

SPIN Module curriculum in

Paediatric Diabetes Care

SPIN Version 2
Approved for use from 1 May 2021

This document outlines the curriculum and Assessment Strategy to be used by Paediatricians completing the RCPCH SPIN module in Paediatric Diabetes Care.

This is Version 2.0. As the document is updated, version numbers will be changed and content changes noted in the table below.

Version number	Date issued	Summary of changes
V2	May 2021	Full redevelopment of the curriculum, moving from knowledge based capabilities to behavioural Learning Outcomes and aligning with RCPCH Progress.

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Section 1

Introduction and purpose

Introduction to SPIN modules

Special Interest (SPIN) modules are the additional training/experience a Paediatrician completes so that they can be the local lead and part of the clinical network providing for children and young people who need specialist paediatric care. They are designed to meet a specific service need, with possible roles suitable for those who have completed a SPIN module identified within the SPIN purpose statement.

Trainees, Consultants and others providing expert care will be able to seek training in an area of special interest or in aspect(s) of sub-specialty care. This will involve training, assessment and supervised care. It will vary in breadth and depth, depending upon the specific SPIN syllabus. The SPIN can be completed before or after CCT. It should be feasible to complete the SPIN in no more than 12 months full-time training. SPIN training does not have to be completed within one placement or over one continuous period. The assessment of whether the clinician has attained the required Learning Outcomes will only examine evidence relating to a maximum of three calendar years (ideally 12 -24 months) prior to submission due to the rapid changes in diabetes care (*diabetes management landscape is changing too rapidly, and it should not allow five years retrospective evidence*).

Please note that SPIN Modules are:

- NOT a route to GMC sub-specialty accreditation;
- NOT required for GMC accreditation in Paediatrics or any of its sub-specialties;
- NOT sub-specialty training and not equivalent to GRID training.

SPINs are undertaken and assessed within the working environment, under the guidance of a designated Supervisor, recording evidence within the ePortfolio. The RCPCH SPIN Lead, usually the relevant College Specialty Advisory Committee (CSAC), is responsible for reviewing completed portfolios and confirming if successful completion of the SPIN is to be awarded.

More information regarding SPIN Modules, including how to apply to undertake a SPIN and how to submit evidence against the competences, is contained in the SPIN Module Guidance on the RCPCH SPIN webpages: www.rcpch.ac.uk/spin.

Purpose statement

This purpose statement demonstrates the need for clinicians to undertake a SPIN module in Paediatric Diabetes Care, and the benefits to and expectations of a clinician undertaking training in this area.

This SPIN module meets the current and future anticipating requirements of the health service, reflecting patient and population needs:

General Paediatricians in District General Hospitals are increasingly part of wider clinical networks. By supporting General Paediatricians in developing an interest in a specific area of practice, SPINs help facilitate more patients being seen by a Paediatrician with the expertise to treat certain specific conditions nearer to their home, rather than having to travel to a major paediatric unit.

This SPIN module considers interdependencies across related specialties and disciplines, and has been developed and supported by the relevant key stakeholders:

This SPIN module has been supported by the Paediatric Endocrinology/Diabetes and General Paediatric CSACs. Diabetes is the commonest hormonal disorders in children and young people and those completing this SPIN module will be able to deliver Paediatric Diabetes Care locally.

The UK has the highest prevalence of children and young people with Type 1 Diabetes in Europe (Lacobucci, 2013). Complications associated with suboptimal diabetes management include damage to small and large blood vessels and nerves which over time can result in blindness, kidney failure, heart disease, stroke and amputations. With good diabetes care and blood glucose management, the risks of complications are reduced, enabling children and young people to enjoy a healthy and longer life (NPDA 2018/2019 report).

Good quality care requires adequate resources and training of the workforce (Campbell & Waldron, 2013) to support the medical, emotional and psychological needs of children, young people and their families.

As there are a growing number of children with diabetes, together with advances in technology, service provision needs to evolve to meet this demand; local units need to be able to manage children and young people with diabetes mellitus. This entails developing expertise in optimising blood glucose control to minimise future complications, intensive insulin regimes, continuous glucose monitoring systems (CGMS) and continuous subcutaneous insulin infusions (CSII).

Clinicians specialising in Paediatric Diabetes Care will provide significant value not only through their clinical skills, but also in developing relationships and improving governance with the local inter-professional and multi-professional network.

The SPIN module supports flexibility and the transferability of learning, and provides a clearly-defined professional role for clinicians who have completed a SPIN. The SPIN module sets out what patients and employers can expect from clinicians, who have gained the SPIN:

Following successful completion of this SPIN module and Level 3 Paediatric training, the CCT holder will be competent to take up a post as a Consultant General Paediatrician with a special

interest in Paediatric Diabetes. It would be possible to complete this SPIN module post-CCT.

By the end of training, it is expected that clinicians who have completed this SPIN will have a sound understanding of the clinical management of children and young people requiring care with diabetes. The clinician will have developed leadership of managing children with diabetes, both in the acute inpatient and outpatient setting. As well as optimising blood sugars and minimising long term complications, transition of care to adult services will also be an important aspect of Paediatric Diabetes Care.

The SPIN training will enable the clinician to develop and/or lead a Paediatric Diabetes Unit within a district general or tertiary unit setting.

To continue their ongoing development following completion of the SPIN, it is recommended that clinicians:

- Participate in the activity of their regional Paediatric Endocrine/Diabetes Care network.
- Undertake regular continuing professional development related to diabetes care to retain the knowledge and skills gained whilst undertaking the SPIN module, including keeping up to date with advances in this area.
- Undertake regular audit and quality improvement projects allied to delivery of Paediatric Diabetes Care.
- Continue to update themselves with new technologies and advances in diabetes care.

During SPIN training, it is recommended that clinicians identify a children and young people's group with relevant experiences to visit, listening and learning from their experiences and reflecting with their supervisor on how to improve clinical and service practice. The #VoiceMatters section of this document raises the views of children, young people and their families. This can be used to inform practice, discussions with supervisors and colleagues, as well as improving understanding and awareness of patient and family experiences.

Requirements to undertake this SPIN module

Applicant requirements

This SPIN module is available to General Paediatric Level 3 trainees and all post-CCT Paediatricians with an interest in Paediatric Diabetes Care, who are able to access sufficient training opportunities to meet the requirements of the SPIN curriculum.

Clinicians who are interested in undertaking this SPIN module should approach their Head of Schools and Training Programme Director in the first instance to confirm if the necessary posts would be available and request support in undertaking this extra training. SPIN applicants are required to demonstrate that they have support of their Training Programme Director and have an appropriate Educational and Clinical Supervisor in place.

Applicants with relevant recent experience may use some retrospective evidence towards their SPIN module in some cases. Please see the applicant guidance at www.rcpch.ac.uk/spin for more details on how to apply to undertake a SPIN module.

Training duration

SPIN training should be feasible within 12 months for full-time trainees, or pro-rata for Less Than Full Time (LTFT) trainees. It is expected that to achieve the necessary Learning Outcomes, a trainee will need to train in the following clinical settings:

At least 12 months attached to a diabetes unit with a minimum of two consultants in a tertiary centre and/or a consultant with a DGH Diabetic Service supported by other consultants competent in managing acute diabetes care. Experience in a tertiary centre is not essential as long as the SPIN Learning Outcomes can be achieved during their DGH placements. There should be at least two ST4-ST8 trainees in the department and a full diabetes multidisciplinary team (MDT) available (paediatric diabetes specialist nurse, paediatric diabetes dietitian and psychological support or links with CAMHS).

A suitable training centre is one which is currently approved for higher specialist training (see sub-specialist training section of the RCPCH website for more detail).

Out of Programme (OOP) training

Trainees should not need to take Out of Programme (OOP) to complete a SPIN module. Undertaking a SPIN will NOT be considered as a basis for an OOP except in exceptional circumstances and where both Deaneries/Local Education Training Boards (LETBs) agree and approve the SPIN module programme. These exceptional circumstances include applications from trainees where approved training in a particular special interest is not available in their current Deanery/LETB. Permitting OOP for these exceptional circumstances provides a positive contribution to workforce planning in regions where limited approved SPIN modules are available. For example, smaller sub-specialties such as Nephrology or Immunology & Infectious Diseases (IID) may only be available in a limited number of Deaneries/LETBs. In order for applications utilising OOP to be considered by the RCPCH, both Deaneries/LETBs must agree and approve the SPIN module programme and provide clear justification as to why the module could not be completed in the trainee's current Deanery/LETB.

Post requirements

When applying to undertake a SPIN, applicants must demonstrate that they will be able to access the necessary learning opportunities and placements, and an appropriate named Educational and Clinical Supervisor must be in place. Additional requirements for delivering this SPIN module are provided in the checklist in Appendix B. This addresses any specific requirements; for example, the human or physical resource experiences the trainee will need to be able to access in order for the curriculum to be delivered successfully. Please contact the SPIN Lead (usually the relevant CSAC) if further guidance is required.

Meeting GMC training requirements

All training must comply with the GMC requirements presented in *Promoting excellence: standards for medical education and training* (2017). This stipulates that all training must comply with the following ten standards:

Theme 1: Learning environment and culture

- S1.1 The learning environment is safe for patients and supportive for learners and educators. The culture is caring, compassionate and provides a good standard of care and experience for patients, carers and families.
- S1.2 The learning environment and organisational culture value and support education and training, so that learners are able to demonstrate what is expected in Good Medical Practice and to achieve the learning outcomes required by their curriculum.

Theme 2: Educational governance and leadership

- S2.1 The educational governance system continuously improves the quality and outcomes of education and training by measuring performance against the standards, demonstrating accountability and responding when standards are not being met.
- S2.2 The educational and clinical governance systems are integrated, allowing organisations to address concerns about patient safety, the standard of care, and the standard of education and training.
- S2.3 The educational governance system makes sure that education and training is fair and is based on the principles of equality and diversity.

Theme 3: Supporting learners

- S3.1 Learners receive educational and pastoral support to be able to demonstrate what is expected in Good Medical Practice, and to achieve the learning outcomes required by their curriculum.

Theme 4: Supporting educators

- S4.1 Educators are selected, inducted, trained, and appraised to reflect their education and training responsibilities.
- S4.2 Educators receive the support, resources and time to meet their education and training responsibilities.

Theme 5: Developing and implementing curricula and assessments

- S5.1 Medical school curricula and assessments are developed and implemented so that medical students are able to achieve the learning outcomes required for graduates.
- S5.2 Postgraduate curricula and assessments are implemented so that doctors in training are able to demonstrate what is expected in Good Medical Practice, and to achieve the learning outcomes required by their curriculum.

It is the responsibility of each Deanery/LETB to ensure compliance with these standards for paediatric training, and to notify the RCPCH if further support is required in achieving this. Training delivery must also comply with the requirements of the Conference of Postgraduate Medical Deans' (COPMeD), *a reference guide for postgraduate specialty training in the UK* (8th ed.).

Ensuring fairness and supporting diversity

The RCPCH has a duty under the Equality Act 2010 to ensure that its curriculum and assessments do not discriminate on the grounds of age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion and belief, sex or sexual orientation.

Care has been taken when authoring the SPIN Module curricula to ensure as far as is reasonable and practicable that the requirements for those undertaking the module do not unnecessarily discriminate against any person on the basis of these characteristics, in line with the requirements of the Act.

The RCPCH seeks to address issues of equality, diversity and fairness during the development of SPIN curriculum in a range of ways, including:

- Curriculum content to be authored implemented and reviewed by a diverse range of individuals. Equality and diversity data is gathered regularly for clinicians involved in the work of the RCPCH Education and Training division.
- Undertaking careful consideration of the Learning Outcomes and Key Capabilities to ensure that there is a clear rationale for any mandatory content, and thus there are no unnecessary barriers to access or achievement. Beyond these mandatory requirements, the assessment tools can be deployed in a more flexible and tailored manner, meeting the requirements of the individual trainee.
- All draft SPIN curricula to be reviewed specifically against the protected characteristics prior to sign-off, identifying any possible barriers and ensuring these are appropriately addressed.
- All SPINs are approved for use by the RCPCH Education and Training Quality Committee (ETQC). As the body responsible for production of the Annual Specialty Report, and receiving summary reports on the National Training Survey from Heads of Schools and other sources, the Committee is well placed to ensure the curriculum meets the needs and addresses any existing concerns of the trainee population.
- All SPIN curriculum documents will be published in font type and size that is appropriate for a wide range of audiences, and optimised for readability. Information regarding the curriculum will be made available through a wide range of media, acknowledging differing learning styles.

The RCPCH is committed to gathering regular feedback from users of its SPIN modules, identifying any areas of bias or discrimination.

Please contact the RCPCH Quality and Standards Manager (qualityandstandards@rcpch.ac.uk) if you have any concerns regarding equality and diversity in relation to this SPIN module curriculum.

Quality assurance and continual improvement

Ensuring quality in delivery

A robust quality assurance and improvement framework is required to support an effective curriculum and Assessment Strategy. The purpose of this is to promote the improving quality of the trainee experience, and to ensure that the curriculum content, delivery, assessment and implementation is monitored and reviewed in a planned, systematic and appropriate manner.

The RCPCH quality infrastructure for training and assessment is based on the Plan, Do, Check, Act (PDCA) cycle, introduced by Deming. In the context of the Programme of Assessment, this means planning for effective assessment processes, executing those processes, review and evaluation including data analysis and multi-source feedback, and finally implementing any required changes.

The framework to support this curriculum will comprise a number of quality improvement tools and processes that impact on the overarching aspects of assessment. These will include:

1. **Effective selection mechanisms.** The SPIN application process ensures trainees will have the necessary capacity, supervision, and access to the breadth and depth of experience needed to meet the requirements of the SPIN module.
2. **Gathering and responding to feedback.** RCPCH gathers feedback in a structured way from SPIN module completers, and uses this and feedback from employers to support the regular review of SPIN modules.
3. **Review of attainment and evidence.** CSACs (or another designated SPIN Lead) review all completed SPIN portfolios prior to sign-off, ensuring consistency.
4. **Quality assurance of assessments.** This takes a variety of forms during the development, delivery and monitoring of assessment tools, as outlined in the RCPCH Progress Assessment Strategy.
5. **Quality of assessors and supervisors.** All SPIN applicants are required to have a suitable Educational Supervisor to support their SPIN training. RCPCH supports this through the Educational Supervisor course and a variety of guidance and resources available on the College website.
6. **Scheduled reviews.** All SPINs are subject to review every three years, although they may be updated more regularly where required.

By applying the framework processes outlined above, the College will ensure that SPIN Modules are monitored and reviewed in a structured, planned and risk-based manner.

SPIN governance

The RCPCH's Education and Training Quality Committee (ETQC) has overall responsibility for the RCPCH SPIN curricula, working closely with the SPIN Lead. The ETQC will monitor the performance of the SPIN through the relevant CSAC/SPIN Lead, and receive scheduled reviews of feedback from SPIN users.

SPIN module review and revision

SPINs are reviewed every three years to ensure they remain fit for purpose, meeting the intended service need. Reviews are led by the SPIN Lead (usually the relevant RCPCH CSAC), who will report to the ETQC requesting any changes required. Where necessary, a SPIN can be updated before the three-year review is due, for example to reflect changes in guidelines.

Updated SPIN curricula will be published, making clear using the version tracking table at the front of each document what amendments have been made on each occasion. Where this amendment relates to a Key (mandatory) Capability, the ETQC will issue guidance for trainees currently undertaking the SPIN module, noting any implications of the amendment and whether they are required to meet the new criteria. Amendments will only be made where a clear rationale exists for doing so, and every effort will be made to minimise any negative impact on the trainee.

#VoiceMatters

RCPCH &Us is a children, young people and family network, working with over 2000 young patients, their families and friends across the UK each year. Through the work of RCPCH &Us we keep children and young people at the centre of everything we do, supporting their voice to inform, influence and shape the work of RCPCH.

RCPCH is guided by the United Nations Convention on the Rights of the Child, particularly article 12 which encourages children and young people's voice in decision making and article 24, providing them with the best health care possible. You can find out more about the rights of the child, how it relates to your practice and useful resources at www.rcpch.ac.uk/rightsmatter.

To support the development of this SPIN, we have reviewed the voice and views of children, young people and their families who have worked with RCPCH &Us over the last 12 months. You can find out more about RCPCH &Us at www.rcpch.ac.uk/and_us.

What children, young people and families said

“The best doctor is someone who can change your feelings of health can help you on the worst day possible” RCPCH &Us

It can be hard for us and our families we have a condition that we are just learning about or that we might have for the rest of our life. We can be worried, nervous and trying to be strong for everyone else, including you. It helps us when people take time, when they are patient, kind and explain things in different ways for different people in our family, so that we can understand what is going on. Sometimes we need to have conversations and time with you separately from our family members, so that we can talk to you about things that we might not want to mention in front our families.

“The best doctor is informed about national and local support services for children and young people, signposting and engaging with them” RCPCH &Us

There is so much to understand when you are told about different conditions or treatments, medicines and rules that we have to follow. We wish that we were told sooner about local support groups or services and national charities that can help us to understand things like living understanding how you live with the condition or manage the symptoms, or to talk to someone who isn't your doctor to get help understanding things.

When we have diabetes which means we always have to remember about our medicines and what we can and can't do, we would really like it if our school, our GP and our specialist doctor all has the same information at the same time, and talks to each other to make sure that everyone knows what it happening. It can be really hard when one of the places looking after us doesn't have all the information or doesn't understand enough to help us. It would help if we had a care plan that has all the up to date information and is easy to share between everyone. It would also be good if we got given tips to help us to manage our diabetes when we are at school, at friends' houses, doing sports or out and about.

“Maybe have a cooking class where you could learn to make good packed lunches or what options in the shop were good for you would be good like if you are there with friends and have to choose” RCPCH &Us

Sometimes there are things going on at home that might be making our conditions worse but it might be hard for us to talk about them or we might be embarrassed or don't want to offend our families. You might be able to help us by talking to all of our extended family so that it isn't just our responsibility to explain it to them. It would be great if you find out about your local area or national charities and have this ready to explain to us or our families, and to remind us regularly when you see us as it is easy to forget or lose the information when there are lots of other things going on.

“If you go to someone’s house in our community, to refuse the food would be considered rude and people don’t necessarily want to share their diabetes status in this situation.” RCPCH &Us

Having an illness or condition that people can't see can be hard for people to understand. It helps when doctors think about how to help make sure you have good mental health as well as looking after physical health. Sometimes mental health can be worse when you have got a medical condition. Having doctors who know how to talk to us about mental health as well as our physical health is important. Talking about how we are coping, and feeling should be an everyday normal conversation, not just something that is mentioned or checked once.

“With mental health conditions it is important to know that people with long term conditions like diabetes are more prone to having a mental health condition so check in how they are feeling and use games and workbooks to explain what’s in your mind” RCPCH &Us

For people with long term conditions, we might be seeing doctors for our whole lives. It can be worrying thinking that the doctor, nurses, receptionists and everyone you have grown up with in your children's clinic will change when you move to adults. This could be when you are still at school, so it doesn't always feel like it is time to go to another hospital and be helped by a different doctor or nurse in a new clinic. It would be good to find out different ways to help that move and transition, like lots of appointments with both sets of doctors (old and new), virtual tours, phone calls and visits so you get used to it, and that you start talking about it really early so a few years before you have to move.

We also know that virtual appointments are going to be around for a while to help the NHS while it isn't safe for everyone to come into clinics and hospitals at the same time.

“Offering online appointments issue is that sometimes at home with the family there is no safe space to have confidential call and feel safe that no one is listening in.” RCPCH &Us

There are a few things that can be done to help us have good appointments whether they are on the phone or using video.

1. Reassure us about how it will work
2. Give us choice of how to talk with you
3. Help us to keep it private when we are at home
4. Help us to prepare for our virtual appointment
5. Make it easy for people without good WiFi access
6. Make it clear and simple about how we get help when we need it

“Remember that for some young people it is becoming too much with everything happening in their bedroom: school, friend socials, mental health appointments/health consultations. You can’t get away from it space wise” RCPCH &Us

Thank you for doing this course to be the best doctor 😊

“The best doctor is someone like you, kind, funny, happy and listens to me and my family”
RCPCH &Us

Questions to think about:

1. How are you going to support children and young people to feel comfortable in opening up? Are there tools and resources that could help?
2. Have you asked about other things in our house where we live that we might need help with like helping our wider families to understand the condition?
3. What ways will you help everyone to talk with you on their own in the way that is right for them?
4. What local and national charities do you know that help families living with diabetes?
5. How will you help to make virtual health appointments safe, private and confidential for patients?

Thank you to children, young people and families from RCPCH &Us network for sharing their ideas and views used in this section.

Section 2

Paediatric Diabetes Care SPIN curriculum

How to use the RCPCH SPIN curriculum

This curriculum provides a framework for training, articulating the standard required to achieve the SPIN module and progress as indicated within the purpose statement. The curriculum ensures the quality and consistency of training and assessment, together with encouraging the pursuit of excellence in all aspects of clinical and wider practice. It must be referred to throughout training, as the clinician records evidence demonstrating their developing skills and knowledge.

The curriculum should be used to help design training programmes locally that ensure all trainees can develop the necessary skills and knowledge, in a variety of settings and situations. The curriculum is designed to ensure it can be applied in a flexible manner, meeting service needs as well as supporting each trainee's own tailored Learning and Development Plan.

The curriculum comprises a number of Learning Outcomes which specify the standard that clinicians must demonstrate to attain this SPIN module. Trainees are encouraged to consider innovative ways of demonstrating how they have met the Learning Outcome.

Trainees are strongly encouraged to record evidence against the Learning Outcomes throughout their SPIN training, including engaging in active reflective practice to support their own development. The supervisor will review whether the trainee is on target to achieve or has achieved the Learning Outcome(s), and will suggest specific areas of focus to ensure that the trainee achieves the Learning Outcome(s) by the end of their SPIN training period. The Illustrations may be a useful prompt for this.

Components of the SPIN curriculum

The **Learning Outcomes** are the outcomes which the trainee must demonstrate they have met to be awarded this SPIN module. Progress towards achievement of the Learning Outcomes is reviewed at regular meetings with a designated supervisor. Learning Outcomes are mapped to the GMC's Generic Professional Capabilities framework.

The **Key Capabilities** are linked to specific Learning Outcomes, and are mandatory capabilities which must be evidenced by the trainee, in their ePortfolio, to meet the Learning Outcome.

The **Illustrations** are examples of evidence and give the range of clinical contexts that the trainee may use to support their achievement of the Key Capabilities. These are intended to provide a prompt to the trainee and trainer as to how the overall outcomes might be achieved. They are not intended to be exhaustive, and excellent trainees may produce a broader portfolio or include evidence that demonstrates deeper learning. It is not expected that trainees provide ePortfolio evidence against every individual illustration (or a set quota); the aim of assessment is to provide evidence against every Key Capability.

The **Assessment Grid** indicates suggested assessment methods, which may be used to demonstrate the Key Capabilities. Trainees may use differing assessment methods to demonstrate each capability (as indicated in each Assessment Grid), but there must be evidence of the trainee having achieved all Key Capabilities.

SPIN Learning Outcomes

This table contains the generic Learning Outcomes required for all trainees undertaking the RCPCH SPIN in Paediatric Diabetes Care. Within the curriculum and throughout the syllabi the Learning Outcomes are mapped to the GMC's Generic Professional Capabilities (GPCs). More information on the GPC framework is available from the GMC website: <https://www.gmc-uk.org/education/postgraduate/GPC.asp>.

Please note, trainees will also be required to complete their generic and General Paediatric Level 3 Learning Outcomes in order to gain their Certificate of Completion of Training (CCT). Consultants undertaking a SPIN will already have demonstrated the required generic skills, knowledge and behaviours prior to having obtained their CCT.

This SPIN curriculum only defines the specific Learning Outcomes for the stated focus, purpose and extent of remit stated for this SPIN module, and cannot be used to indicate competence in any other aspect of paediatrics.

SPIN Learning Outcome		GPCs
1	Comprehensively manages the care of children and young people (CYP) with type 1 diabetes.	3,5,6
2	Comprehensively manages the care of children and young people (CYP) with type 2 diabetes.	3,4,5,6
3	Manages effective transition of young people (YP) with diabetes.	2,3,4,5,6
4	Recognises and understands the investigations and treatments of rare forms of diabetes (e.g. genetic diabetes, neonatal diabetes, cystic fibrosis-related diabetes and steroid-induced diabetes).	3,5
5	Leads, develops and works effectively in a multidisciplinary service and engages with regional and national diabetes networks.	5,6
6	Uses audit, research and evidence-based practice to provide and plan diabetes services.	8,9

The syllabus supporting these Learning Outcomes is provided on the following pages.

SPIN Learning Outcome 1

Comprehensively manages the care of children and young people (CYP) with type 1 diabetes.	GPC 3,5,6
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Key Capabilities

Demonstrates good understanding of the pathophysiology, genetics, immunology, epidemiology and biochemical aspects of type 1 diabetes, including glycated haemoglobin analysis and its significance in evaluating diabetes control.	GPC 3,5
Manages all acute aspects of type 1 diabetes, including diabetic ketoacidosis (DKA), hypoglycaemia, new diagnosis, pump failure, poorly controlled diabetes needing stabilisation and diabetes management during surgery.	GPC 3,5,6
Demonstrates proficiency in the ongoing continuous outpatient management in type 1 diabetes, including providing advice on diet, carbohydrate counting, sports and conducting the annual review process, screening for complications, using a range of consultation styles, such as motivational interviewing.	GPC 3,4,5
Demonstrates proficiency in the initiation and use of diabetes-related technologies (such as continuous glucose monitoring system (CGMS) and insulin pumps) and interprets patient data from technological platforms.	GPC 3,5
Develops experience of the impact of type 1 diabetes on the CYP and family outside of the clinic environment (such as helping CYP with type 1 diabetes at camps, sports days or residential events).	GPC 4

Illustrations

1. Understands the biochemistry affecting HbA1C, recognising that, in the presence of haemoglobinopathy, the HbA1C may not be a reliable measure of glycaemic control.
2. Demonstrates expertise in the recognition and management of DKA, including knowledge of the evidence base.
3. Demonstrates the knowledge and skills to assess and initiate management of patients presenting with diabetes both in inpatient and outpatient settings.
4. Counsels CYP and their families at diagnosis in an appropriate setting and deal with important issues, including emotional aspects.
5. Recognises the principles of diabetes management, including the most common insulin regimens and their potential advantages and disadvantages.
6. Provides advice about diet and competent with at least one meal planning method, e.g. carbohydrate counting.
7. Understands the principles of dietetic management in type 1 diabetes.
8. Uses the NICE patient eligibility criteria to offer technology and capable in the initiation and ongoing use of CSII (continuous subcutaneous insulin infusion), Flash Glucose Monitoring and CGMS (continuous glucose monitoring).
9. Interprets downloads from glucose monitors, insulin pumps and CGMS and advises patients and carers accordingly.

10. Demonstrates the ability to manage diabetic emergencies, such as missed or incorrect insulin, sick day rules, hypo and hyperglycemia or pump failure.
11. Advises parents and schools on appropriate care plans for a school-age child.
12. Monitors injection sites, detects early signs of complications (eg retinopathy screening, foot examination) and plans appropriate screening in patients with type 1 diabetes for associated conditions, such as thyroid and coeliac disease.
13. Proficient in the management of diabetic control during surgical and anaesthetic procedures, both major and minor.
14. Manages the ongoing impact of diabetes on education and psychosocial well-being and understands the cultural and lifestyle issues affecting diabetes care.
15. Demonstrates an understanding of behavioural and cognitive physiology and psychology as pertinent to diabetes in different age groups.
16. Uses different consultation strategies (eg motivational interviewing or target setting), according to individual CYP's needs with an understanding of the concept of transition (from primary to secondary school and from paediatric to adult services).
17. Delivers ongoing diabetes education to families and allied health professionals in a variety of settings.
18. Advises on exercise and illness management to the CYP, family and other health professionals.
19. Attends diabetes camps or other events outside of the clinic environment to gain an understanding of the impact of T1DM on the life of the child and family.
20. Understands the association between the type 1 diabetes and other endocrine conditions such as Addison's disease, disorders of growth and puberty, thyroid disease and polyendocrine syndromes.
21. Awareness of ongoing research in diabetes including cell-based therapies and immunotherapy.
22. Recognises unusual presentations of hypoglycaemia (self-harm, presence of insulin antibodies and factitious illness) and how to investigate and manage this in the context of diabetes.

SPIN Learning Outcome 2

Comprehensively manages the care of children and young people (CYP) with type 2 diabetes.	GPC 3,4,5,6
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Key Capabilities

Demonstrates proficiency in the care of CYP with type 2 diabetes and screening for comorbidities.	GPC 3,5,6
Applies knowledge of the indications and use of pharmacological therapies and lifestyle interventions for type 2 diabetes, such as weight management and diet.	GPC 3,5

Illustrations

1. Understands the pathophysiology of T2DM, including the concept of insulin resistance and obesity.
2. Understands the diagnostic challenges in certain scenarios to differentiate between type 1, type 2 and other forms of diabetes.
3. Recognises obesity comorbidities, including NAFLD (non-alcoholic fatty liver disease), OSA (Obstructive sleep apnoea) and dyslipidaemia and screens and manages/refers these appropriately.
4. Provides advice and support on weight management, both at the time of diagnosis and on ongoing basis.
5. Understands the principles of dietetic management in type 2 diabetes.
6. Understands pharmacological therapies used in the management of type 2 diabetes.
7. Understands screening methods/tests and guidelines available for detection of long-term complications.

SPIN Learning Outcome 3

Manages effective transition of young people (YP) with diabetes.	GPC 2,3,4,5,6
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Key Capabilities

Demonstrates understanding of the transition process and initiates the process at an appropriate age.	GPC 2,3,4
Works with the YP, adult and paediatric MDTs to guide effective transition to adult care.	GPC 2,4,5
Recognises the challenges involved in transitional care and appropriately supports YP with support from the MDT.	GPC 4,5
Supports carers and CYP on emerging independence; advises on alcohol, driving, sexual health including contraception, travel, and independent living.	GPC 3,5,6

Illustrations

1. Recognises the importance of transitional care in diabetes and its associated challenges.
2. Assesses and facilitates a young person’s readiness to transfer to adult services and plans the transfer.
3. Attends YP transition clinics for both type 1 and type 2 diabetes.
4. Supports YP together with the MDT to deliver effective transition.
5. Encourages and supports the YP to develop independence including learning to self-manage their diabetes as well as attend consultations alone.
6. Considers and uses different communication styles to encourage the YP to discuss questions around independence, including alcohol, drugs, sexual health, driving and managing diabetes away from caregivers.

SPIN Learning Outcome 4

Recognises and understands the investigation and treatment of rare forms of diabetes (e.g. genetic diabetes, neonatal diabetes, cystic fibrosis-related diabetes and steroid-induced diabetes).	GPC 3,5
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Key Capabilities

Recognises when to consider and how to investigate a diagnosis of rare/atypical diabetes and understands the principles of management.	GPC 3,5
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Illustrations

1. Understands diabetes associated with other diseases, e.g. cystic fibrosis, mitochondrial diseases and steroid-induced.
2. Recognises the investigation of maturity onset diabetes of the young, when to suspect and conduct treatment.
3. Understands the treatment of transient and permanent neonatal diabetes and investigates and manages appropriately.

SPIN Learning Outcome 5

Leads, develops and works effectively in a multidisciplinary service and engages with regional and national diabetes networks.	GPC 2,5,6,8
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Key Capabilities

Works as part of the diabetes multidisciplinary team to ensure that patients are cared for in an appropriate clinical environment, including recognising and managing safeguarding issues.	GPC 2,5,6,7
Communicates effectively with the wider multidisciplinary and inter-professional teams and outside agencies (e.g. schools and social care) including the CYP, their families and carers, as appropriate.	GPC 5,6
Participates and engages in the regional diabetes network and has knowledge of national activities.	GPC 5,6,8

Illustrations

1. Develops a teamwork approach to diabetic care, involving dieticians, nurse specialists, psychologists and social care support.
2. Recognises how safeguarding concerns may present within the context of diabetes and works with the MDT and external agencies to address these issues and help and support the child and family.
3. Understands the impact of diabetes on the CYP and family, how this affects their involvement within the wider community (e.g. school, sports activities) and works with the MDT team to develop an individualised care plan.
4. Gains experience of leading diabetes MDTs and apply effective communication skills in a range of environments and situations, such as when dealing with referrals to safeguarding, social care, including in challenging circumstances (such as Discharge Planning Meetings (DPMs) or safeguarding strategy meetings).
5. Participates in case presentations, audit and quality improvement (QI) projects at local level and at national and/or regional diabetes network meetings that enable shared learning.
6. Engages in appropriate and relevant continuing professional activities such as the: Association of Children’s Diabetes Clinicians (ACDC), the British Society for Paediatric Endocrinology (BSPED) and the International Society for Paediatric and Adolescent Diabetes (ISPAD).

SPIN Learning Outcome 6

Uses audit, research and evidence-based practice to provide and plan diabetes services.	GPC 6,8,9
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Key Capabilities

Conducts and/or supervises audit or QI projects in diabetes.	GPC 6
Leads in the development and revision of local diabetes guidelines.	GPC 6
Uses QI audit/projects to improve service delivery and ultimately patient care.	GPC 6
Knowledge of the national paediatric diabetes audit (NPDA) (as applicable), the Quality Improvement programme and the Peer Review process (or equivalent) and how to use this information in service development.	GPC 6
Demonstrates understanding of how CYP's diabetes services are commissioned.	GPC 5
Participates in delivering diabetes structured education (e.g. to CYP, families, or allied health-professionals).	GPC 8

Illustrations

1. Actively participates in local management meetings within the diabetes service.
2. Applies and evaluates local and national clinical guidelines and protocols in paediatric diabetes practice and recognises the individual patient needs when using them.
3. Carries out diabetes audit and quality improvement projects in a range of settings in partnership within the multidisciplinary team and identifies best practice.
4. Understands NPDA data reports (or equivalent) including review of own unit data and how this drives improvement in patient care both locally and nationally and reduces unwarranted variation.
5. Shows an understanding of the Peer Review process (participates if the opportunity arises).
6. Shows an understanding of how CYP diabetes services are commissioned.
7. Plans ongoing diabetes education to families and allied health professionals in a variety of settings.

Section 3

Assessment Strategy

How to assess the Paediatrics Diabetes Care SPIN

The Assessment Strategy for this SPIN module is aligned with the RCPCH Progress Programme of Assessment, utilising a range of different formative and summative assessment tools.

The Programme of Assessment comprises a wide range of assessment tools which must be used in conjunction with the Blueprint to develop skills and assess capability. The assessments are knowledge, skills and capability-based, capturing a wide range of evidence which can be integrated to reach a judgement as to the trainee's achievement of the SPIN module learning outcomes. The assessments also provide trainees with the opportunity to obtain developmental feedback. Further information on all assessment instruments can be found within the RCPCH Progress Programme of Assessment.

The key aspect of the assessment strategy for this SPIN module is the blueprint, on the following page. This grid indicates the assessment requirements to support and demonstrate achievement of the Learning Outcomes and, where appropriate, the minimum number of assessments required. Please note, not all assessments are mandated or their use prescribed, such that trainees may use other assessment types from the list within the Programme of Assessment, where they and their supervisors feel this is appropriate. The mandatory assessments are:

1. 1 satisfactory ePaedMSF from the Diabetes MDT, ideally in the second half of the SPIN training period.
2. Supervised learning events (as per RCPCH Programme of Assessment Blueprint) must include a LEADER, a CEX, CBDs, and DOCs, and cover the following key areas in Paediatric Diabetes:
 - Outpatient management of a patient with type 1 diabetes
 - Inpatient management of a patient with type 1 diabetes
 - Use of technology in type 1 diabetes
 - Management of a patient with type 2 diabetes
 - Rare or atypical forms of diabetes
 - Communication skills and consultation styles used with young people with diabetes and their families and carers
 - Adolescent care and transition to young adult services
 - Multidisciplinary and team working
 - Collaboration with external agencies
 - Delivering structured education
 - Knowledge of the NPDA
 - Understanding of Quality Improvement and its application to CYP Diabetes Care including the process of Peer Review

Assessment blueprint

This table suggests assessment tools which may be used to assess the Key Capabilities for these Learning Outcomes.

This is not an exhaustive list, and trainees are permitted to use other methods (such as clinical questions, reflections) within the RCPCH Assessment Strategy to demonstrate achievement of the Learning Outcome, where they can demonstrate these are suitable.

Key Capabilities	Assessment / Supervised Learning Event suggestions										
	Paediatric Mini Clinical Evaluation (ePaed Mini-CEX)	Paediatric Case-based Discussion (ePaeds CBD)	Paediatric Case-based Discussion (DOP/Aop)	Directly Observed Procedure / Assessment of Performance	Acute Care Assessment Tool (ACAT)	Discussion of Correspondence (DOC)	Clinical Leadership Assessment Skills (LEADER)	Handover Assessment Tool (HAT)	Paediatric Multi Source Feedback (ePaed MSF)	Paediatric Carers for Children Feedback (Paed CCF)	Other
Demonstrates good understanding of the pathophysiology, genetics, epidemiology and biochemical aspects of type 1 diabetes, including glycated haemoglobin analysis and its significance in evaluating diabetes control.		✓							✓		
Manages all acute aspects of type 1 diabetes, including diabetic ketoacidosis (DKA), hypoglycaemia, new diagnosis, pump failure, poorly controlled diabetes needing stabilisation and diabetes management during surgery.	✓	✓			✓				✓	✓	
Demonstrates proficiency in the ongoing continuous outpatient management in type 1 diabetes, including providing advice on diet, carbohydrate counting, sports and conducting the annual review process, screening for complications, using a range of consultation styles, such as motivational interviewing.	✓	✓				✓					
Demonstrates proficiency in the initiation and use of diabetes-related technologies (such as continuous glucose monitoring system (CGMS) and insulin pumps) and interprets patient data from technological platforms.	✓	✓	✓								
Develops experience of the impact of type 1 diabetes on the CYP and family outside of the clinic environment (such as helping CYP with type 1 diabetes at camps, sports days or residential events).	✓	✓									
Demonstrates proficiency in the care of CYP with type 2 diabetes and screening for comorbidities.	✓	✓				✓			✓		
Applies knowledge of the indications and use of pharmacological therapies and lifestyle interventions for type 2 diabetes, such as weight management and diet.	✓	✓									

Key Capabilities	Assessment / Supervised Learning Event suggestions										
	Paediatric Mini Clinical Evaluation (ePaed Mini-CEX)	Paediatric Case-based Discussion (ePaeds Cbd)	Paediatric Case-based Discussion (DOP/Aop)	Directly Observed Procedure / Assessment of Performance (DOP/Aop)	Acute Care Assessment Tool (ACAT)	Discussion of Correspondence (DOC)	Clinical Leadership Assessment Skills (LEADER)	Handover Assessment Tool (HAT)	Paediatric Multi Source Feedback (ePaed MSF)	Paediatric Carers for Children Feedback (Paed CCF)	Other
Demonstrates understanding of the transition process and initiates the process at an appropriate age.	✓	✓				✓					
Works with the YP, adult and paediatric MDTs to guide effective transition to adult care.	✓	✓				✓	✓				
Recognises the challenges involved in transitional care and appropriately supports YP with support from the MDT.	✓	✓				✓	✓				
Supports carers and CYP on emerging independence; advises on alcohol, driving, sexual health including contraception, travel, and independent living.	✓	✓				✓					
Recognises when to consider and how to investigate a diagnosis of rare/atypical diabetes and understands the principles of management.	✓	✓									
Works as part of the diabetes multidisciplinary team to ensure that patients are cared for in an appropriate clinical environment, including recognising and managing safeguarding issues.							✓	✓	✓		
Communicates effectively with the wider multidisciplinary and inter-professional teams and outside agencies (e.g. schools and social care) including the CYP, their families and carers, as appropriate.							✓	✓	✓		
Participates and engages in the regional diabetes network and has knowledge of national activities.								✓			
Conducts and/or supervises audit or QI project in diabetes.							✓	✓			
Leads in the development and revision of local diabetes guidelines.							✓	✓			
Uses QI audit/projects to improve service delivery and ultimately patient care.		✓					✓	✓			
Knowledge of the national paediatric diabetes audit (NPDA) (as applicable), the Quality Improvement programme and the Peer Review process and how to use this information in service development.		✓					✓				
Demonstrates understanding of how CYP's diabetes services are commissioned.		✓					✓				
Participates in delivering diabetes structured education (e.g. to CYP, families, or allied health-professionals).	✓										

Appendices

Appendix A: Further guidance and resources

Doctors completing this SPIN module may find the following resources useful to support their training. Please note, there is no mandatory requirement to use any or all of these resources, and RCPCH cannot be held responsible for the quality or content of any external materials.

Assessment

RCPCH Assessment web pages www.rcpch.ac.uk/assessment

RCPCH Assessment Strategy www.rcpch.ac.uk/progress

Recommended reading

1. <https://www.bsped.org.uk/clinical-resources/guidelines/>
2. <https://www.eurospe.org/education/e-learning/>
3. <https://www.ispad.org/page/ISPADGuidelines2018>
4. <https://professional.diabetes.org/content-page/practice-guidelines-resources>
5. <https://www.nice.org.uk/guidance/ng18>
6. <http://www.a-c-d-c.org/endorsed-guidelines/>
7. <https://www.digibete.org/>

Training events or courses

1. <https://www.bsped.org.uk/meetings/forthcoming-meetings/>

For more information

More information regarding SPIN modules, and all current SPIN curricula and supporting forms, can be found at www.rcpch.ac.uk/spin.

For general queries regarding SPIN modules, including eligibility to undertake a SPIN or how to apply, please contact spin@rcpch.ac.uk.

For queries relating to the SPIN curriculum, please contact qualityandstandards@rcpch.ac.uk.

The SPIN Lead is a member of the Diabetes and Endocrinology CSAC. See the RCPCH website for the contact details of the current SPIN Lead: <https://www.rcpch.ac.uk/membership/committees/paediatric-diabetes-endocrinology-csac>.

Appendix B: Criteria for SPIN delivery

The following requirements should be met when designing a training programme for a SPIN module trainee. Adherence to these criteria will help ensure the trainee will have the necessary support and access to experiences which they will require in order to successfully complete this SPIN module. These criteria are framed against the standards set out in Excellence by Design: standards for post graduate curricula (GMC 2017).

Purpose	
<ul style="list-style-type: none"> • Access to regular supervised clinics. • Service specific requirements to enable achievement of the curriculum e.g. Day case facilities, imaging. • Opportunities to work with shared care networks in primary and secondary care. • Opportunities to work with shared care clinical guidelines and protocols. • The learning environment is safe for patients and supportive for learners and educators. The culture is caring, compassionate and provides a good standard of care and experience for patients, carers and families. (Taken from GMC Promoting Excellence). 	<p>CSAC specific requirements:</p> <ul style="list-style-type: none"> • A centre that looks after at least 80 children with Diabetes Mellitus. • See and manage newly diagnosed patients with diabetes, including initiation of insulin. • Safe cover arrangements for paediatric department out of hours in line with RCPCH guidance. • Evidence of compliance with existing employment rules to working time. • Working intensity and pattern that is appropriate for learning. • Access to sub-specialty training time which allows achievement of the competences throughout the programme - this would be expected typically to take 12 months.
Governance and strategic support	
<ul style="list-style-type: none"> • The Site must ensure that Supervisors and trainers can effectively deliver the RCPCH Assessment Strategy. • The trainee will be able to participate in leadership and management activities. 	<p>CSAC specific requirements:</p> <ul style="list-style-type: none"> • A minimum of two consultants in a tertiary centre and/or a consultant with a DGH Diabetic Service supported by other consultants competent in managing acute diabetes care. Experience in a tertiary centre is not essential (though most trainees find this beneficial) as long as the SPIN outcomes can be achieved during their DGH placements. • More than one ST4 -8 in the children's department. • In-patient facilities for children with diabetes with protocol management of DKA and illness/surgery in children with diabetes. • Offers Continuous Subcutaneous Insulin infusion (CSII) to children with diabetes. • Participation in Local Diabetes network. • Participation in National Diabetes Audit.

Programme of learning	
<ul style="list-style-type: none"> Specific requirements for structured learning opportunities. Exposure within the clinical environment will provide sufficient learning opportunities to meet the requirements of the curriculum. Access to multidisciplinary teams consisting of a minimum of nurses, dietitians, psychologists or links with CAMHS. The post should provide a training experience that enables completion of the trainees' PDP 	<p>CSAC specific requirements:</p> <ul style="list-style-type: none"> The minimum length of training required is 12 months attached to Diabetes Services in one or more posts. Attend at least 15 clinics within any six month WTE. Attachment to young adult or transition diabetes clinic for at least five sessions over the programme. Diabetes, including non-type 1 and type 2, neonatal diabetes, Cystic Fibrosis (CF) related diabetes. See and review at least 75 Diabetic patients in Multi-Disciplinary Clinics. Diabetes specialist nurse or similar, paediatric dietician, psychology support or links with CAMHS. Attend at least one Diabetes activity outside clinical environment (diabetes camp, sports activity etc.). Close links with biochemistry department - attachment to biochemistry department to learn about HbA1c assay. Links with adult diabetes services. Attachment to Diabetes specialist nurse for hospital and home visits. Attachment to the paediatric dietician for clinic and home visits.
Programme of assessment	
<ul style="list-style-type: none"> The site has adequate levels of Educational Supervisors. Consultants with either General Paediatric or Sub Specialty expertise can be matched to the Requirements of the trainee. It is important that Educational supervisors can provide supervision and have the required time in their job plans to facilitate this, i.e. 1 PA Per week per 4 trainees. Supervision must ensure patient safety. Support for trainers and supervisors must be available within the Trust. 	<p>CSAC specific requirements:</p> <ul style="list-style-type: none"> An educational supervisor trained in assessment and appraisal. An educational supervisor who has dedicated time to provide educational supervision. Evidence that the assessment strategy is being delivered. Trainers receive appropriate training on the delivery of the assessment strategy.

Quality assurance and improvement

- The post will allow the trainee to participate in audits and clinical improvement projects.
- The post will allow the trainee to actively engage with the teaching, assessing and appraising of junior staff.
- The post will allow opportunity for the trainee to engage in research activities.

CSAC specific requirements:

- RCPCH/BSPED Accredited Advanced Paediatric Diabetes Course or equivalent.
- This post forms part of a complete paediatric training programme which provides a minimum of five years of acute clinical experience, including out of hours.
- Regular Diabetes MDT meetings.
- Attend some network meetings.
- Evidence of trainee's participation in two audit projects on a Diabetes related topic.
- Opportunities for formal and informal teaching.
- For senior trainees: opportunities for involvement of assessment of others.
- Opportunities to be involved in management, e.g. management meetings with primary care teams or school.

