

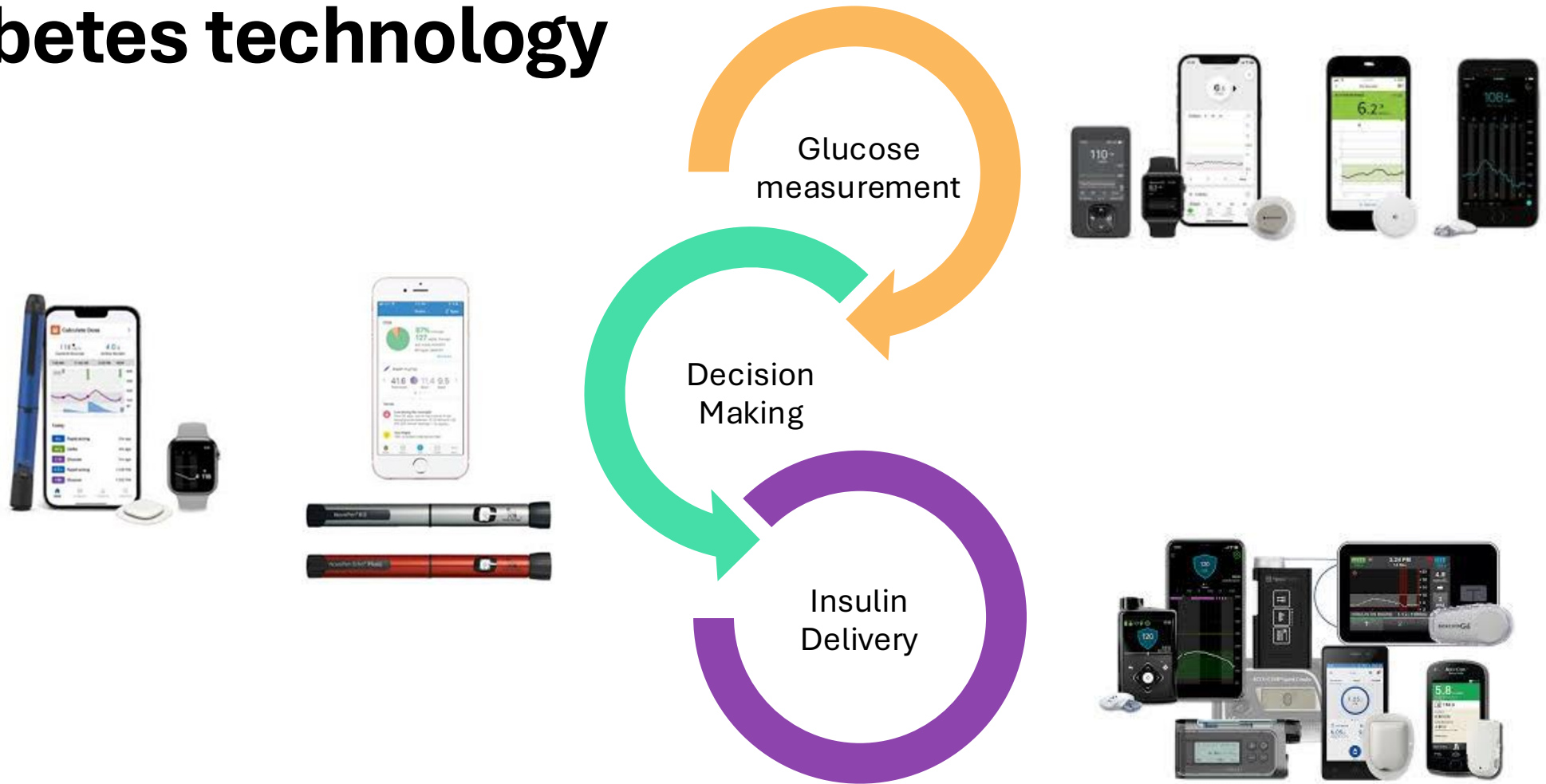
Introducing the HCL / Technologies 4 Tier Competency Document

Erica Richardson

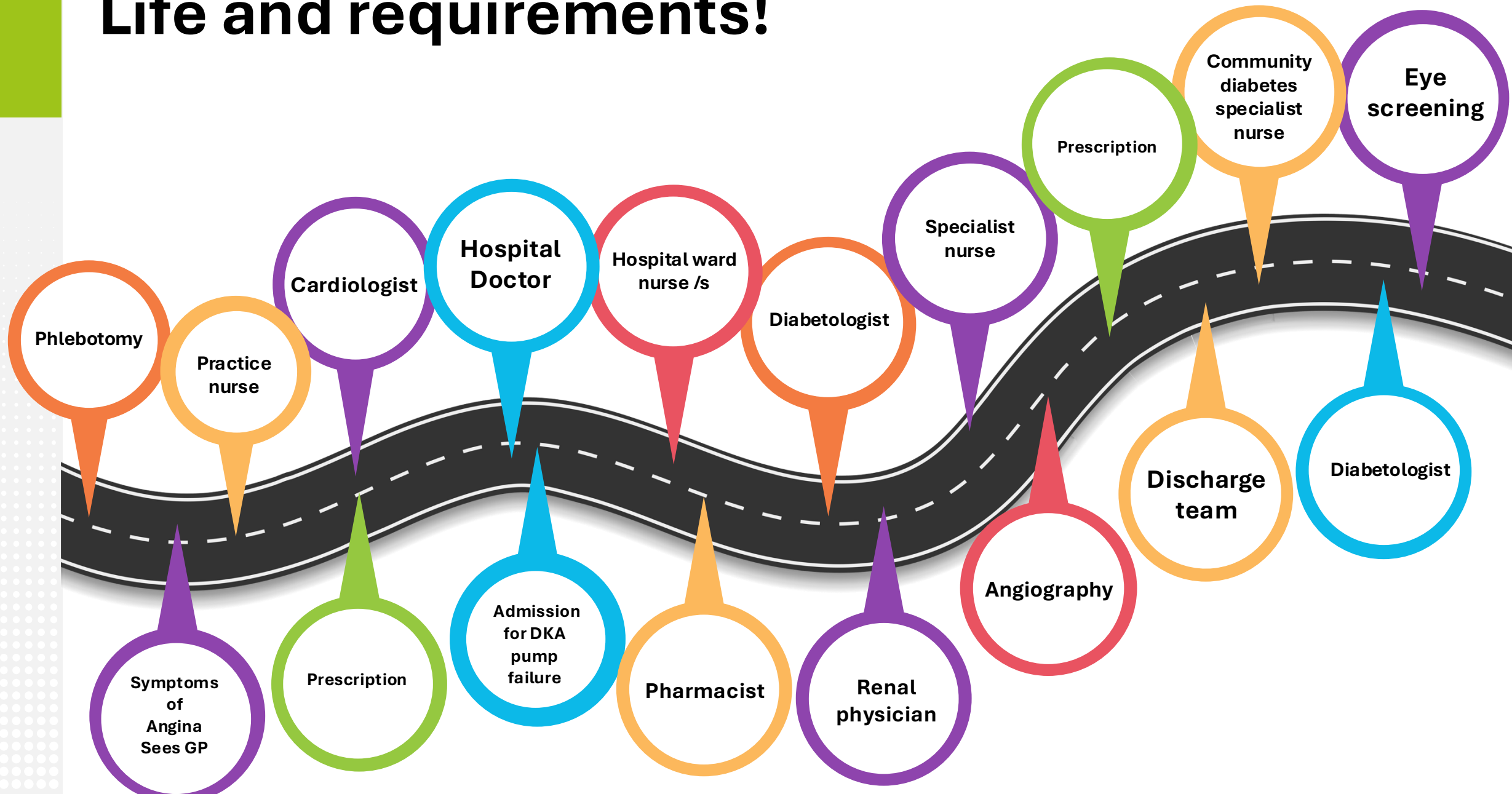
Lead diabetes Research Nurse, ACP and Nurse
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Diabetes technology



Life and requirements!

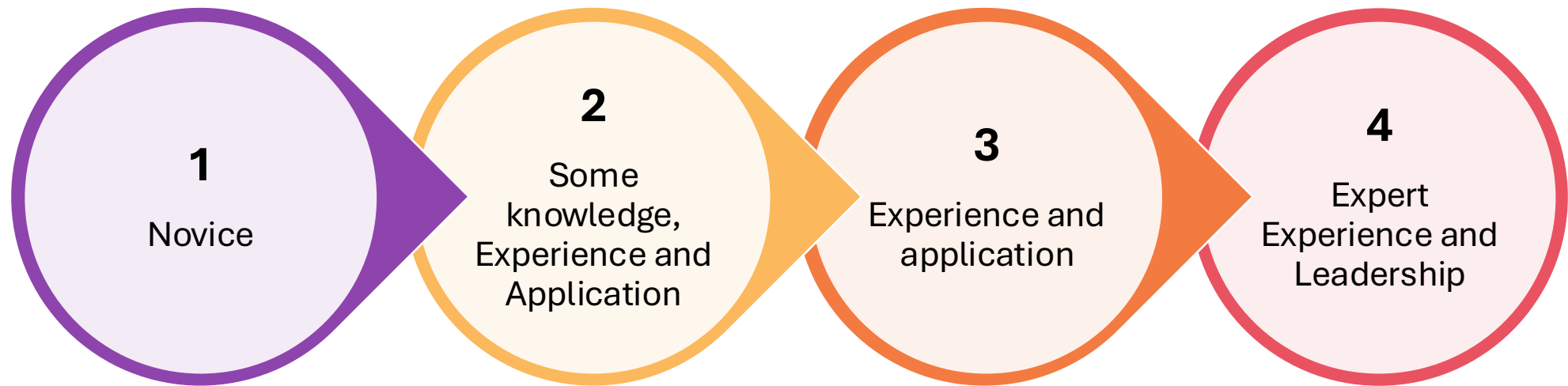


Who are you and where do you fit in along the journey?



How would you rate your knowledge and skills in CGM systems?

- Rate your skills on tech from 1-4



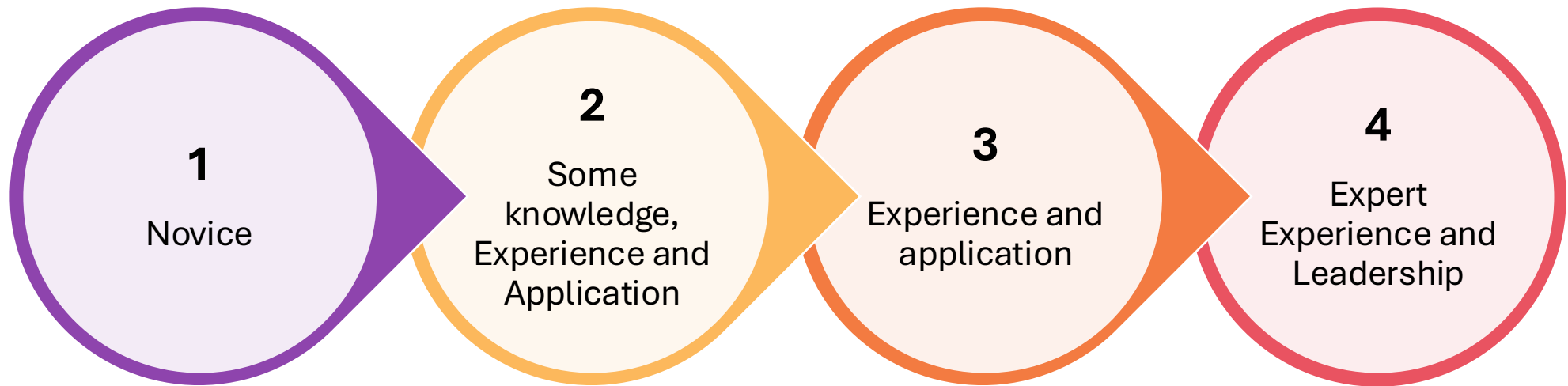


How would you rate your knowledge and skills in CGM systems?

Slido results

How would you rate your knowledge and skills in HCL systems?

- Rate your skills on tech from 1-4





How would you rate your knowledge and skills in HCL systems?

Slido results

Why: National scoping audit results:

Table 1. Respondents' confidence level across common diabetes technology scenarios. Confidence of national service evaluation survey respondents in a range of common diabetes technology scenarios.

Staff group	Number of respondents	Confidence level of respondents*					Total HCL confidence
		Interpret glucose data from a CGM	Ability to explain how a HCL system works	Assist in troubleshooting HCL problems	Support people living with diabetes to transition from MDI to HCL	Provide education to people living with diabetes about HCL limitations and safety concerns	
Diabetes nurse consultant	2	5.00	5.00	4.50	5.00	4.50	4.80
Paediatric DSN	19	4.74	4.47	4.37	4.68	4.68	4.59
Adult inpatient DSN	220	4.48	4.11	3.73	3.91	3.86	4.02
Specialist diabetes dietitians	12	4.83	4.00	3.42	3.58	3.58	3.88
Adult community DSN	91	4.62	3.59	3.26	3.36	3.44	3.65
Diabetes healthcare assistants and technicians	5	4.00	2.80	2.60	2.80	2.60	2.96
DSN working in primary care	24	4.12	2.58	2.17	2.54	2.50	2.78
Adult diabetes specialist midwife	18	3.33	3.17	2.39	2.33	2.39	2.72
Other (general ward nurses)	12	3.58	2.58	2.42	2.17	2.50	2.65
Advanced nurse practitioners	4	4.00	2.00	1.75	2.25	2.00	2.40
Adult practice nurse	27	3.30	1.44	1.30	1.22	1.26	1.70

*For each professional role, values show average confidence levels in each clinical scenario measured on a 5-point Likert scale, ranging from 1 (not at all confident) to 5 (very confident).
CGM=continuous glucose monitor; DSN=diabetes specialist nurse; HCL=hybrid closed-loop; MDI=multiple daily injections.

Kelly,fletcher-Salt & Williams (2025) Bridging the confidence gap: A national service evaluation of the impact of CGM and hybrid closed-loop technologies on UK nurses and Midwives. Online: <https://diabetesonthenet.com/journal-diabetes-nursing/evaluation-cgm-hcl/>

Why: National scoping audit results continued....

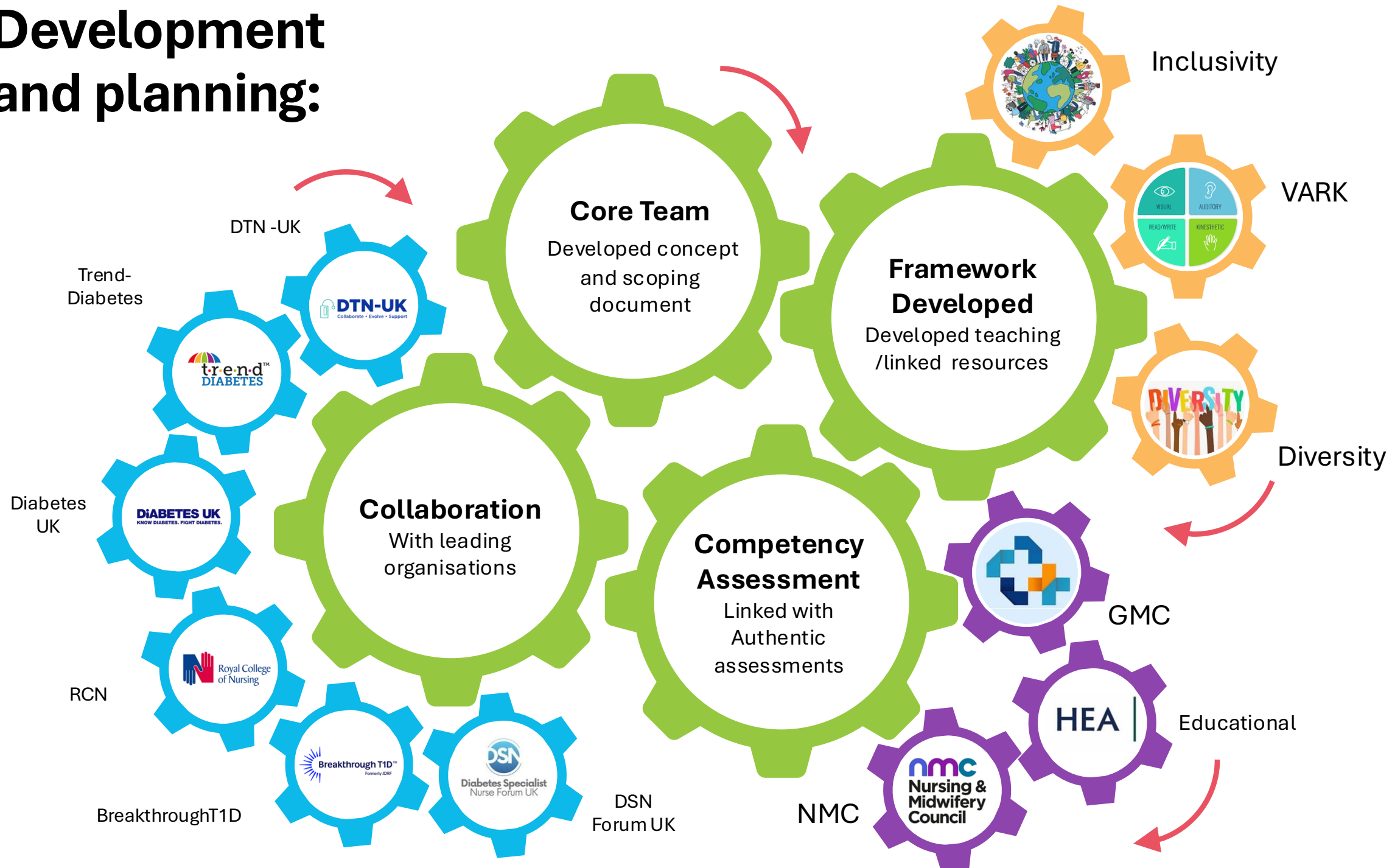
		Awareness of local services for education and assistance with HCL (Likert 1-7)						
Role	Median [IQR]	1 (Low)	2	3	4	5	6	7 (High)
Endocrinologist	7 [6,7]	1.30%	0.60%	1.30%	1.30%	7.10%	29.50%	59.00%
Diabetes nurses	7 [6,7]	3.00%	1.90%	1.90%	1.90%	5.90%	14.50%	71.00%
Endocrinology residents	5 [3,6]	3.80%	17.50%	8.80%	7.50%	21.30%	21.30%	20.00%
		Awareness of education needed prior to HCL (Likert 1-7)						
Role	Median [IQR]	1 (Low)	2	3	4	5	6	7 (High)
Endocrinologist	7 [6,7]	0.60%	1.30%	1.30%	1.90%	10.30%	30.30%	54.20%
Diabetes nurses	7 [6,7]	2.60%	2.20%	1.50%	1.10%	3.70%	19.00%	69.90%
Endocrinology residents	5 [3,6]	11.50%	11.50%	7.70%	6.40%	23.10%	24.40%	15.40%
		Awareness of the concept of onboarding (Likert 1-7)						
Role	Median [IQR]	1 (Low)	2	3	4	5	6	7 (High)
Endocrinologist	6 [6,7]	3.20%	3.20%	1.30%	5.10%	9.60%	32.70%	44.90%
Diabetes nurses	7 [6,7]	3.30%	3.00%	2.20%	3.0%	3.30%	16.70%	68.50%
Endocrinology residents	4 [2,6]	15.00%	11.30%	8.80%	10.00%	21.30%	20.00%	13.80%
		Confidence with assisting in right choice for right person discussions (Likert 1-7)						
Role	Median [IQR]	1 (Low)	2	3	4	5	6	7 (High)
Endocrinologist	6 [5,7]	1.90%	3.20%	1.90%	2.60%	17.40%	32.90%	40.00%
Diabetes nurses	7 [6,7]	6.00%	2.60%	1.90%	5.20%	7.80%	23.50%	53.00%
Endocrinology residents	5 [3,6]	16.00%	8.60%	12.30%	12.30%	24.70%	19.80%	6.20%



The Key concept:

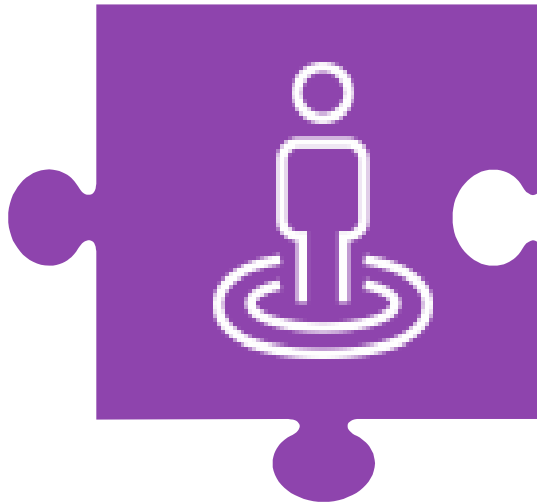
Level	Target Audience
1 Awareness	Any HCP or support worker, who in the course of their duties may come across people living with diabetes who may be using this technology as part of their role.
2 Competence	Any HCPs whose primarily work is related to supporting people living with diabetes. They need to have a degree of knowledge and competence to allow them to provide support to people using diabetes technologies, but they are not an expert. They will have competency in common aspects but still require support for complex issues.
3 Expertise	HCPs whose primary role includes supporting people using diabetes technology, who desire a level of expertise around the use of diabetes technologies and are competent to onboard patients and support others (at level 2) around complex issues such as travel, exercise and pregnancy.
4 Leadership	HCPs who have expertise in diabetes technologies and are providing local or regional leadership in care delivery and complex case management.

Development and planning:



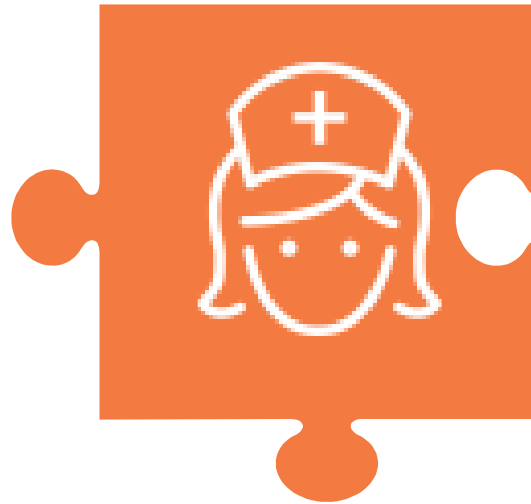
Perspective?

Person



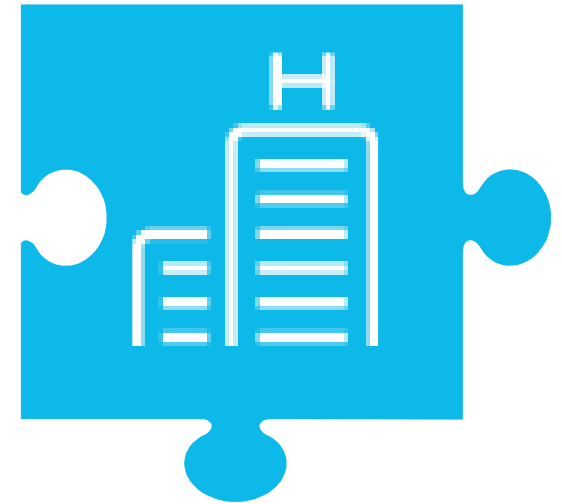
- Point of view on skills
- Expectations

HCP



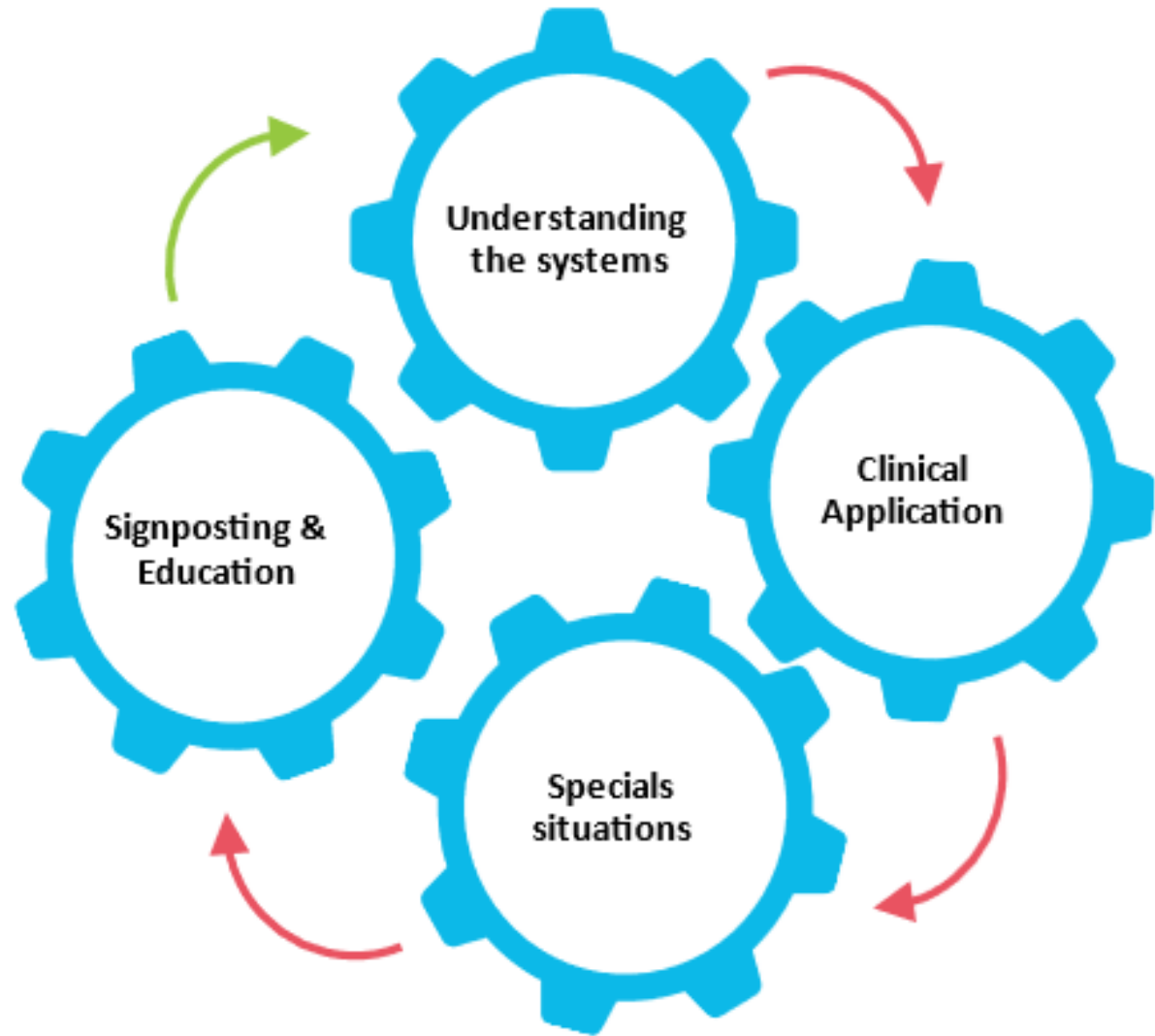
- Specialist team support
- Training competence
- Wrap around services

Health care system



- Service
- Capacity
- Support

Key Principles of Assessments:



Level 1: Awareness



Who Are they?

- Nurse or a doctor working in primary care
- General medical team in hospital or ER
- A ward nurse



What do they need to know?

- Identify CGM and insulin pumps
- Understand emergencies (high or low)
- How to identify someone who might benefit from the technologies



Where might they access training information?

- Flyers /posters
- Short videos / workshops or seminars
- Online resources



How might their competency be assessed

- Simulated scenarios
- Short questions after online resources.

Level 2: Competence



Who Are they?

- In-patient diabetes nurse
- Diabetes specialist doctor / nurses
- A community diabetes nurse /GP with specialist interest



What do they need to know?

- Understand main differences between different CGM and insulin pump systems
- Access data and understand key metrics
- Identify common patterns and support patients



Where might they access training information?

- Training days
- Online training materials
- Industry / academic educational programmes



How might their competency be assessed

- Multiple choice questions
- Simulated scenarios / Peer review / Practical demonstration
- Assessed E-Learning modules

Level 3: Expertise



Who Are they?

- Doctor or Nurse working in pump services
- Diabetes specialist midwife
- Speciality trained dietician



What do they need to know?

- Safely on-board people to CGM and insulin pump systems
- Accurately calculate settings and assess data
- Support and guide people in special situations i.e. exercise and pregnancy



Where might they access training information?

- Hands-on practical training
- Workshops and seminars
- Online training resources



How might their competency be assessed

- Practical demonstrations and case study /problem solving
- Written assessments /oral examinations
- Peer assessment

Level 4: Leadership



Who Are they?

- Lead for type 1 diabetes services
- A senior diabetes specialist nurse or dietician
- A clinical director (with specialist interest)



What do they need to know?

- Demonstrate expert levels of knowledge and skills in complex situations
- In-depth knowledge of evidence, local guidance and policy
- Educational and Leadership skills



Where might they access training information?

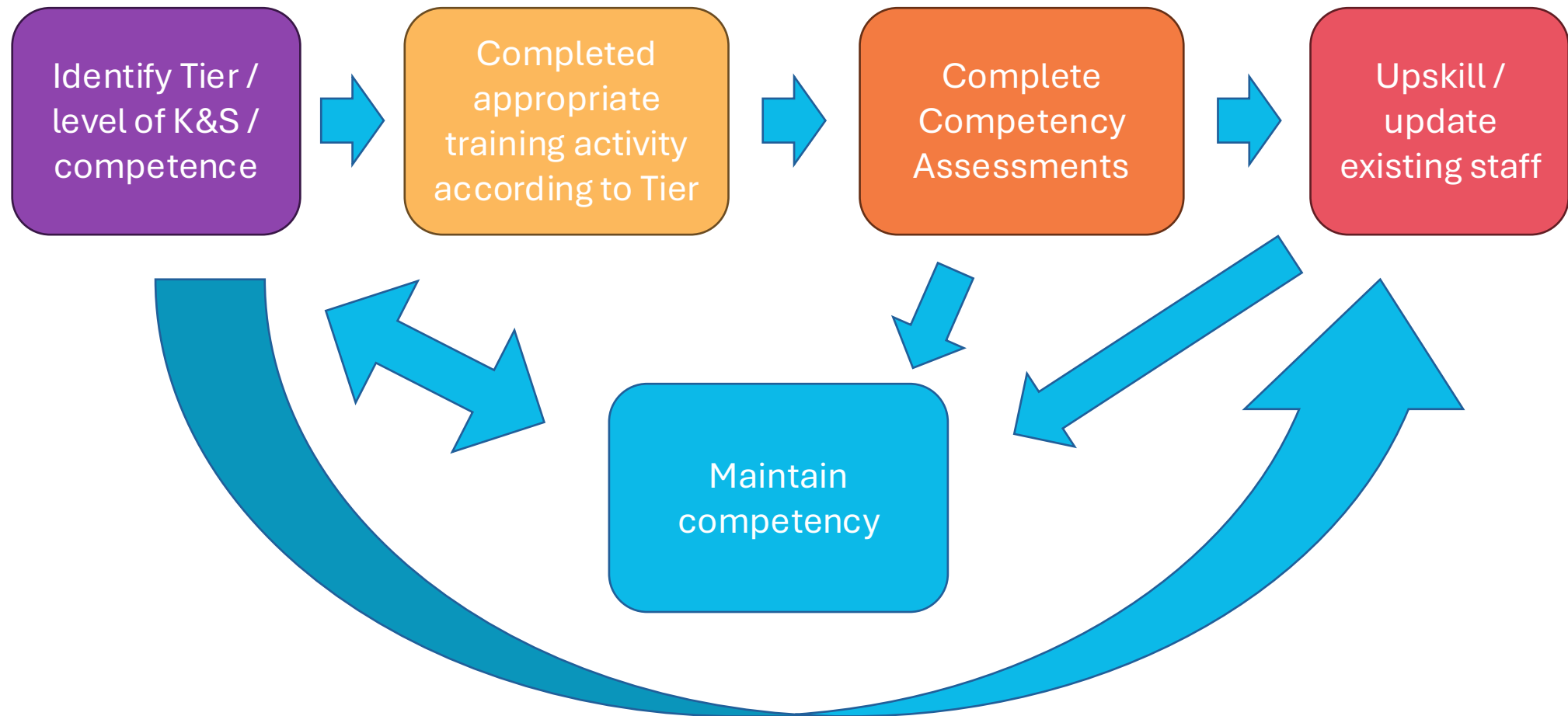
- National /international forums and conferences
- Peer reviewed journals
- Structured education / National training programmes



How might their competency be assessed

- Implementation plans
- Peer assessment
- Online modules (TIER 3 +)

How do we think the competency could be incorporated into type 1 diabetes services?

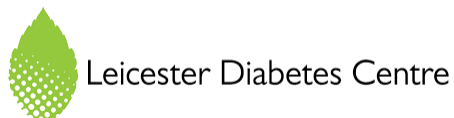


Expected outcomes:

- Wider adoption and access of advanced technologies
- Reduced variance in levels of care
- Increased levels of confidence
- Streamlined services: matching role and responsibilities with skills and competency
- Greater experiences for end users



Links:



- easd-elearning.eu/course/53/Technology-and-type-1-diabetes.html
- abcd.care/current/dtn-uk-best-practice-guides
- abcd.care/dtn/education
- go.glooko.com/academy
- leicesterdiabetescentre.org.uk/4-levels-to-diabetes-technology
- leicesterdiabetescentre.org.uk/practical-diabetes-technology-course



Leicester Diabetes Centre presents:

Diabetes Technology and Hybrid Closed Loop Awareness Day

DATE: Monday 09th December 2024

TIME: 09:00 – 17:15

LOCATION: The Jubilee Hotel & Conference - Triumph Road Jubilee Conference Centre, Nottingham NG7 2TU

COST: £55 (Refreshments and lunch included)

The one-day programme equips individuals with essential knowledge and confidence to understand diabetes technology, including Hybrid Closed Loop (HCL) systems. Led by Professor Pratik Choudhary's award-winning team, participants will gain up-to-date insights on type 1 technology through interactive workshops, informative lectures, and case studies.

Healthcare professionals who work with people living with type 1 diabetes and want to improve their knowledge and confidence in technology, particularly closed-loop systems, but who aren't directly involved with the pump team. You need guidance on referrals for closed-loop systems and basic skills to support patients using HCL.

Learning outcomes include:

- Understand diabetes technology and HCL indications, functionality, and criteria; consult on suitability.
- Understand and interpret the outputs of data from technology
- Recognise when to escalate to specialists or pump experts.
- Be knowledgeable about CGM, insulin pumps, and HCL; including signposting to other resources.
- Comprehend the impact of HCL on individuals.
- Explain HCL functions, limitations, and discuss patient suitability.

CPD point certificate on completion

University Hospitals of Leicester NHS Trust Leicester Diabetes Centre

Please note that your registration will only be confirmed upon receipt of payment.
If you have any further questions regarding these courses please get in touch with: LDCTechnologyCourse@uhl-tr.nhs.uk

The Leicester Diabetes Centre has developed a suite of education programmes in weight management and obesity for both healthcare professionals and people living with, or at risk of, type 2 diabetes.

Visit our website to find out more:
www.leicesterdiabetescentre.org.uk

