

Initiative for **Q**uality improvement and **E**pidemiology among **C**hildren and **A**dolescents with **D**iabetes (**IQECAD**)

03/05/2024

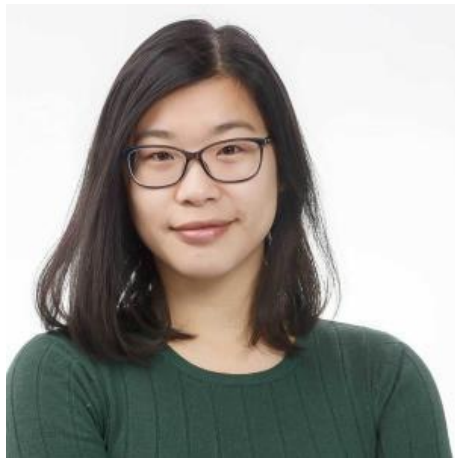
Suchsia Chao, Sciensano

Diabetes team

IQECAD

Initiative for Quality improvement and Epidemiology among Children and Adolescents with Diabetes

Suchsia Chao



IQED

Initiative for Quality improvement and Epidemiology in Diabetes

Astrid Lavens



Kalina Todorova



IQED-foot

Initiative for Quality improvement and Epidemiology in multidisciplinary Diabetic Foot clinics

An-Sofie Vanherwegen



Leader

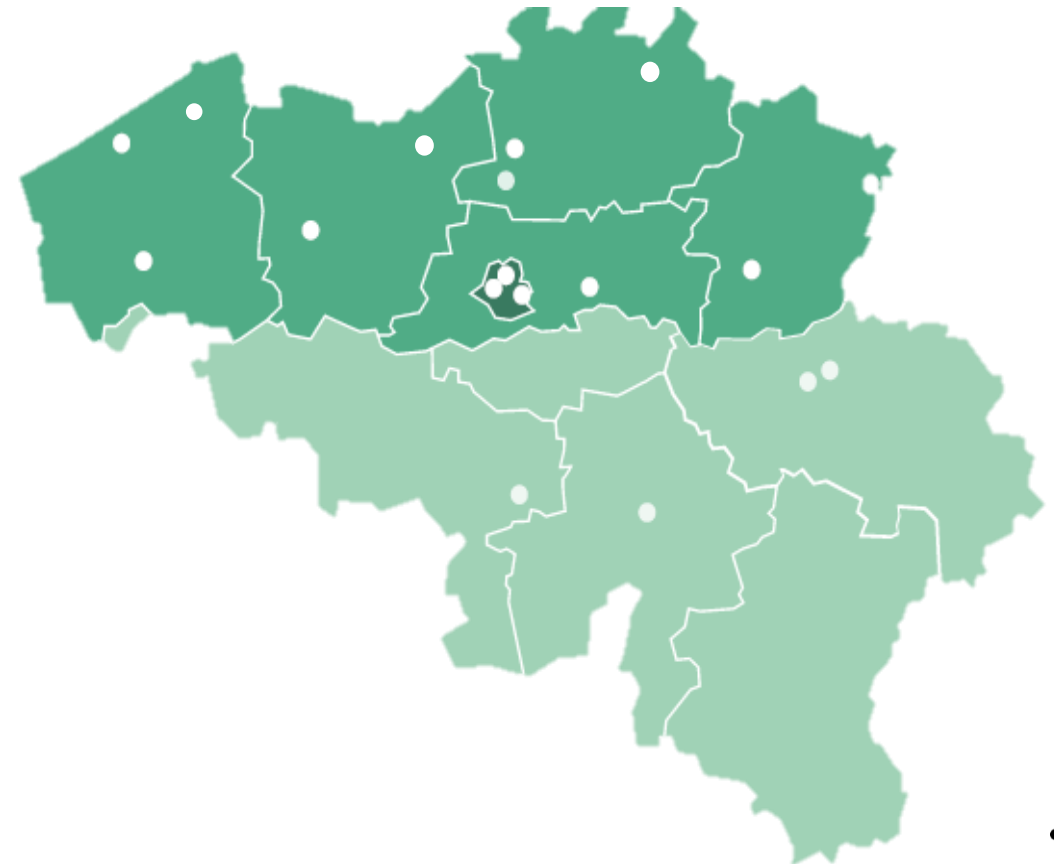
Flora Mbela Lusendi



What is IQECAD ?

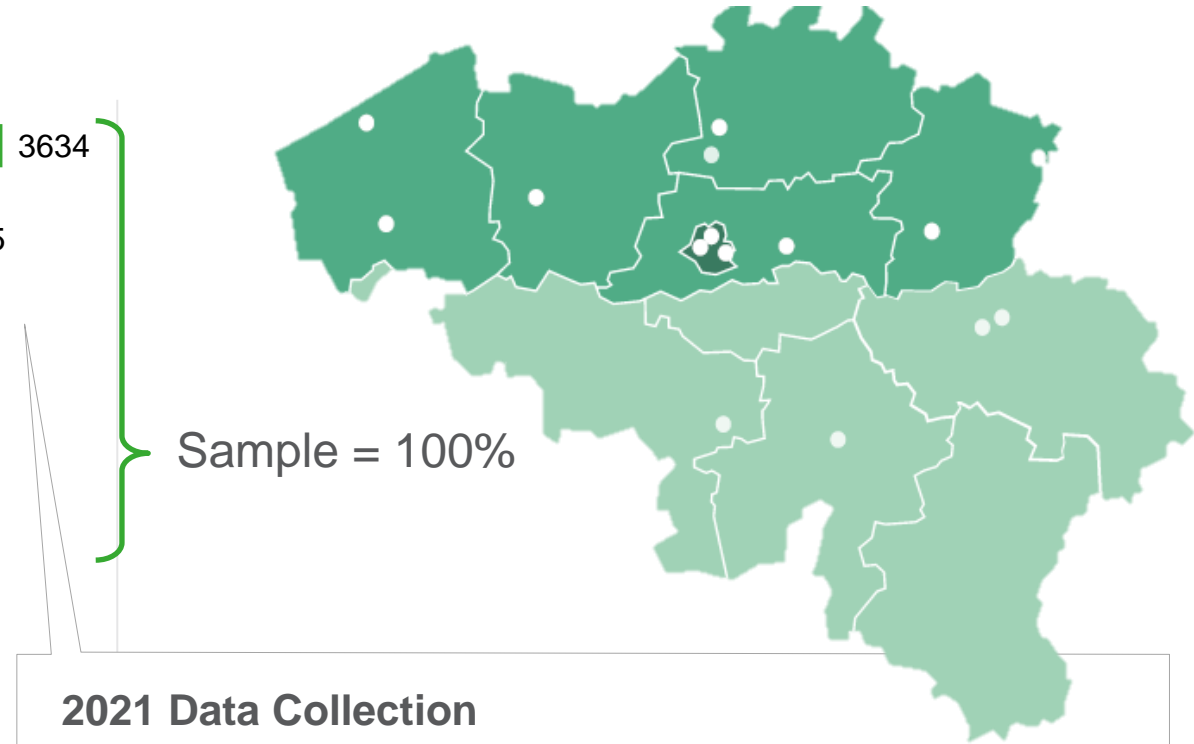
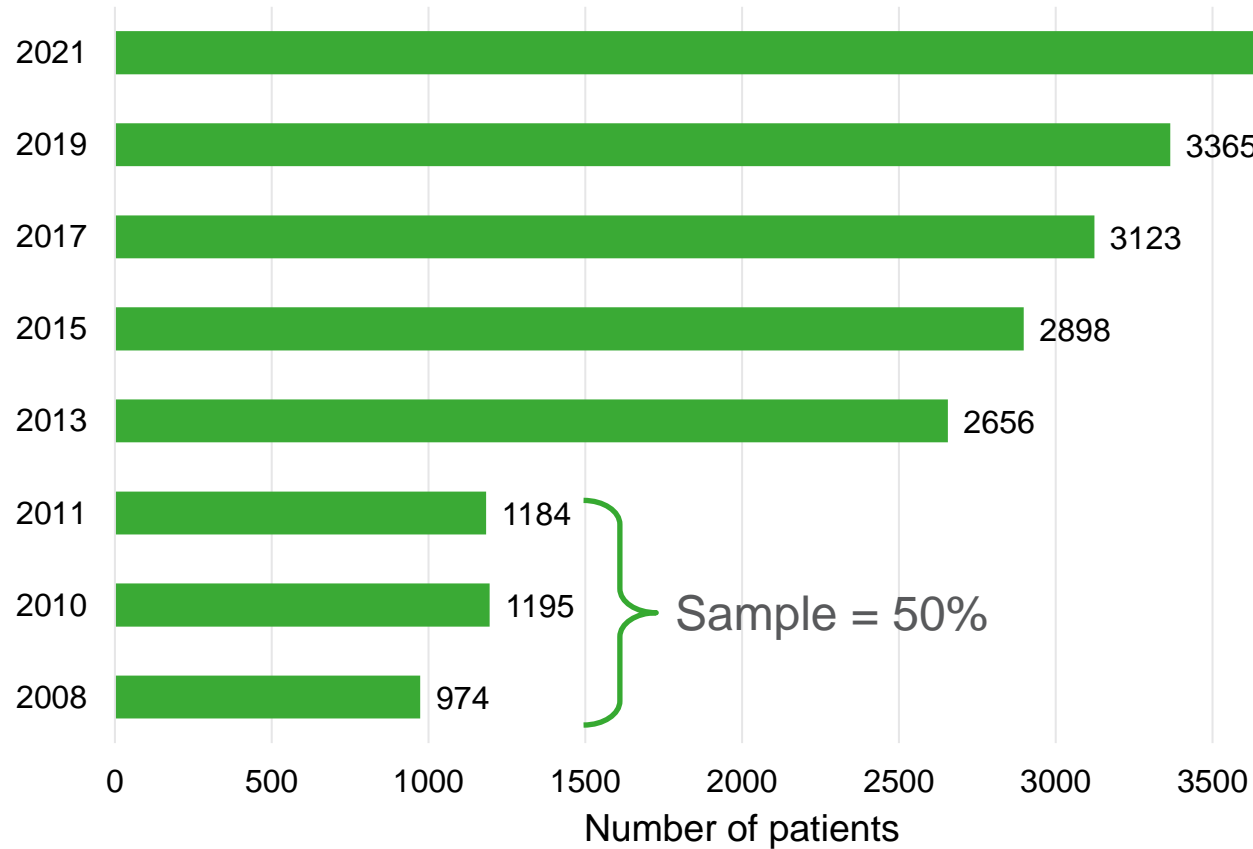
= Initiative for **Q**uality improvement and **E**pidemiology among **C**hildren and **A**dolescents with **D**iabetes
= **C**ontract between paediatric **diabetes centres** and the **RIZIV/INAMI**

- First data collection = 2008 (biennial)
- 18 paediatric diabetes centres across Belgium
- **Who is included ?**
 - Youth < 19 years with type 1 diabetes (DT1)
 - Not pregnant during the audit year
 - Informed consent form signed



What is IQECAD ?

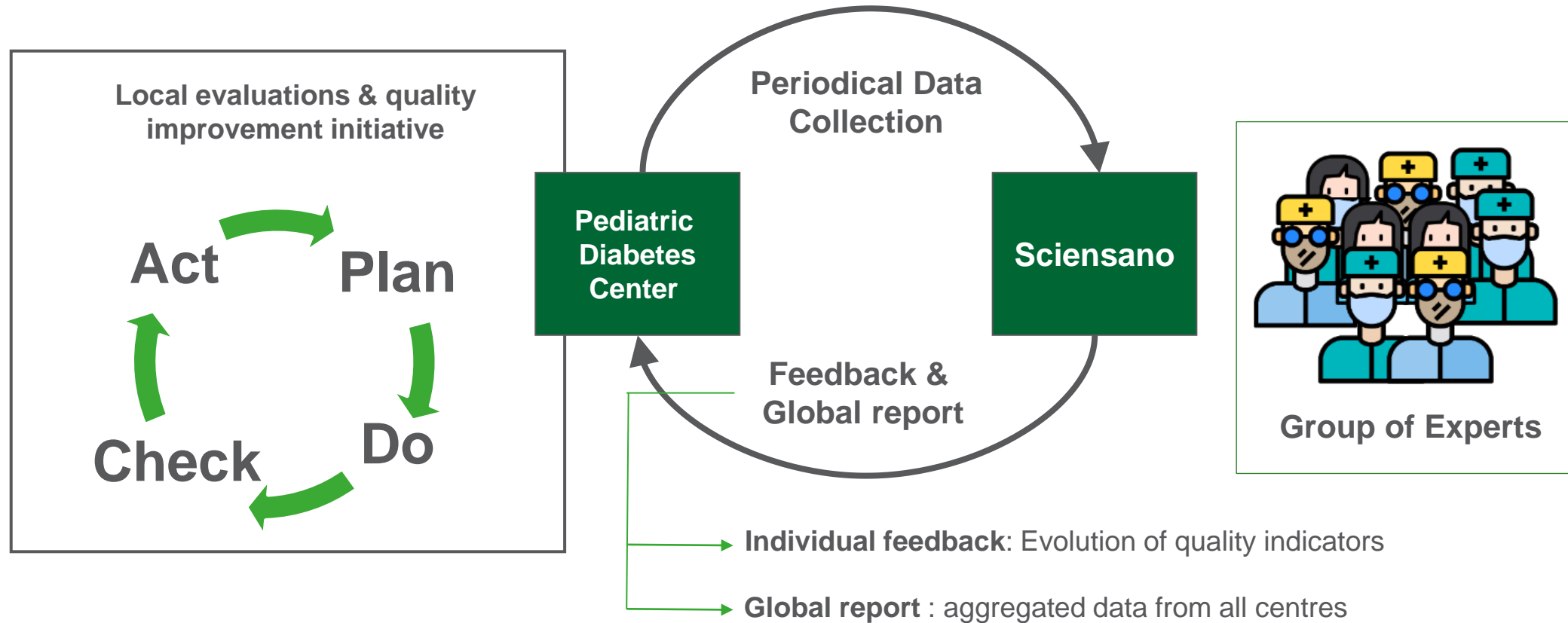
Evolution of the DT1



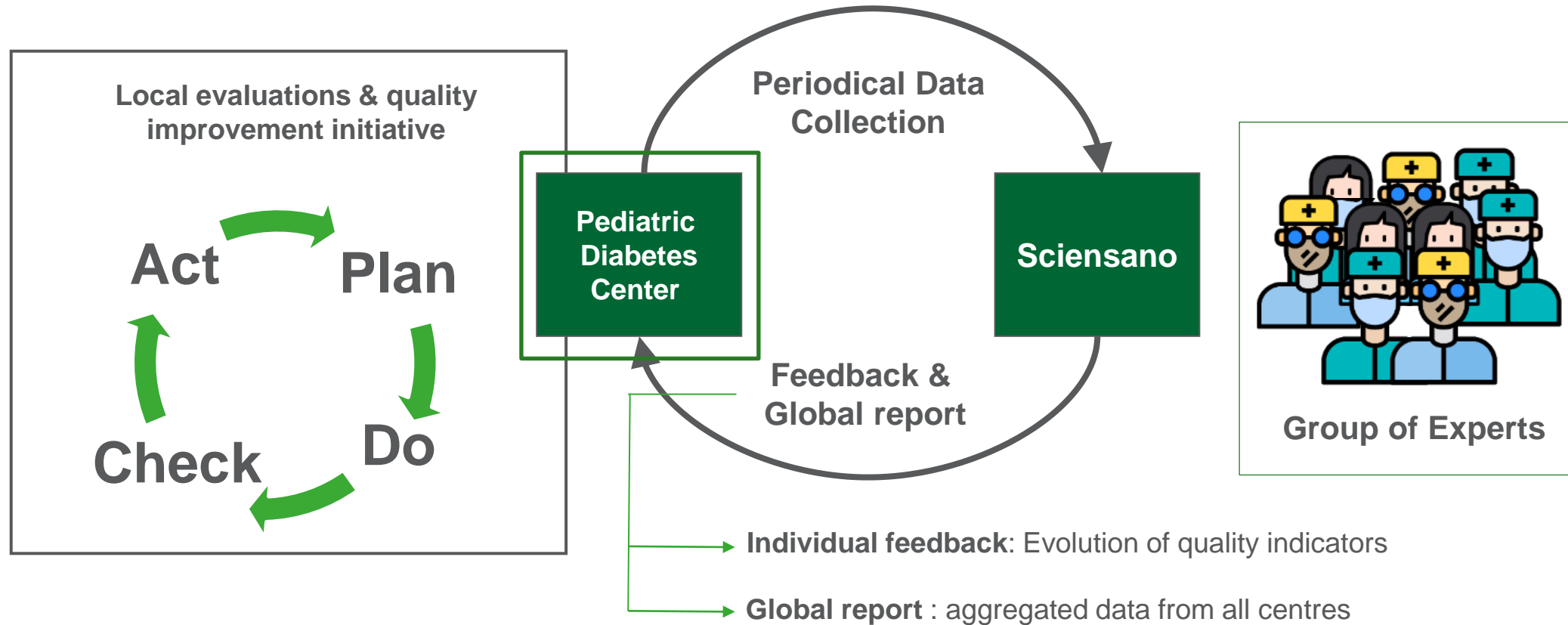
2021 Data Collection

- 17 pediatric diabetic centres
- 3634 patients with DT1 and < 19 years registered
- 98.5% of eligible patients were included

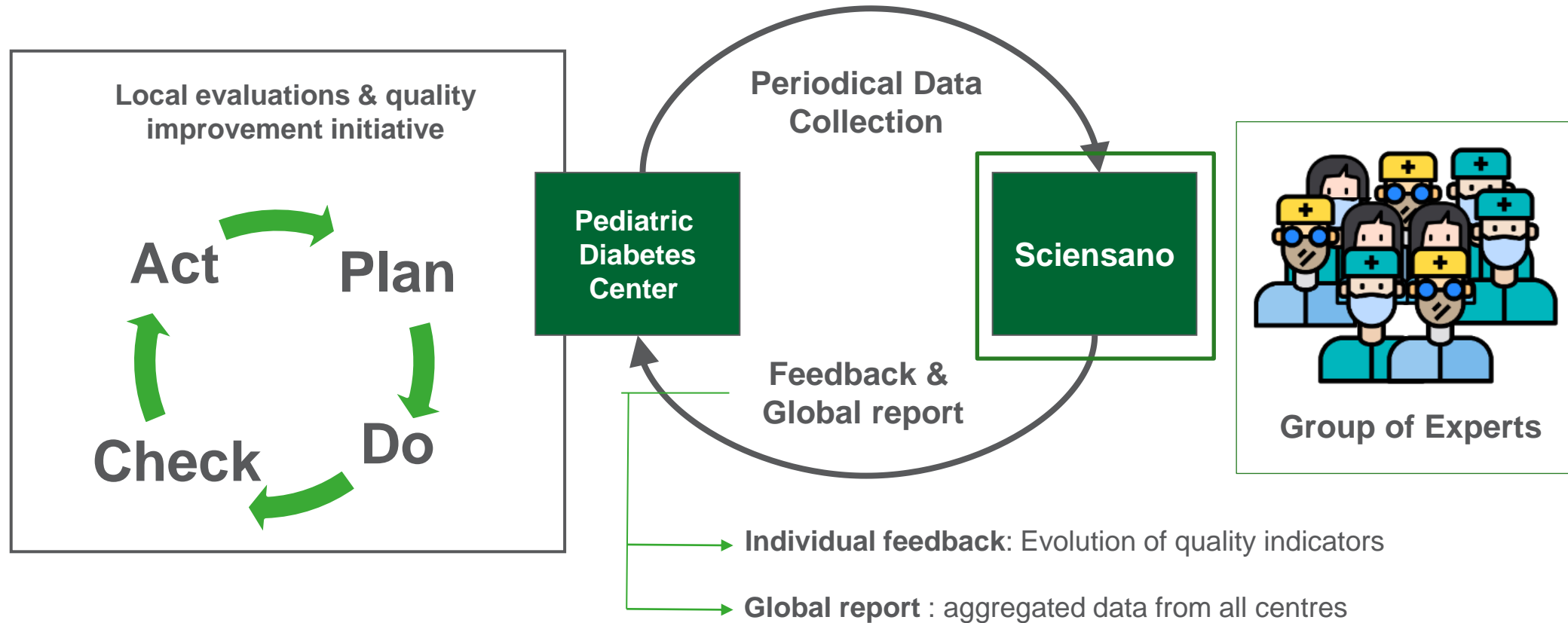
How does it work ?



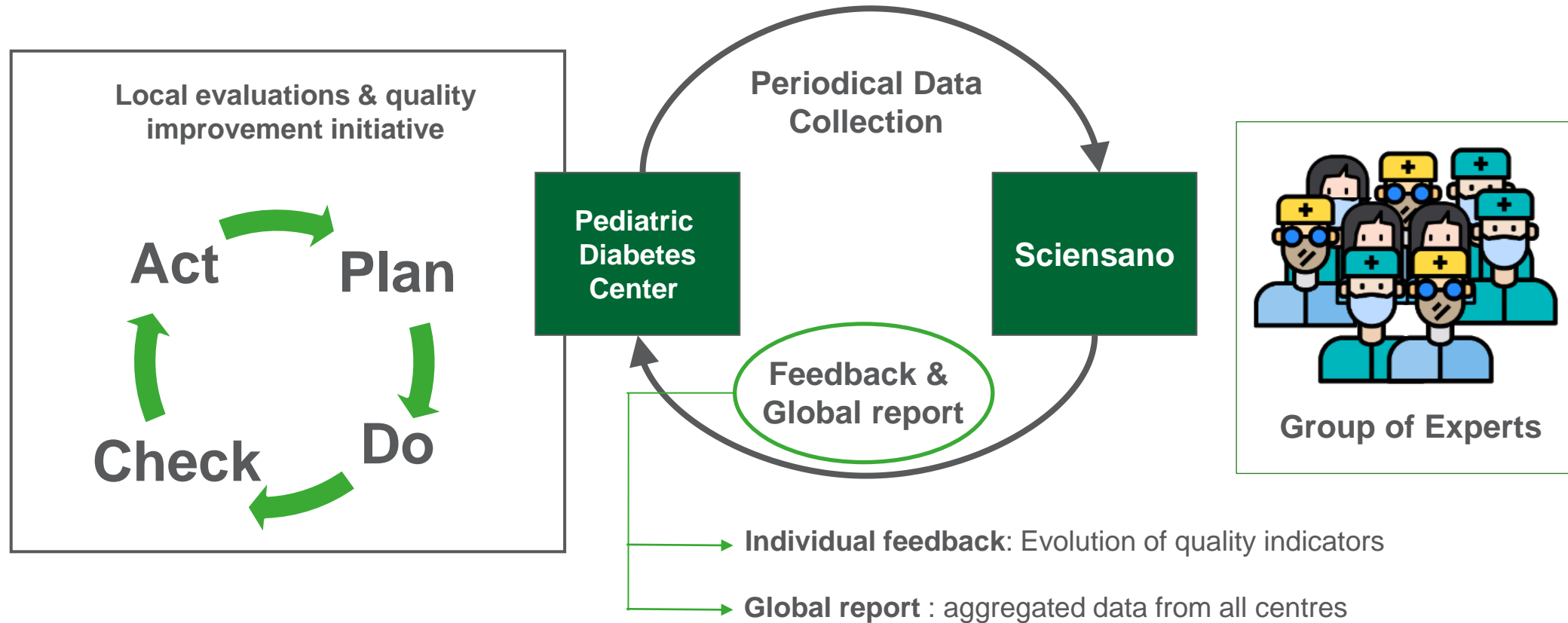
How does it work ?



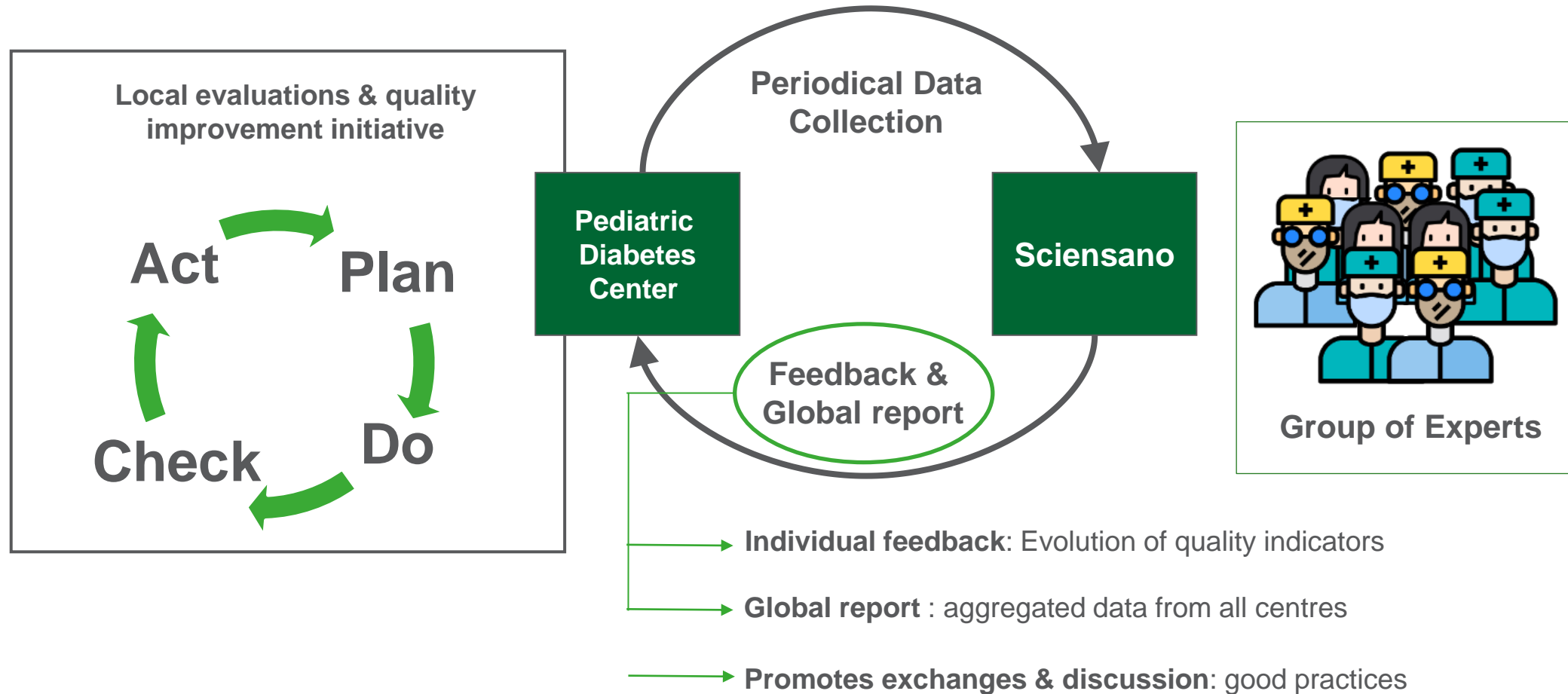
How does it work ?



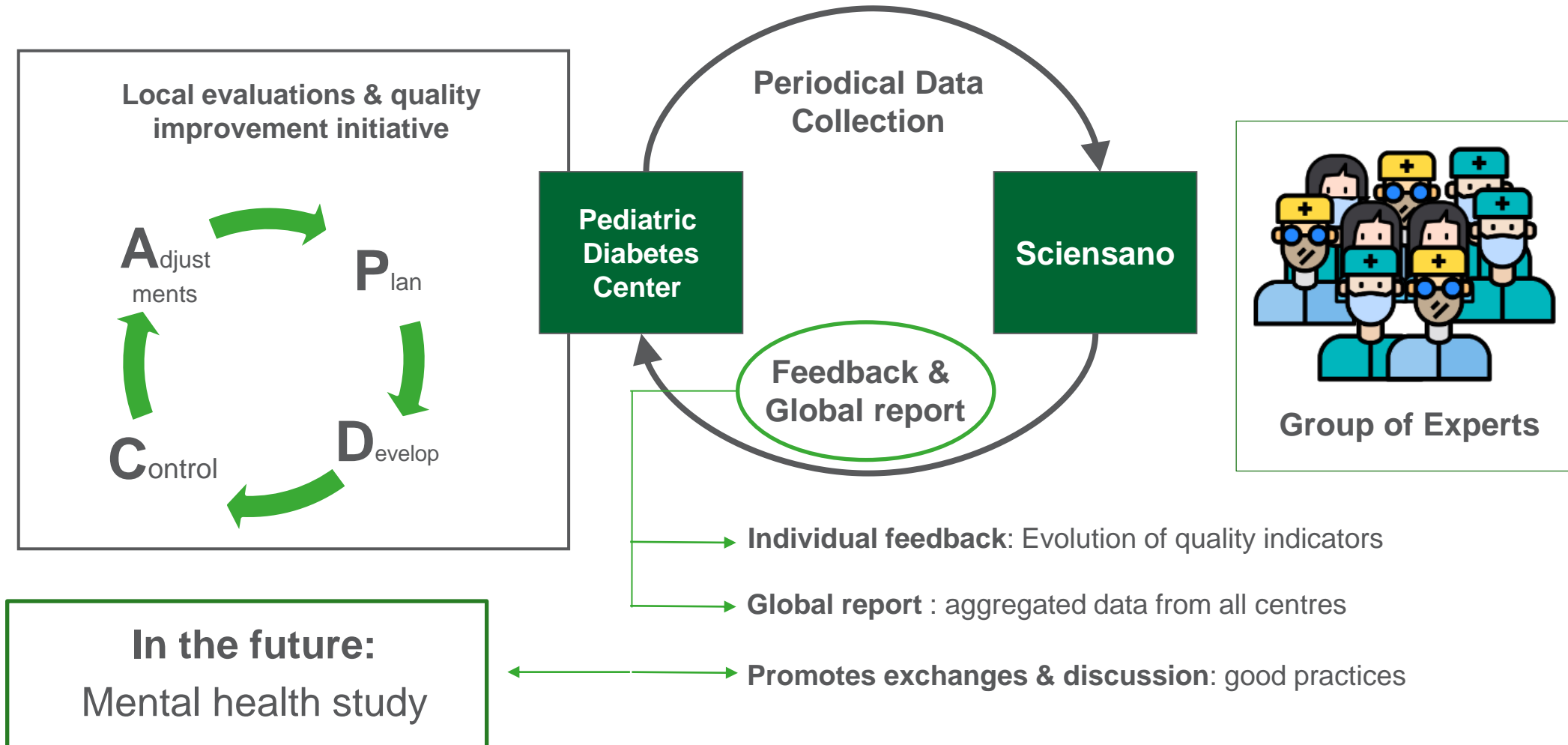
How does it work ?



How does it work ?

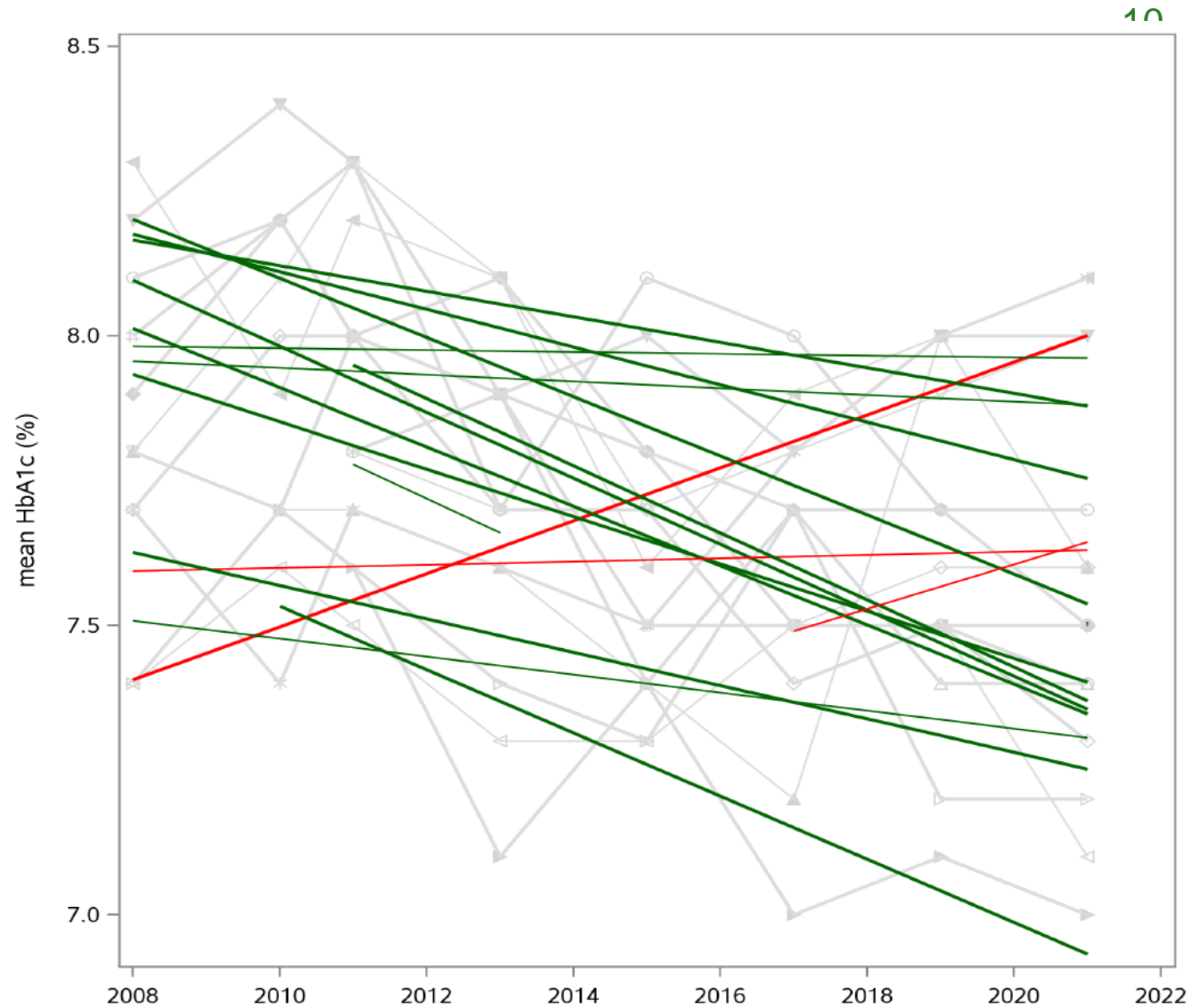


Introduction à IPQE-EAD



Evolution du HbA1c

- **Hbab1c** = How blood sugar level have been controlled over a 3-month period ?
- **Hba1c** = **key** parameter to follow !
- An **improvement** in HbA1c was observed in **14 out of 17 centres**.
- For **8 centres**, this decrease was statistically significant (lines in bold)



IQECAD highlights

Belgium has good position in international HbA1c comparison

DIABETIC
Medicine

DiABETES UK
KNOW DIABETES. FIGHT DIABETES.

RESEARCH: EPIDEMIOLOGY




International comparison of glycaemic control in people with type 1 diabetes: an update and extension

Regina Prigge, John A. McKnight, Sarah H. Wild , Aveni Haynes, Timothy W. Jones, Elizabeth A. Davis, Birgit Rami-Merhar, Maria Fritsch, Christine Prchla, Astrid Lavens, Kris Doggen ... [See all authors](#) 

First published: 10 December 2021 | <https://doi.org/10.1111/dme.14766> | Citations: 13

J. A. McKnight and S. H. Wild are joint senior authors.

[Read the full text](#) >

 PDF  TOOLS  SHARE

Abstract

Aims

To update and extend a previous cross-sectional international comparison of glycaemic control in people with type 1 diabetes.

International comparison (Prigge et al):

- 54,158 children aged < 15 years with type 1 diabetes
- 19 countries or regions between 2016 and 2020
- Median HbA1c (IQR) is presented in order of increasing HbA1c.

➔ Belgium have a excellent position in the ranking !



IQECAD highlights

Belgium has good position in international HbA1c comparison



Country/Region	Data source	N	Median HbA1c % (IQR)	Missing HbA1c (%)
Italy	regional	192	7.2 (6.8; 8.1)	0
Greece	clinic	26	7.2 (6.8; 7.6)	3.8
Belgium	national	2,242	7.3 (6.7; 7.9)	1
Denmark	national	1,869	7.4 (6.7; 8.0)	15.5
Austria	national	1,444	7.4 (6.8; 8.1)	0.6
Netherlands	clinic	583	7.4 (6.9; 8.1)	2.2
Germany	national	17,463	7.5 (6.8; 8.3)	1.3
Slovenia	national	382	7.5 (7.0; 8.1)	0
Australia	regional	627	7.6 (6.9; 8.2)	3.5
England	national	18,514	7.7 (7.0; 8.3)	6.1
Wales	national	1,045	7.7 (7.0; 8.4)	5.6
Scotland	national	1,960	7.8 (7.3; 8.5)	2.2
Finland	regional	131	7.8 (7.3; 8.4)	2.3
France	regional	40	8.0 (7.5; 8.5)	0
Hong Kong	national	228	8.1 (7.3; 9.0)	8.3
Ukraine	national	6,618	8.3 (7.3; 9.7)	13.3
New Zealand	regional	324	8.3 (7.4; 9.6)	8.8
Ireland	clinic	74	8.4 (7.5; 9.2)	12.2
Latvia	national	396	9.1 (7.8; 10.8)	12.1

International comparison (Prigge et al):

- 54,158 children aged < 15 years with type 1 diabetes
- 19 countries or regions between 2016 and 2020
- Median HbA1c (IQR) is presented in order of increasing HbA1c.

➔ Belgium have a excellent position in the ranking !

➔ High quality of care

End

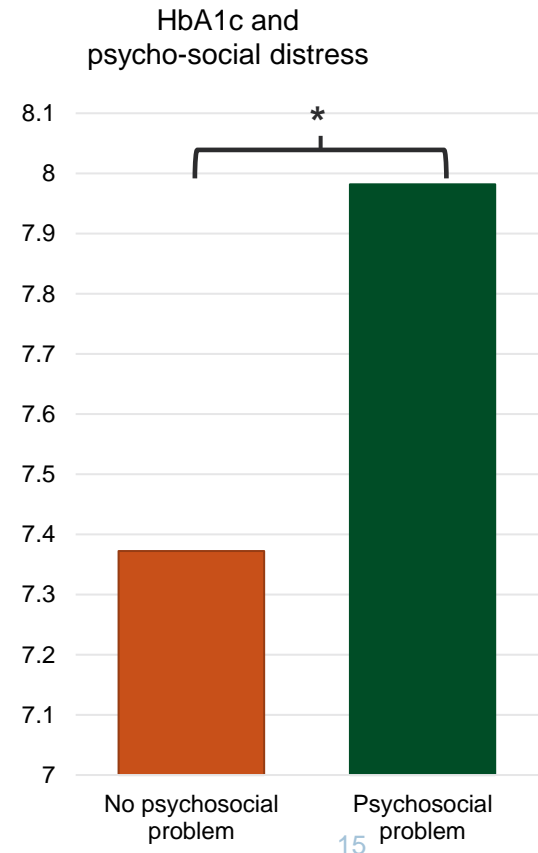
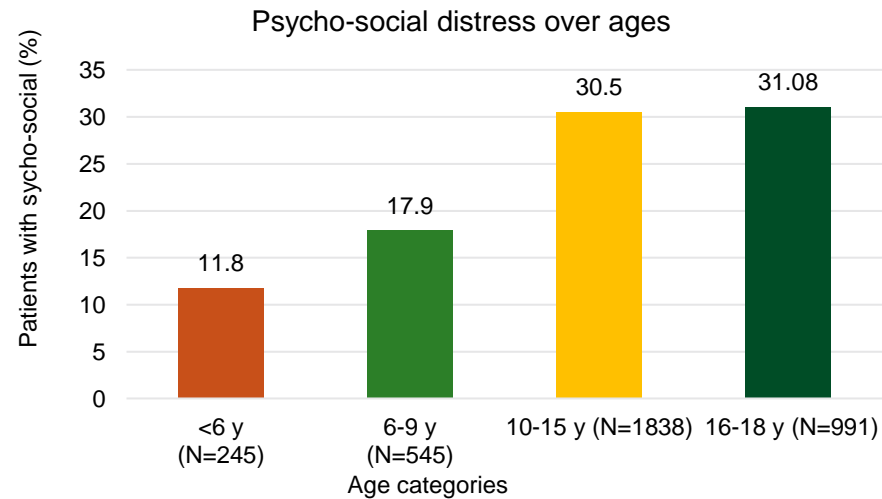
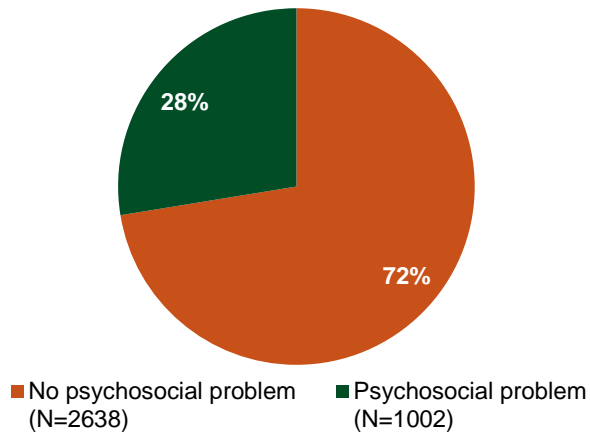


IQECAD highlights

In a near future, use of Patient-Reported Outcome Measures (PROMs) to screen psychosocial distress

- Psychosocial distress = unpleasant emotions an individual has when they are overwhelmed.
- **In diabetes:** Psychosocial distress impacts the quality of life of children with diabetes, complicates the effective management, treatment adherence, which can lead to long term complications.

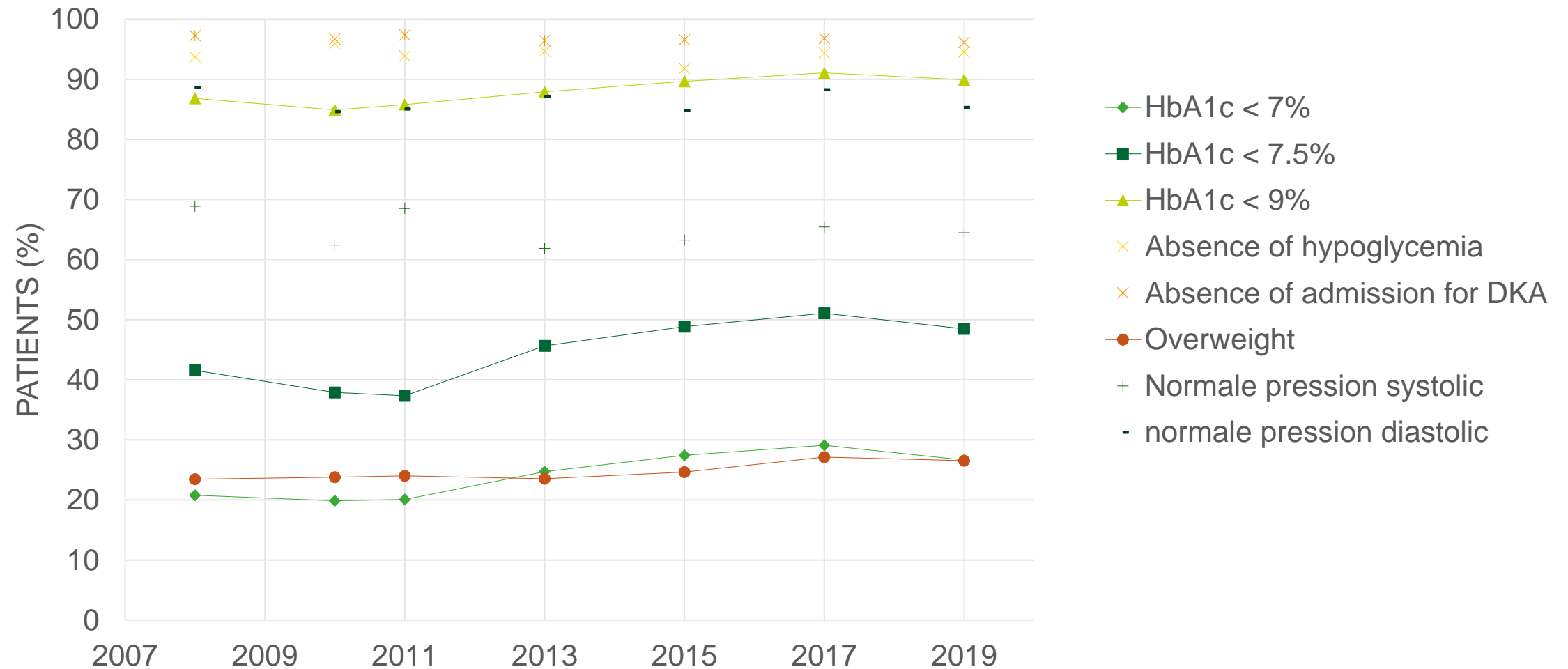
Proportion patients with psycho-social distress (N=3640)



Development of a platform (online questionnaire) to assess psychosocial distress in children with diabetes

Outcomes indicators

EVOLUTION OUTCOME INDICATORS



Process indicators

EVOLUTION – PROCESSUS INDICATORS

