WP7

Diabetes: a case study on strengthening health care for people with chronic diseases

Task 2
Secondary prevention of type 2 diabetes

CHRODIS
ADDRESSING CHRONIC DISEASES & HEALTHY AGEING ACROSS THE LIFE CYCLE

TECHNISCHE UNIVERSITÄT DRESDEN

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Quality criteria/key components for high quality of care for people with diabetes

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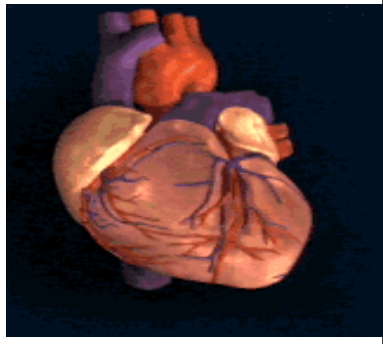
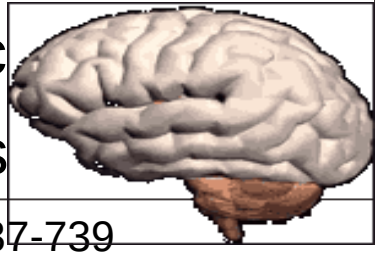
Micro-/Macrovascular Complications of Diabetes

Amputation rates	→	40 x higher
Myocard infarction rates	→	2 – 3 x higher
Apoplex rates	→	2 – 3 x higher
Hypertension rates	→	2 – 3 x higher
Lipid disorders	→	3 x more
Metabolic Vasc. Syndrome	→	ca. 80% of diabetic patients





(1) Panzram G, Diabetologia 30 (1987) 123 – 131, (2) MMW 40 (1991) 737-739

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The Good Message

There is evidence available, that cardiovascular and diabetesspecific complications can be stopped or reduced

as a result of a good disease management!

Glossary

Diabetes (disease) management programmes
are targeting intervention strategies for secondary prevention of diabetes.

Component parts should be, for example:

- weight reduction programmes, lifestyle improvement programmes, quit smoking programmes as well as
- self-management programmes, education programmes and pharmacological therapies etc.

→to avoid further micro- and macrovascular complications and to improve the prognosis of diabetic patients.

Disease Management

4 components:

1. **Clinical guidelines** (as the knowledge base)
2. **Integrated care** (a cross-sectoral health care system)
3. **Continuous quality improvement** (i.e. in quality circles)
4. **plus active empowerment of diabetic patients**

[Hunter 1997]

Key Components for High Care Quality: 1) Indicators for Structure Quality

C1 Complex practice guidelines for patients with multiple chronic diseases (i.e. MVS) available

- **with criteria for in time/early transfer** to the next care level
- **with rules/standards for cooperation** between the care level and integrated care, resp.
- **with risk adjusted therapeutic targets**

C2 Cross-sectoral and population based integrated care (interfaces, pathways)

- **Cooperation of interdisciplinar working practice teams → bottom up programs!**

C3 Cross-sectoral quality management of physicians, outcome-oriented!

- **Regularly evaluation of the outcome of the management program/care model**
- **Regularly feed-back reports to the physicians**
- **Longitudinal monitoring of patients/ Telemedicine**

C4 Patient centered approach → to raise the value for the patient (value based health care)

- **Patient empowerment programs**
- **Shared decision making of physician and patient**
- **Risk assessment and stratification,** respectively

→ **Identification of homogeneous groups of patients** (by risk adjusted therapeutic targets)

- **Priorization of therapeutic elements for patients with multiple chronic diseases/conditions**
- **Early diagnosis of multimorbidity (50+) → early therapy → secondary prevention**

→ **Participating rate of patients!**

2) Indicators for Process Quality

Regularly Self-Management	Quarterly Examination	Annual Examination	Regularly Education
Blood glucose (FBG + pp. BG) • OAD: 2 x /week • CT: 3 x /week • ICT: 3-4 x /week **Day-Night-Profile** • Insulin therapy: 2 x monthly **Urine glucose self-monitoring (not necessary!)** **Blood pressure (RR)** **Weight checks**	• **HbA1c** • **Body weight** • **Blood pressure** • **Foot inspection** • **Documentation of findings**	• **Lipid parameters** • **Uric acid** • **Creatinine** • **Albumin i. U./ i.e. Micraltest** • **Foot pulses and tuning fork test** • **Clinical examination** • **ECG + 24 h RR profile** • **Ocular fundus** • **Internal quality management**	**Refresher Courses every 3 years**

Indicator	Unit	Gender	Targets: (MVS with ≥3 factors → CHD 10-years risk > 30% → very high risk)
			Target to be aimed at → optimal
Weight	%		reduce by 5%
Waist circumference	cm	males	< 102
		females	< 88
TG	mmol/l		< 1.7
	mg/dl		< 150
HDL-C	mmol/l	males	> 1.1
	mg/dl		> 43
	mmol/l	females	> 1.3
	mg/dl		> 50
LDL-C	mmol/l		< 2.6 →1.8*
	mg/dl		< 100 →70
RR	mmHg		< 140/85 →130/80**
Fasting glucose	mmol/l i.P.		< 5.6
	mg/dl		< 100
pp. glucose	mmol/l		< 7.8
	mg/dl		< 140
HbA1c	%		< 6.5*** (in patients with DM)
	mmol/mol		< 48

3) Intermediate outcome indicators

Therapeutic aims for patients with DMT2

+ Prevalence of the Metabolic Vascular Syndrome (MVS)

Long term outcome indicators

- **Major limb amputation rates**
- **Myocard infarction rates**
- **Apoplex rates**
- **Cardiovascular mortality rates**

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Problematic of the Natural History of Diabetes

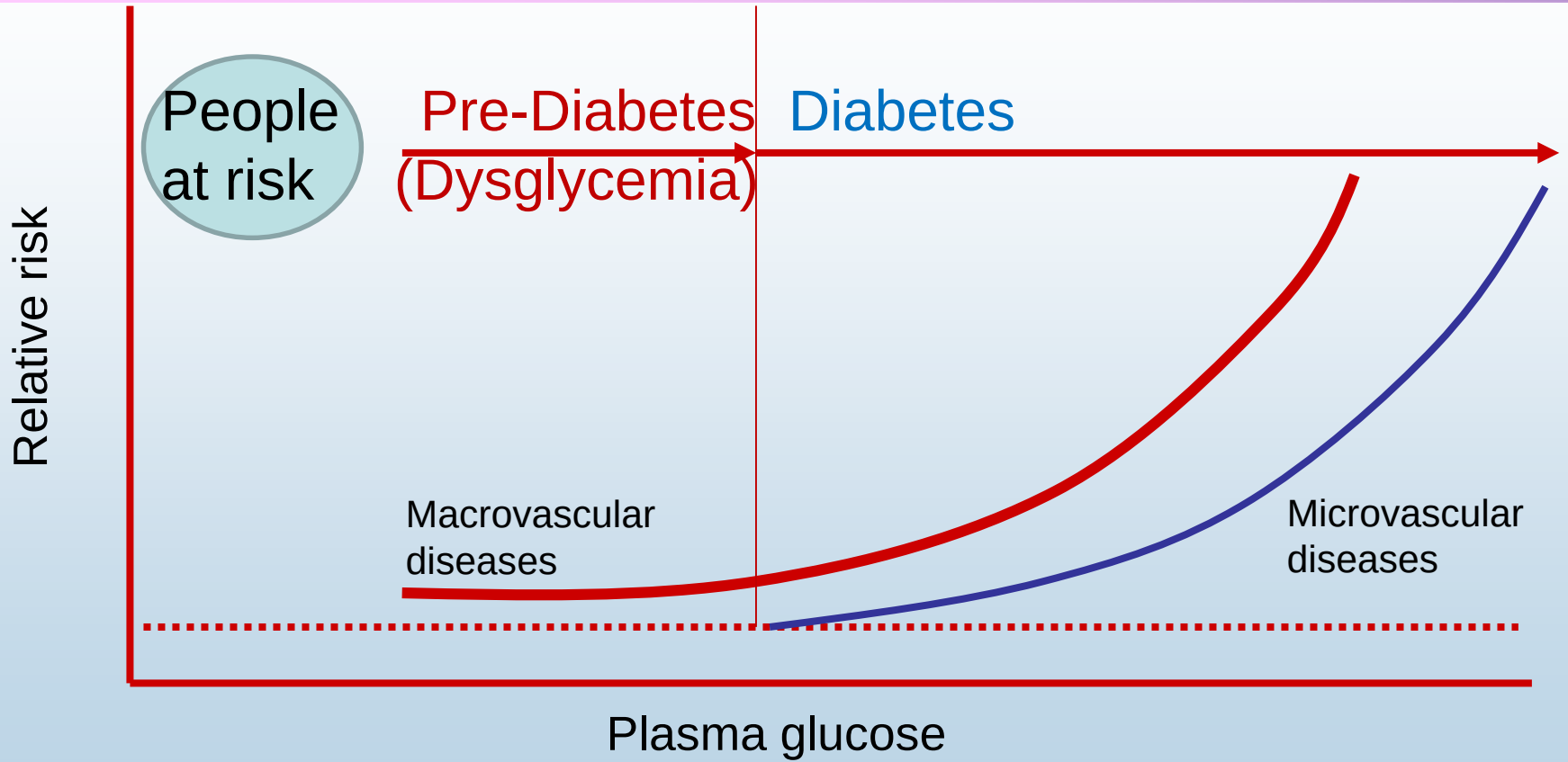


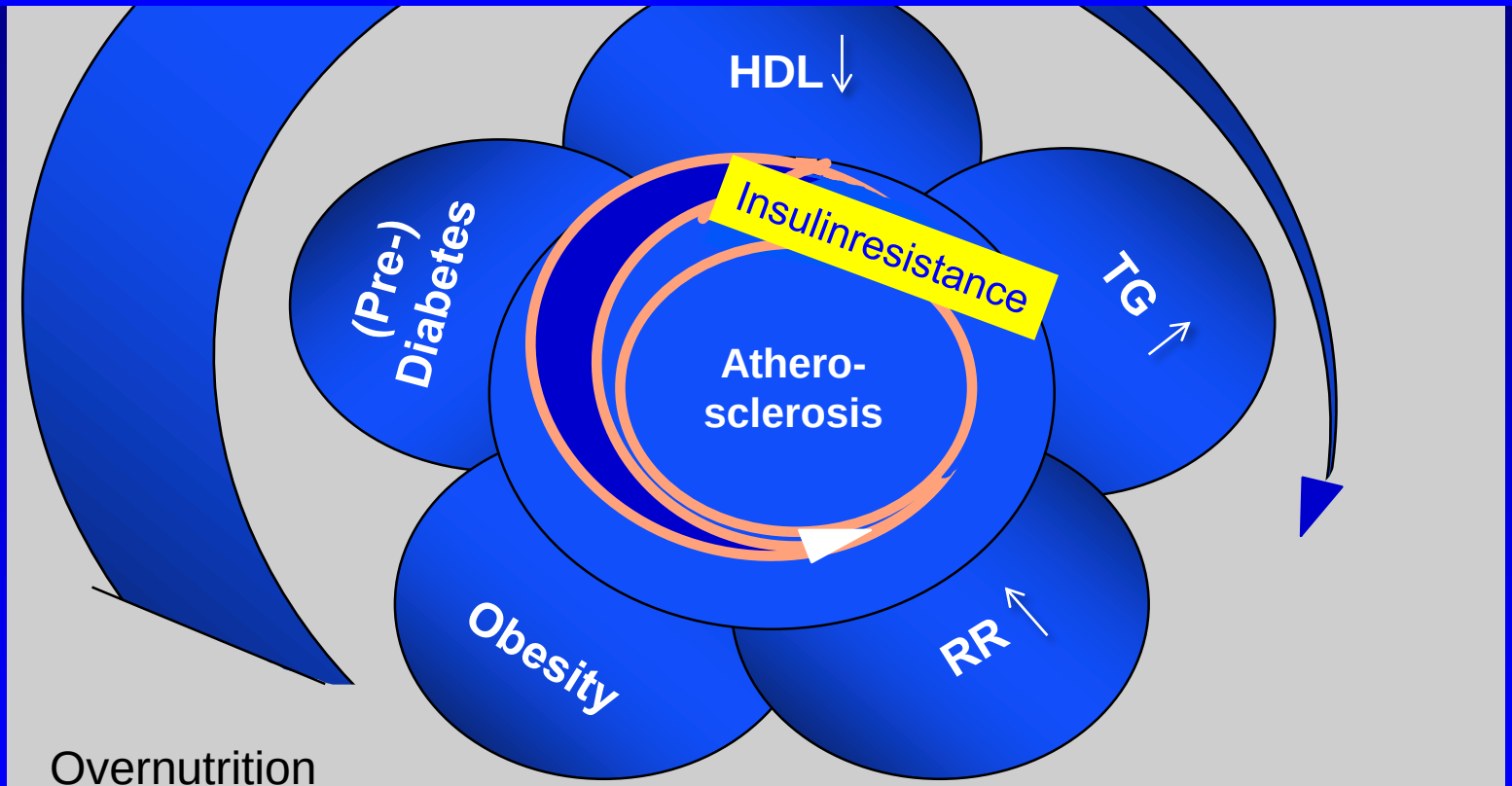
Figure according to Del Prato, EASD 2008

Perspective: Cross-sectoral Population based Care

The complexity of the type-2-diabetes with co-existent multimorbidity (MVS!) in most of the cases

→ should result in multifactorial care models

The Metabolic Vascular Syndrome (MVS) – a Cluster of Risk Factors/Diseases with a Common Soil



Overnutrition
Lack of physical Excercise
Genetic Predisposition

M Hanefeld
W Leonhardt
Deutsches Gesundheitswesen 1981

From

Disease Management

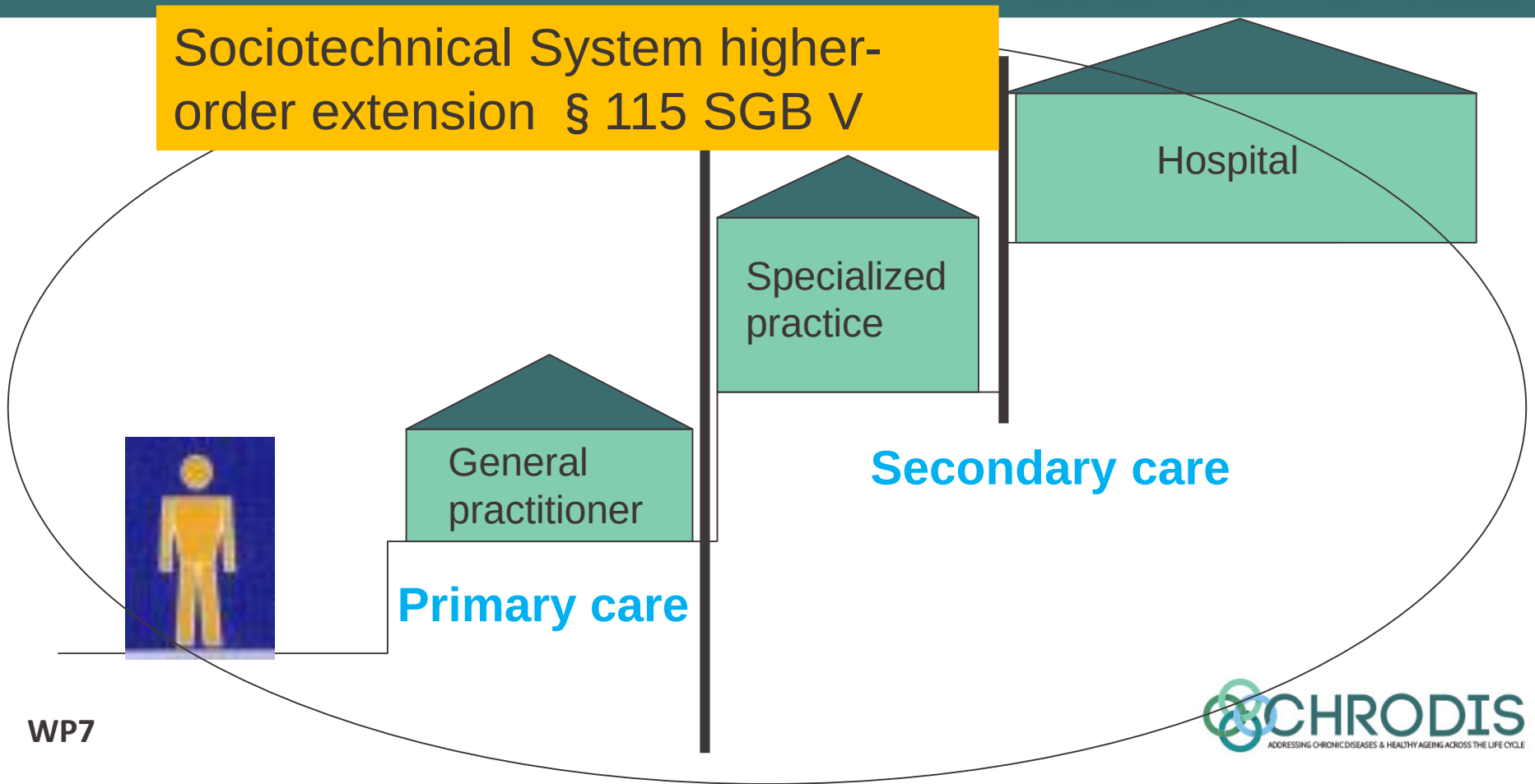
to the

Chronic Care Model

(by Wagner Ed et al.)

Rothe, Shaker Verlag 2010

From Sectoral to Integrated Care and the Chronic Care Model, resp.



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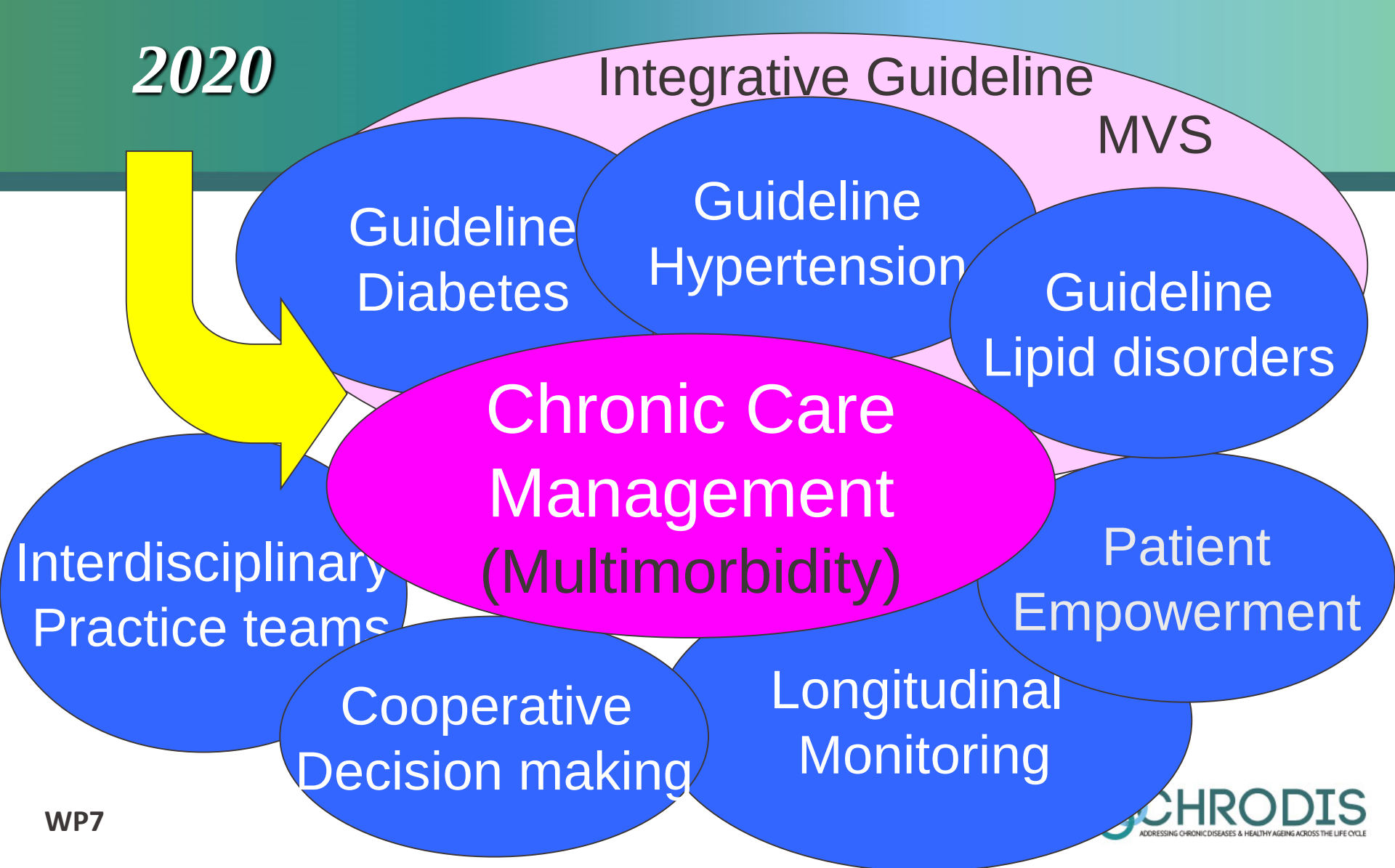
2020
Integrative Guideline
MVS
Guideline
Diabetes
Guideline
Hypertension
Guideline
Lipid disorders
Chronic Care
Management
(Multimorbidity)
Interdisciplinary
Practice teams
Patient
Empowerment
Cooperative
Decision making
Longitudinal
Monitoring
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The 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)

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