to other professionals' prescribing decisions where they impact upon their own decisions. This will include communication across NHS-private practice boundaries where it is necessary to ensure that clinicians have appropriate information to inform their prescribing practice.

The dietitian supplementary prescriber must make it clear to the patient that supplementary prescribing activity cannot be undertaken in isolation. The prescriber should inform anyone else who may be in a position to prescribe for that patient of their actions to avoid prescribing errors. This is most likely to be the patient's general medical practitioner, but may also include other health and social care professionals. If the patient refuses to consent to sharing such information, the dietitian should offer an explanation of the risks of not doing so. If the patient continues to refuse to give consent, the dietitian supplementary prescriber should consider which course of action, including not to prescribe, would be in the best interests of the patient. This must be documented in their records.

Summary and preferred option with description of implementation plan

This section is to be completed after consultation only

Appendix – Dietitians

Demand for training

Option 2 – Supplementary prescribing

Uptake of training courses by year.

Table 1. Uptake of training courses by year

Year	1	2	3	4	5	6	7	8	9	10	Total
Uptake	60	60	60	60	60	60	60	60	60	60	600
% uptake	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	
Cumulative % uptake	4%	9%	13%	18%	22%	27%	31%	35%	40%	44%	

Financial cost of training and staff backfill by year

Estimates of values and assumptions

Cost of training reported by Higher Education Institutes for 2013.

Assumes cost of training is £1750

Cost of backfilled staff is estimated at £22 per hour, based on the Personal Social Services Research Unit (PSSRU) (2014) Unit costs for Band 6 staff, excluding qualifications and overheads.

Total time for backfill is based on a 7.5-hour shift and 26 training days per advanced dietitian

Discount rate 3.5%

Table 2. Financial cost of training and staff backfill by year

Year	1	2	3	4	5	6	7	8	9	10	Total
Cost of training	£105,000	£101,449	£98,019	£94,704	£91,501	£88,407	£85,418	£82,529	£79,738	£77,042	£903,807
Cost of staff backfill	£269,297	£260,190	£251,391	£242,890	£234,676	£226,740	£219,073	£211,665	£204,507	£197,591	£2,318,020
Total	£374,297	£361,639	£349,410	£337,594	£326,178	£315,148	£304,490	£294,194	£284,245	£274,633	£3,221,827

Total financial and opportunity cost of training and staff backfill

Estimates of values and assumptions:

To estimate the opportunity cost of health care displaced by training and staff replacement, the financial cost (actual spend) was translated into quality adjusted life years (QALYs) at a rate of £15,000 per QALY. The social value of the health benefit displaced by paramedic training (course fees and backfilled time) was calculated by re-monetising the QALYs displaced at a rate of £60,000 per QALY. Discount rate 3.5%

Table 3 –Total financial and opportunity cost of training and staff backfill

Year	1	2	3	4	5	6	7	8	9	10	Total
Financial cost	£374,297	£361,639	£349,410	£337,594	£326,178	£315,148	£304,490	£294,194	£284,245	£274,633	£3,221,827
Opportunity cost	£1,497,186	£1,446,557	£1,397,639	£1,350,376	£1,304,711	£1,260,590	£1,217,962	£1,176,775	£1,136,980	£1,098,532	£12,887,308

Cost savings due to health service use avoided

Option 2 – Supplementary prescribing

Avoidable GP appointments assuming advanced practitioners trained in supplementary prescribing (estimates required to calculate table 5 below)

Estimates of values and assumptions:

Number of advanced practitioner dietitians is reported by HCPC (November 2014). Cost impact is calculated for all advanced dietitians; the cost impact is therefore proportionate to the number of advanced dietitians trained every year. Staff costs are derived from Unit Costs of Health and Social Care (PSSRU 2013/14). Inpatient costs are derived from NHS reference costs for Muscular, Balance, Cranial or Peripheral Nerve Disorders, Epilepsy or Head Injury, with CC Score 0-2 (low cost) and Muscular, Balance, Cranial or Peripheral Nerve Disorders, Epilepsy or Head Injury, with CC Score 12-14 (high cost). Rates of avoidable health service use derived from expert opinion of the British Dietetic Association (BDA); 1-2 GP appointments per week, 1-2 telephone contacts per month, 1 avoidable hospital admission every three months

Table 4. Avoidable GP appointments assuming advanced practitioners trained in supplementary prescribing (estimates required to calculate table 5 below)

Values estimated	Low estimate	High estimate
No. AP dieticians	1354	
Referrals per week for a prescription	1	2
No GP appointments per week	1354	
Cost GP appointment	£37	
Total cost per week	£50,098	£100,196
Total cost per year (all advanced dieticians)	£2,605,096	£5,210,192

Discounted financial cost savings by year by cumulative uptake of training – avoidable GP appointments

Estimates and assumptions:

All benefits of training accrue the following year

Low estimate assumes one GP appointment avoided per month (high estimate, 2 GP appointments per month)

Discount rate 3.5%

Table 5. Discounted financial cost savings by year by cumulative uptake of training – avoidable GP appointments

Year	1	2	3	4	5	6	7	8	9	10	Total
Cumulative uptake	4%	9%	13%	18%	22%	27%	31%	35%	40%	44%	
Discounted cost (low estimate)		£111,536	£215,529	£312,361	£402,397	£485,987	£563,463	£635,144	£701,332	£762,317	£4,190,066
Discounted cost (high estimate)		£223,072	£431,058	£624,722	£804,794	£971,974	£1,126,926	£1,270,287	£1,402,664	£1,524,634	£8,380,131

Avoidable telephone contact between advanced dietitian and hospital consultants

Estimates of values and assumptions:

Low cost estimate is one contact per four weeks (high estimate, 2 every four weeks)

Registrar costs - £40 (59) per hour (48 hour week); £34 (£56) per hour (56 hour week); £48 (£71) per hour (40 hour week).

Advanced dietian cost not known, no comparative cost reported in PSSRU, only cost per hour Band 5 hospital dietitian: £31.

Table 6: Avoidable telephone contact between advanced dietitian and hospital consultants

Values estimated	Low estimate	High estimate
Hospital tel. contacts per week for prescription	0.25	0.5
Associate registrar - 5 minute telephone call	£7.83	
AP dietitian time - 5 min telephone call	£2.58	
Total cost per week	£3,526	£7,052
Total cost per year (all Advanced Dieticians)	£183,354	£366,708

Discounted financial cost savings by cumulative uptake of training – avoidable telephone consultations between advanced dietitians and hospital consultants

Estimates of values and assumptions

Cumulative benefits of training accrue the following year

Table 7. Discounted financial cost savings by cumulative uptake of training – avoidable telephone consultations between advanced dietitians and hospital consultants

Year	1	2	3	4	5	6	7	8	9	10	Total
Cumulative uptake	4%	9%	13%	18%	22%	27%	31%	35%	40%	44%	
Discounted cost (low estimate)		£7,850	£15,170	£21,985	£28,322	£34,205	£39,658	£44,703	£49,362	£53,654	£294,909
Discounted cost (high estimate)		£15,700	£30,339	£43,970	£56,644	£68,410	£79,316	£89,406	£98,724	£107,308	£589,818

Avoidable hospital admissions

Estimates of values and assumptions:

One admission is avoided every three months (expert opinion from the BDA), e.g. 1/13 (0.077) per week, assuming 13 weeks per three month period

Cost of admission dependent on complications level, low cost (level 0-2)(high cost level 12-14. Speciality - Gastroenterology

Table 8. Avoidable hospital admissions

Values estimated	Low estimate	High estimate
Hospital admission per week poorly managed symptoms	0.077	
Hospital appointment cost	£406	£566
Total cost per week	£ 42,286	£ 58,951
Total cost per year (All advanced Dietitians)	£ 2,198,896	£ 3,065,456

Discounted financial savings by cumulative uptake of training – avoidable hospital admissions

Estimates of values and assumptions:

Cumulative benefits of training accrue the following year

Table 9. Discounted financial savings by cumulative uptake of training – avoidable hospital admissions

Year	1	2	3	4	5	6	7	8	9	10	Total
Cumulative uptake	4%	9%	13%	18%	22%	27%	31%	35%	40%	44%	
Discounted cost (low estimate)		£94,145	£181,923	£263,656	£339,653	£410,209	£475,605	£536,109	£591,976	£643,453	£3,536,729
Discounted cost (high estimate)		£131,246	£253,616	£367,560	£473,507	£571,868	£663,036	£747,383	£825,268	£897,030	£4,930,514

Total discounted financial and opportunity cost of health service utilisation savings, by cumulative proportion of advanced dietitians per year in supplementary prescribing

Estimates of values and assumptions:

Cumulative benefits of training accrue the following year

Lowest estimate is also the best guess estimate

Financial costs were discounted at 3.5%

Following DH guidelines, the opportunity cost of savings in health care utilisation was estimated by converting the financial cost (actual spend) into health benefits as quality adjusted life years (QALYs) at a rate of £15,000 per QALY. The social value of freeing up health services to treat other people was calculated by re-monetising the QALYs displaced at a rate of £60,000 per QALY. Re-monetised QALYs were discounted at a rate of 1.5% per year

Table 10. Total discounted financial and opportunity cost of health service utilisation savings, by cumulative proportion of advanced dietitians per year in supplementary prescribing

Year	1	2	3	4	5	6	7	8	9	10	Total
Cumulative % trained	4%	9%	13%	18%	22%	27%	31%	35%	40%	44%	
Financial cost (low estimate)		£213,531	£412,621	£598,002	£770,372	£930,401	£1,078,726	£1,215,956	£1,342,670	£1,459,424	£8,021,703
Financial cost (high estimate)		£370,019	£715,013	£1,036,251	£1,334,945	£1,612,252	£1,869,278	£2,107,077	£2,326,655	£2,528,973	£13,900,463
Opportunity cost (low estimate)		£886,837	£1,747,463	£2,582,458	£3,392,391	£4,177,821	£4,939,296	£5,677,352	£6,392,514	£7,085,299	£36,881,431
Opportunity cost (high estimate)		£1,541,005	£3,036,463	£4,487,384	£5,894,757	£7,259,553	£8,582,722	£9,865,198	£11,107,894	£12,311,705	£64,086,680

Cost-benefit analysis

Option 2 – Supplementary prescribing

Net present value years 1-10

Inflationary adjustments on health service use avoided has not been applied
Lowest estimate is the best guess estimate.

The net benefit is net social value (measured in opportunity cost not financial costs), measures as the difference in value between health services displaced (and ultimately health gain lost) by spending on training and staff backfill, and the health services freed up (and ultimately health gain) as a result of the change in prescribing regulations.

Table 11. Net present value years 1-10

Year	1	2	3	4	5	6	7	8	9	10	Total
Net benefit (least favourable)	-£1,497,186	-£559,719	£349,824	£1,232,082	£2,087,680	£2,917,231	£3,721,334	£4,500,577	£5,255,534	£5,986,767	£23,994,123
Net benefit (most favourable)	-£1,497,186	£94,448	£1,638,824	£3,137,008	£4,590,046	£5,998,962	£7,364,761	£8,688,423	£9,970,913	£11,213,173	£51,199,372