

# Diabetes management in Lithuania

## The results of questionnaires:

Questionnaire on practices for prevention and management of diabetes in EU member states

Questionnaire on National Diabetes Plans in EU and EFTA member states



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This presentation arises from the Joint Action addressing chronic diseases and healthy ageing across the life cycle (JA-CHRODIS) which has received funding from the European Union, under the framework of the Health Programme (2008-2013).

# Demographic situation in Lithuania

## Demographic situation in Lithuania 1990-2012\*

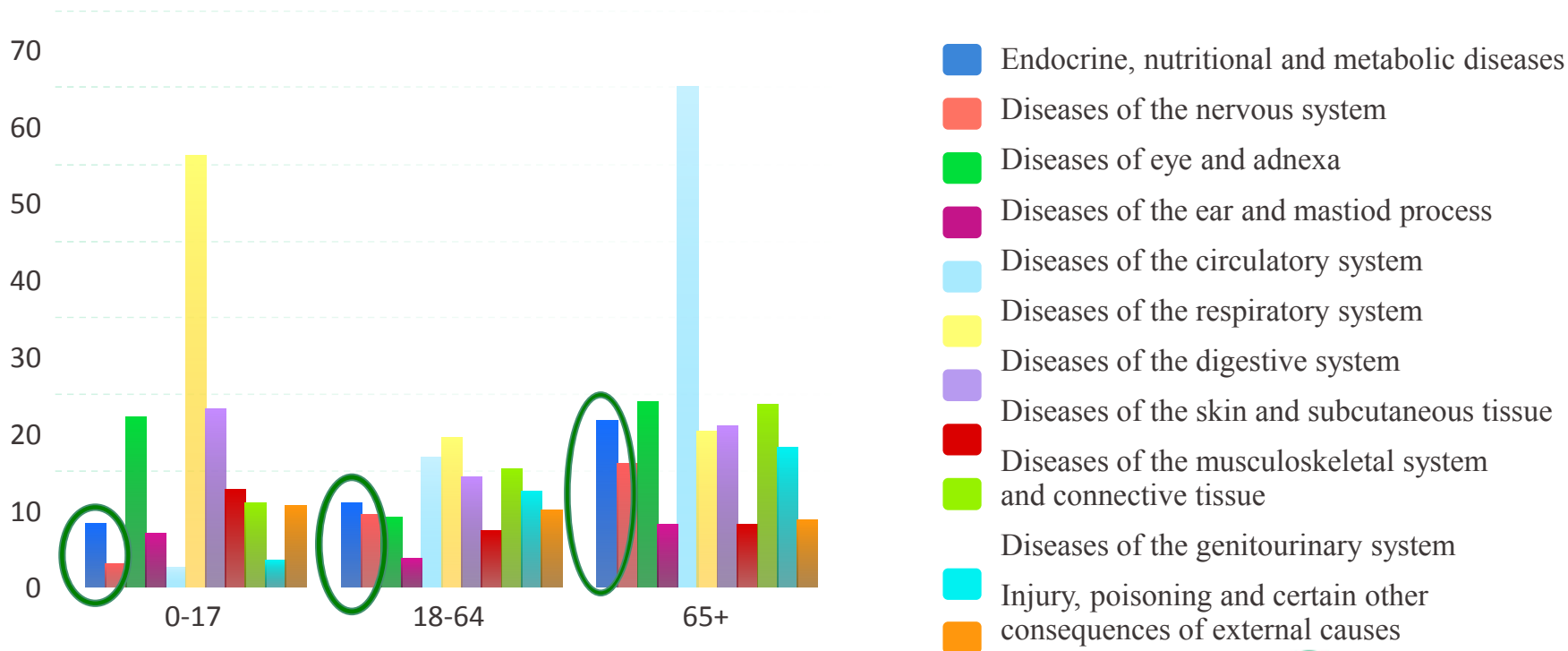
Demographic data	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012
Average number of permanent inhabitants, thousands	3697.8	3629.1	3499.5	3322.5	3269.9	3231.3	3198.2	3162.9	3097.3	3028.1	2987.8

At the beginning of 2013, there were 2971.9 thousand inhabitants in Lithuania,  
i.e. 31.7 thousand less than at the beginning of 2012.  
67% of decrease of population was caused by migration.

*Lithuanian Department of Statistic data, Health Information Center, 2013*

# Number of Ill Persons by Groups of Diseases in 2012 per 100 pop. by age groups

(diseases or traumas registered in health care institutions)



# Practising physicians by speciality at the end of 2011 in Baltics

Health in the Baltic Countries 2011, 20th edition, 2013.

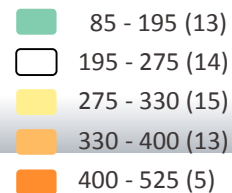
	Estonia		Latvia		Lithuania	
	Number	Per 10.000 population	Number	Per 10.000 population	Number	Per 10.000 population
TOTAL	4372	32.6	6568	32.2	12407	38.8
of them:						
Family doctors/general practitioners	869	6.5	1311	6.4	1854	5.8
Internal medicine	527	3.9	671	3.3	2142	6.7
Surgery	419	3.1	608	3	1181	3.7
Paediatrics	163	1.2	307	1.5	1040	3.3
Gynaecology (including obstetrics)	268	2.0	410	2	657	2.1
Oncology	37	0.3	61	0.3	101	0.3
Otolaryngology	99	0.7	145	0.7	272	0.9
Ophthalmology	123	0.9	206	1	344	1.1
Anaesthesiology	271	2.0	341	1.7	681	2.1
Neurology	120	0.9	227	1.1	435	1.4
Psychiatry	183	1.4	246	1.2	529	1.7
Addiction specialists	-	-	60	0.3	20	0.1
Tuberculosis	-	-	107	0.5	7	0.02
Infectology	38	0.3	52	0.3	59	0.2
Epidemiology	-	-	17	0.1	-	-
Dermatology & venerology	76	0.6	119	0.6	168	0.5
Radiology	182	1.4	240	1.2	461	1.4
Pathology	41	0.3	37	0.2	60	0.2
Forensic medicine	-	-	2	0.01	50	0.2
Laboratory	145	1.1	158	0.8	89	0.3
Hygiene	-	-	2	0.01	-	-
Others	802	6.0	1241	6.1	2257	7.1

# E10-E14

## New cases of diabetes

**314,14 / 100 000 inhab.  
in 2012.**

Ambulatory  
incidence 100 000 inhab.



### Lowest rates

Municipality	Incidence 100 000 inhab.
Alytaus r. sav.	89,2
Mažeikių r. sav.	127,1
Joniškio r. sav.	131,3
Utenos r. sav.	137,1
Kazlų Rūdos sav.	147,4

### Highest rates

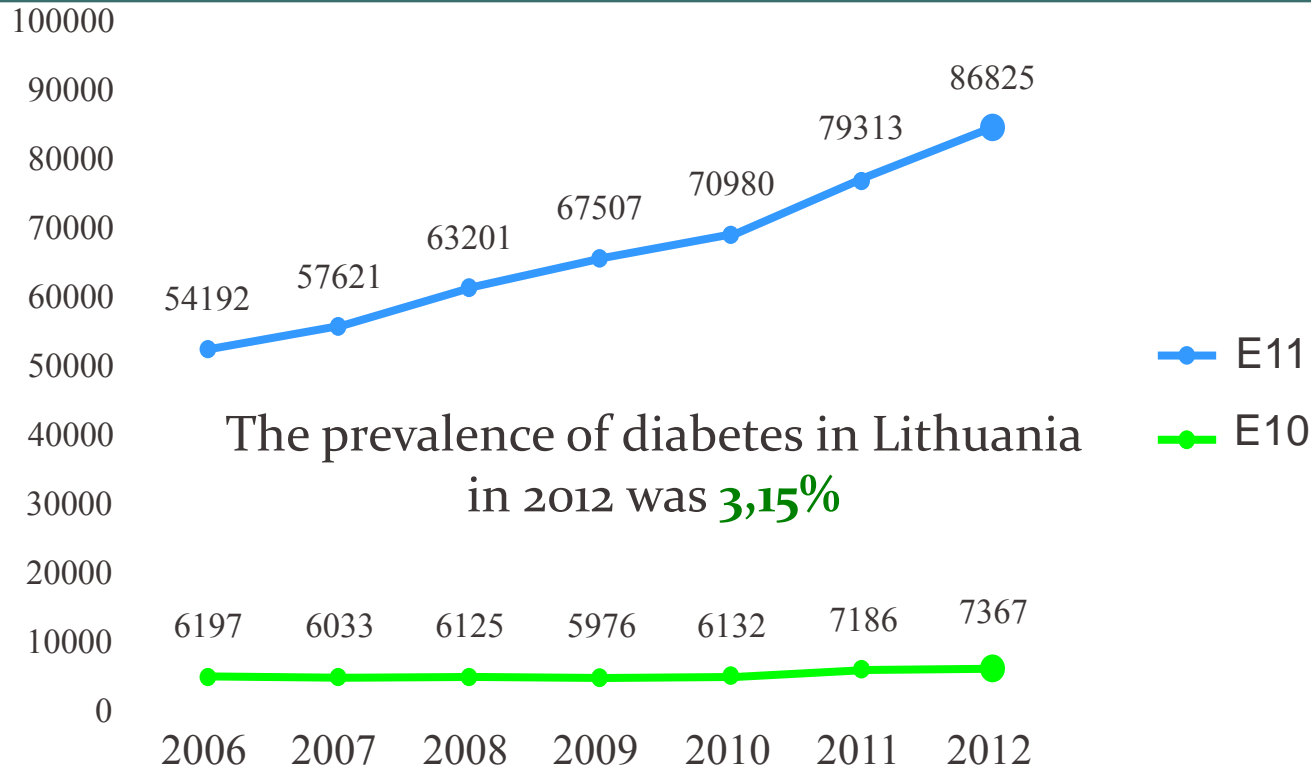
Municipality	Incidence 100 000 inhab.
Telšių r. sav.	524,9
Jonavos r. sav.	509,8
Širvintų r. sav.*	468,0
Šalčininkų r. sav.	442,6
Vilniaus m. sav.	419,0

Higienos institutas. Sveikatos informacijos centras.  
Biostatistinės analizės skyrius. 2012.

# Diabetes epidemiology in Lithuania: 2013

DIAGNOSIS	No.	TLK-10 Code	Total		From Total			
					0-17 year		18+ year	
			Abs. No.	1000 inhab.	Abs. No.	1000 childr.	Abs. No.	1000 adult
Endocrine, nutritional and metabolic diseases	4	E00-E90	376262	125.93	47100	85.63	329162	135.03
Thyroid dysfunction, of which:	4.1	E00-E07	132305	44.28	6313	11.48	125992	51.68
other hypothyroidism	4.1.1	E03	24517	8.21	505	0.92	24012	9.85
thyrotoxicosis (hyperthyroidism)	4.1.2	E05	9808	3.28	119	0.22	9689	3.97
diabetes, of which:	4.2	E10-E14	92043	30.81	759	1.38	91284	37.45
insulin-dependent diabetes mellitus	4.2.1	E10	7367	2.47	713	1.30	6654	2.73
non-insulin dependent diabetes mellitus	4.2.2	E11	95023	29.06	42	0.08	66783	35.60
hypoparathyroidism	4.3	E20	152	0.05	23	0.04	129	0.05
other hypophysis hyperfunction	4.4	E22.8	55	0.02	34	0.06	21	0.01
hypopituitarism	4.5	E23.0	474	0.16	249	0.45	225	0.09
diabetes insipidus	4.6	E23.2	257	0.09	28	0.05	229	0.09
adrenogenital disorders	4.7	E25	164	0.05	60	0.11	104	0.04
primary adrenal cortical insufficiency (Addison's disease)	4.8	E27.1	144	0.05	3	0.01	141	0.06
	4.9	E28-E30	11197	3.75	963	1.75	10234	4.20
gonadal disease	4.1	E55	3745	1.25	3465	6.30	280	0.11
Vitamin D deficiency	4.11	E66	43445	14.54	7234	13.15	36211	14.85
obesity	4.12	E70-E90	149840	50.15	27518	50.03	122322	50.18
metabolic disorders, including:	4.12.1	E78	88377	29.58	150	0.27	88227	36.19
lipoprotein metabolic disorders and other lipidemia	4.12.2	E84	154	0.05	63	0.11	91	0.04
cystic fibrosis								

# Diabetes epidemiology in Lithuania: dynamics of E10 and E11



# Diabetes prevention and management

## Section A - PREVENTION OF DIABETES: FOCUS ON PEOPLE AT HIGH RISK

- The Lithuanian High Cardiovascular Risk (LitHiR) primary prevention programme

## Section B - MANAGEMENT OF DIABETES

### B1. DIABETES MANAGEMENT PROGRAM

- In 2012 new regulations regarding reimbursement of diabetes treatment implemented.
- In 2011 the payment for diabetic nurse consultations (diabetes education and diabetes foot care) was implemented.
- Information on diabetes complications, medication use is available on request from National Health Insurance fund.



# Support diabetes care: diabetes nurses and diabetic foot care

- In 2012: 31118 specialists, having higher or further medical education (non doctors) or 104,7/10 000 inhab., from them 23693 nurses (including obstetricians) or 79,7/10 000 inhab.
- 118 nurses are members of Society of Lithuanian Diabetes Nurses Association (in 2011).
- In 2011 payment for diabetes foot care and diabetes education was implemented.

# Diabetes care: health care structure

## T1DM Patient Pathway

GP/pediatrician suspects and establishes a preliminary diagnosis for T1DM patient

### Signs & Symptoms:

As soon as possible

- Polyuria
- Polyphagia
- Polydipsia
- **Dramatic loss in body weight**
- **Ketonuria and/or Ketoacidosis**
- **Hyperglycemia**
- Blurred vision
- Genital/oral thrush
- Pins & needles
- Most likely to be obese in appearance

Endocrinologist verifies a diagnosis and initiates treatment for T1DM patient

## T2DM Patient Pathway

GP/pediatrician/internist/endocrinologist verifies a diagnosis and initiates treatment for T2DM patient

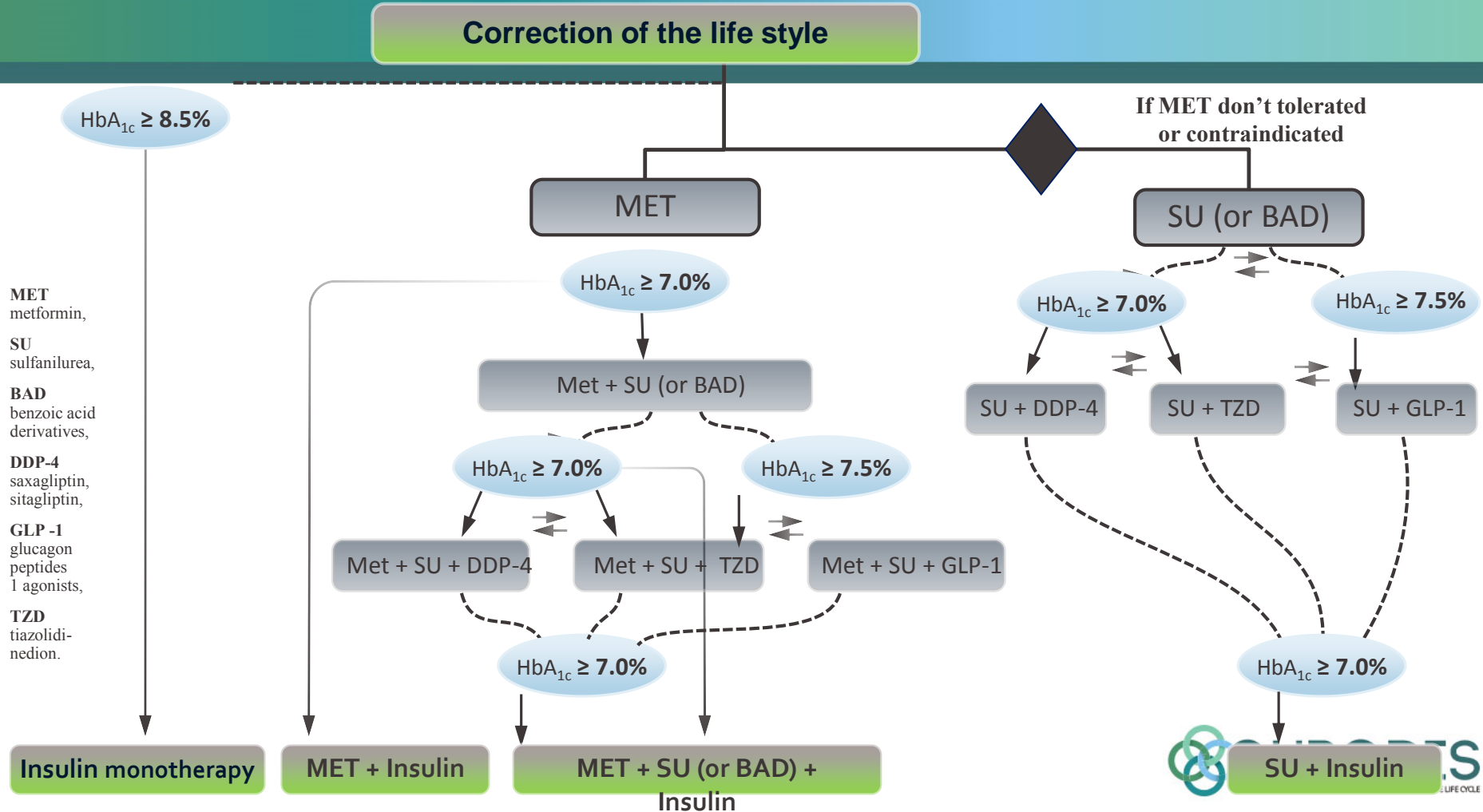
### Signs & Symptoms:

**HbA<sub>1c</sub>:**  
**≥ 8,5 %**  
**or**  
**> 7,0 %**  
**in next**  
**6 months**

- Polyuria
- Polyphagia
- Polydipsia
- Lethargy (slow progression)
- Blurred vision
- Genital / oral thrush
- Pins/needles of legs
- Most likely to be obese in appearance
- Hyperglycemia

Endocrinologist verifies a diagnosis and initiates treatment for T2DM patient

# Treatment scheme for Type 2 Diabetes LT



# Reimbursement: endocrine, nutritional and metabolic diseases

No.	Medicines	ICD-10	Prescribing Conditions
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## 1. Diabetes. Diabetes in pregnancy. Post procedural hypoinsulinemia (100 %)

*Prescribed following regulations from the Minister at the MoH*

1.	Gliclazidum	E10 – E11, E89.1, O24	Endocrinologist or Paediatric endocrinologist initiates treatment. Prescription can be extended by the Internist, Paediatrician or GP
2.	Glimepiridum	E10 – E11, E89.1, O24	
3.	Glipizidum	E10 – E11, E89.1, O24	
4.	Gliquidonum	E10 – E11, E89.1, O24	
5.	Glucagonum	E10 – E11, E89.1, O24	
6.	Exenatidum	E11,	
7.	Insulinum	E10 – E11, E89.1, O24	
8.	Metforminum	E10 – E11, E89.1, O24	
9.	Pioglitazonum	E11	
10.	Pioglitazonum et Metforminum	E11	
11.	Repaglinidum	E10 – E11, E89.1, O24	
12.	Sitagliptinum	E11	
13.	Saxagliptinum	E11	
14.	Sitagliptinum et Metforminum	E11	
15.	Linagliptinum	E11	

# Reimbursement of *SMBG* in DM (both types)

## Situation Overview

(Valid since 2014 01 02)

(Test strips amount per year)	T1DM		T2DM		Pregnancy
	Children's (till 18th years)	Adults	PwD with insulin	PwD with OAD	Gestational and/or additional
Lithuania 100% reimbursement	1800	900	300	150	150/ 600 for pregnancy period

# Reimbursements schemes for insulin pumps

## Situation Overview

(amount per year)	Children/ Pregnancy				Comments
	Pump	Cannula	Transfer Set	Cartridge	
Lithuania (up to 19 years)	no	120	60	48	Pregnancy= planning pregnancy period (1 year) + pregnancy period ( 9 month)

# Diabetes prevention and management

## Section C – EDUCATION PROGRAMS FOR PERSONS WITH DIABETES AND TRAINING FOR PROFESSIONALS

- National Education Programme for Persons with Diabetes is currently under development.
- Diabetes nurses initial training programme is approved. Continues training – under development.
- Doctors - diabetes training lead by Universities during studies. Postgraduate training initiated by Universities, LSE and pharma industry.

# Patients organization: The Lithuanian Diabetes Association



- In 1987 Dr. Feige Nareviciene established the first club for diabetics in Lithuania, called DIA.
- The Lithuanian Diabetes Association was founded on December 9, 1989.
- There are now **over 50 clubs** throughout the country which help the work of the Association locally.
- At present the LDA comprises over **5 thousand members**.



- ***Diabetes Control Programme (DCP) 2006-2007***

I. Early diagnosis of diabetes in high risk subjects (10 regions, 450.000Lt (130.000Eu)).

Results: OGTT performed in 42.574 subjects: DM diagnosed in **4.7%**; Impaired glucose tolerance – in **10.6%**; Impaired fasting glucose – in **12.0%**

II. Information spread for public (on DM risk, healthy living, physical activity)

Results: 5 TV and 3 radio shows; 18 publications in national and regional media; 18 publications for DM patients, newspaper “Diabetas” etc.

III. Education for professionals and patients

Results: 9 teaching materials for GP’s and students; 8 seminars for GP’s and specialists, 4 seminars for diabetes nurses, national conference on diabetes management for GP’s and specialists; 2 conferences for diabetes nurses; summer camp for type 1 DM patients.

- *Diabetes Control Programme (DCP) 2009-2011*

## *Results*

?

# The main obstacles for the development of NDP

- *Lack of the leadership in the development of the NDP.*
- *Lack of baseline information about DM management situation in LT.*
- *Local regulations by law stating that state funded programmes cannot be longer than 3 years and after should be re-vised.*
- *Lack of persistency.*
- *Lack of financial recourses.*
- *Lack of control how already available recommendations are followed.*

# Under the development

- Diabetes care guidelines – Lithuanian Society of Endocrinology
- National Diabetes Programme – Ministry of Health, LSE, patients organization – LDA, National Health Insurance Fund
- The follow-up care of diabetes patients with insufficient control (HbA1c >7%) is planned to be implemented at the end of 2014.

# The Joint Action on Chronic Diseases and promoting healthy ageing across the life cycle (JA-CHRODIS)\*

**\* THIS PRESENTATION ARISES FROM THE JOINT ACTION ON CHRONIC DISEASES AND PROMOTING HEALTHY AGEING ACROSS THE LIFE CYCLE (JA-CHRODIS) WHICH HAS RECEIVED FUNDING FROM THE EUROPEAN UNION, IN THE FRAMEWORK OF THE HEALTH PROGRAMME (2008-2013)**

