Conference "Complementary and Alternative Medicine – Innovation and Added Value for European Healthcare" . 9 October 2012. European Parliament, Brussels, Belgium.

Complementary and Alternative Medicine and chronic disease management

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Chronic diseases in Europe

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Chronic diseases in Europe

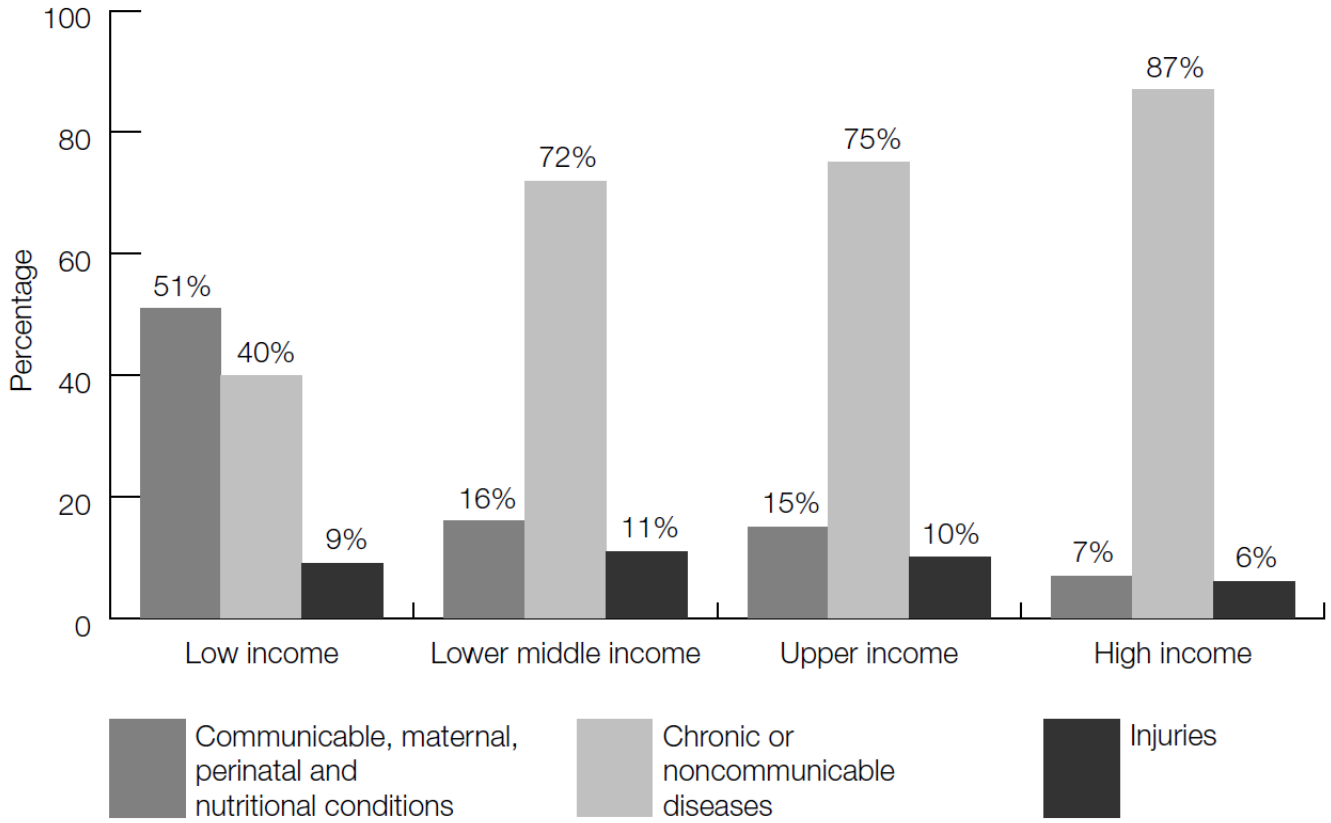
- An ageing population with growing life expectancy
- Growing prevalence of (multiple) chronic diseases
- Rising health care costs and a declining labour force

The proportion of those in European countries aged 65 years and older is projected to grow from 15% in 2000 to 23.5% by 2030.

The proportion of those aged 80 years and over is expected to more than double from 3% in 2000 to 6.4% in 2030.

Chronic diseases in Europe

Fig. 2.1 *Worldwide share of deaths by causes and countries within different World Bank income categories (2002)*



Sources: Suhrcke et al. 2006; Mathers et al. 2003.

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Chronic diseases in Europe

Table 2.1 *Disease burden and deaths from noncommunicable diseases in the WHO European Region by cause (2005)*

Groups of causes	*Disease burden*		*Deaths*	
	DALYs (millions)	*Proportion from all causes (%)*	*Number (millions)*	*Proportion from all causes (%)*
Selected noncommunicable diseases				
Cardiovascular diseases	34.42	23	5.07	52
Neuropsychiatric conditions	29.37	20	0.26	3
Cancer (malignant neoplasms)	17.03	11	1.86	19
Digestive diseases	7.12	5	0.39	4
Respiratory diseases	6.84	5	0.42	4
Sense organ diseases	6.34	4	0	0
Musculoskeletal diseases	5.75	4	0.03	0
Diabetes mellitus	2.32	2	0.15	2
Oral conditions	1.02	1	0	2
All noncommunicable diseases	*115.34*	*77*	*8.21*	*86*
All causes	*150.32*	*100*	*9.56*	*100*

Source: Adapted from Singh 2008.

Innovation and added value of CAM for CDM

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Innovation and added value of CAM for CDM

- Is there a professional contribution of CAM to CDM?

- If so, what is its added value for CDM in Europe?
  - Fulfillment of citizens'/ patients' needs?
  - Positive health outcome & Quality of Life?
  - Positive benefit/risk balance?
  - Cost reduction?
  - ….

- Evidence?

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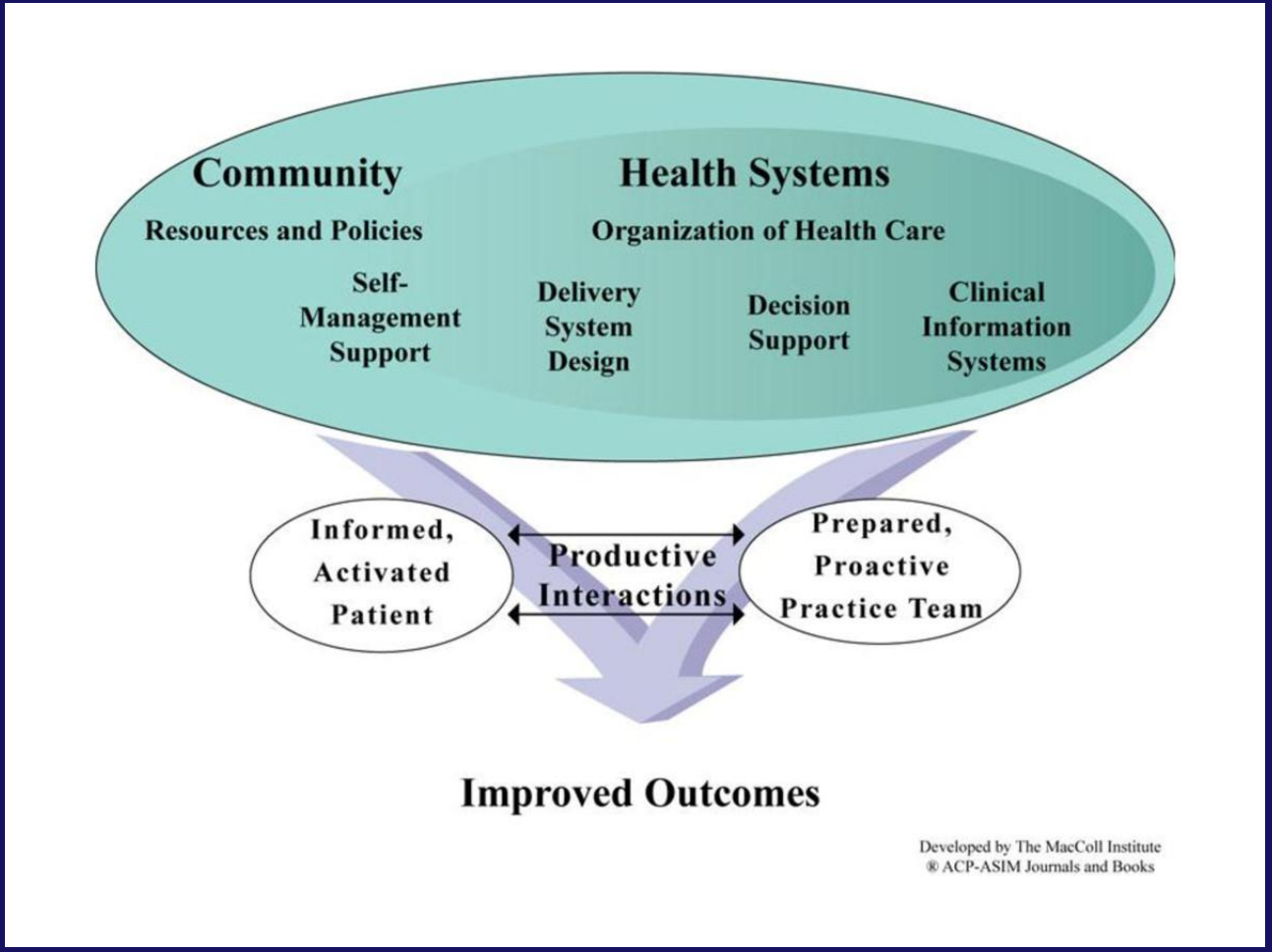
Current status of chronic disease management
The chronic care model



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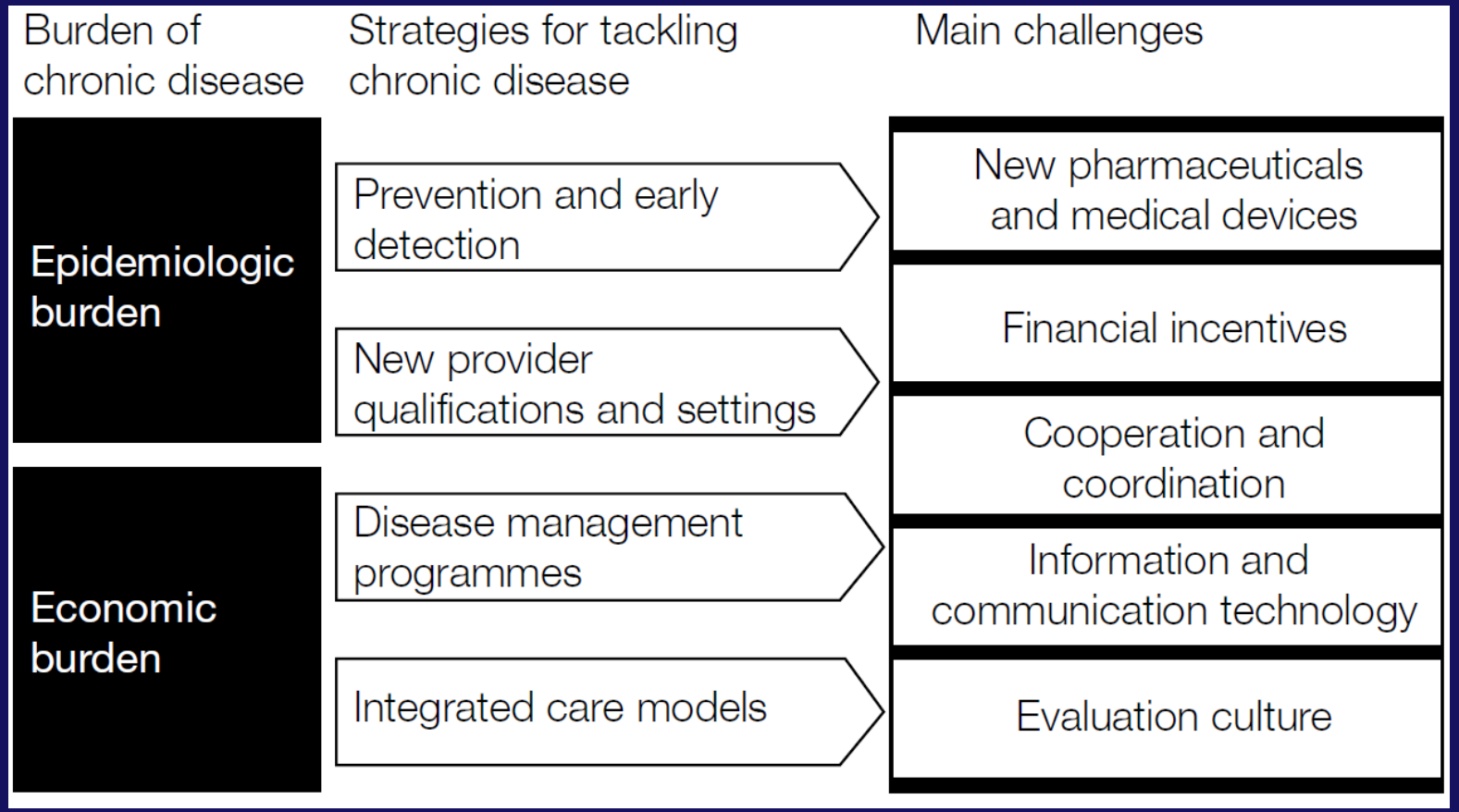
Current status of chronic disease management
Strategies and main challenges



Busse et al. (2010, p. 2). Tackling chronic disease in Europe. Strategies, interventions and challenges. World Health Organization , on behalf of the European Observatory on Health Systems and Policies.

Relevant characteristics of CAM for innovation of CDM

- Background:
  - Health promotion & Salutogenesis/ Sense of coherence approach *(in addition to fighting disease & pathogenesis approach)*
  - Whole system approach *(in addition to biomedical approach)*

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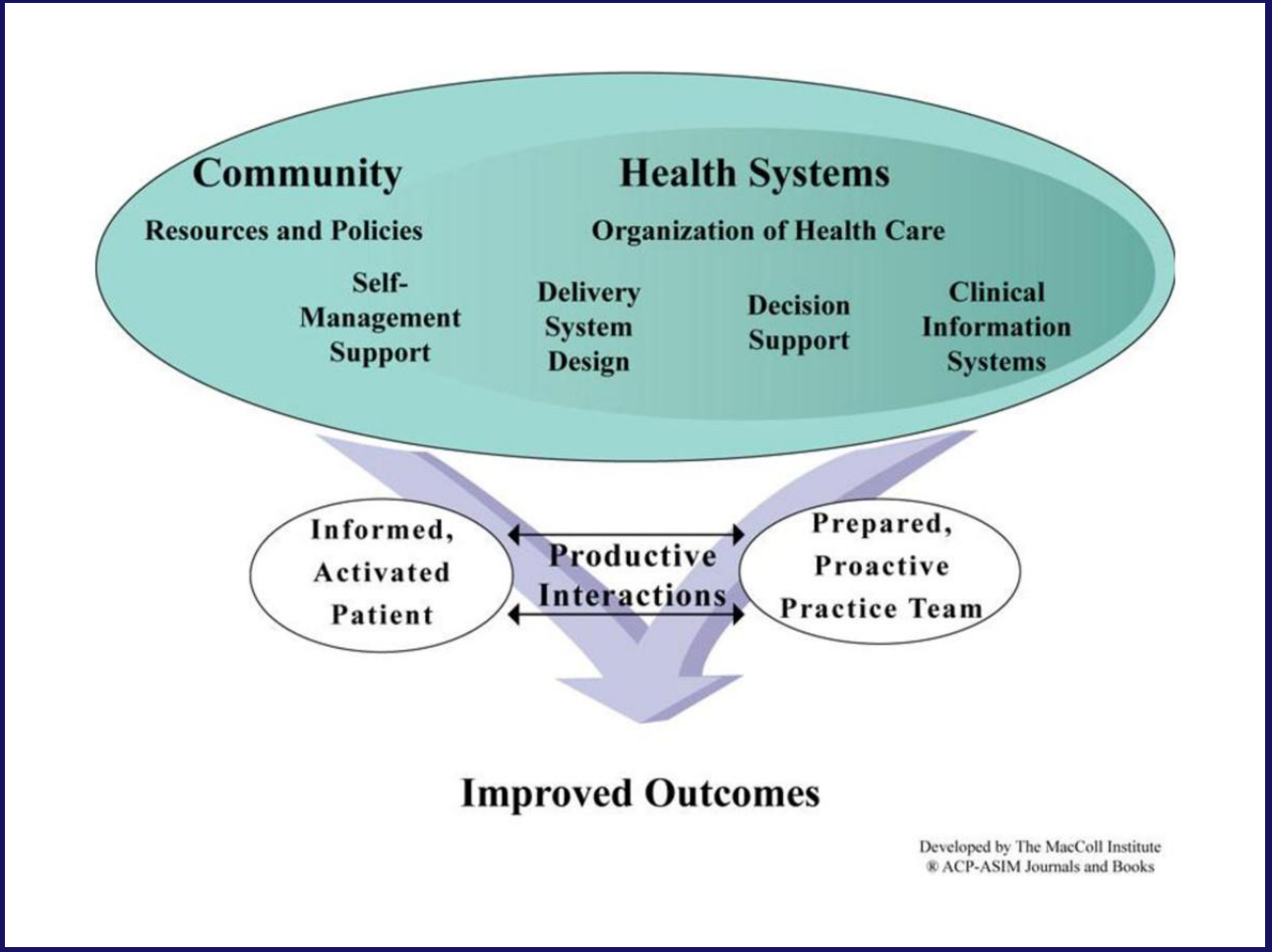
Contribution of CAM to CDM



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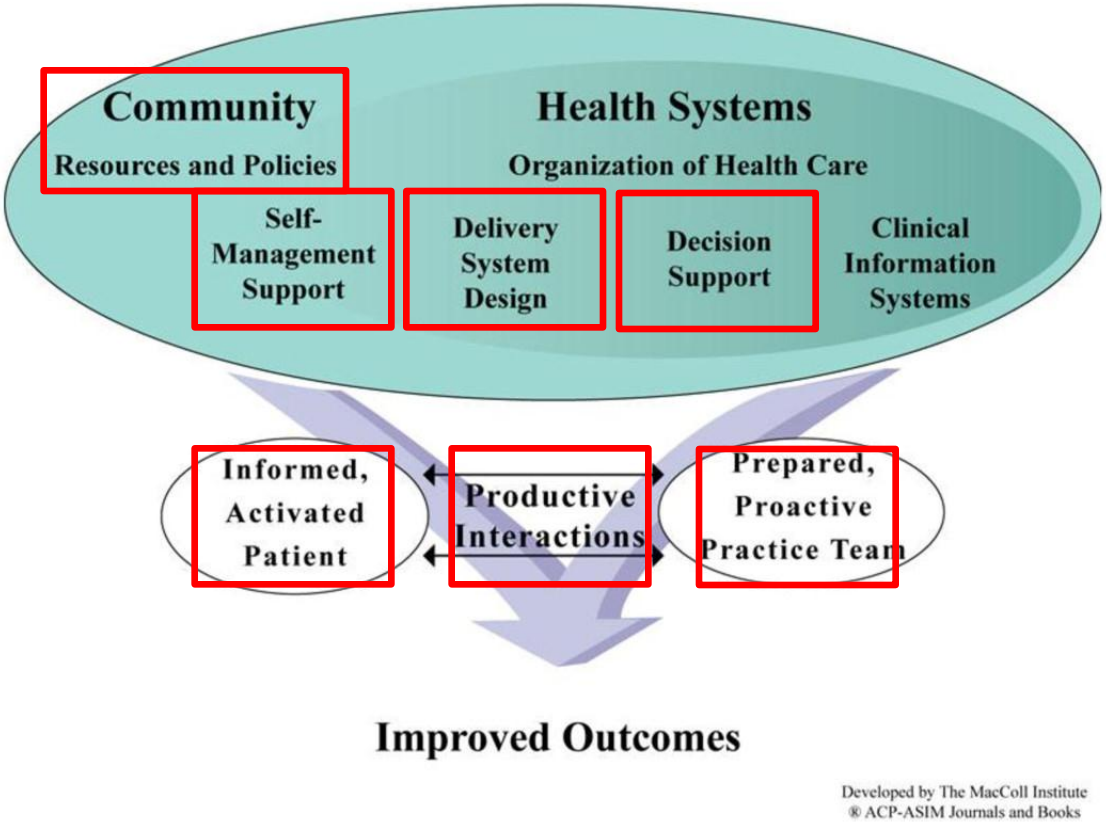
Contribution of CAM to CDM



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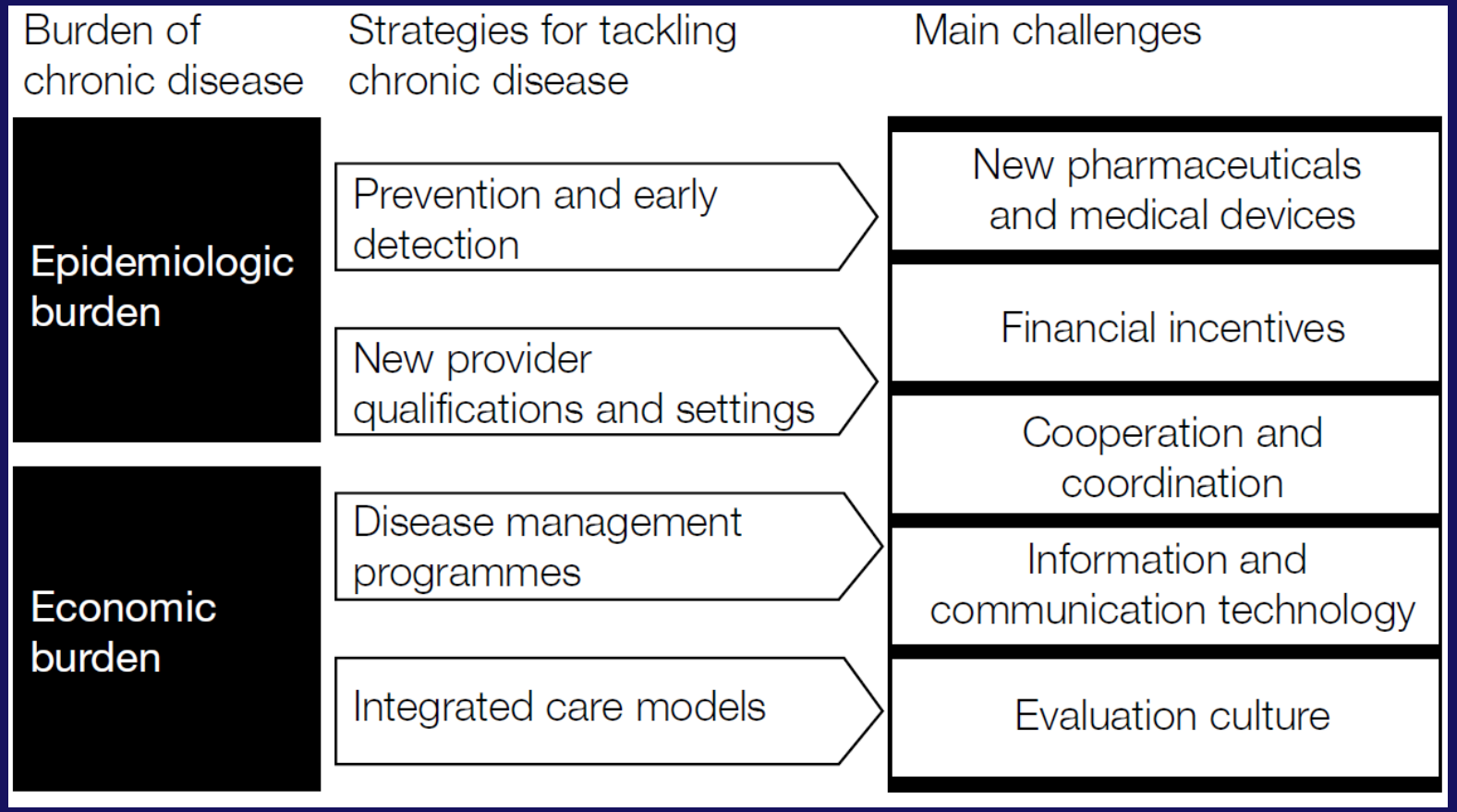
Current status of chronic disease management Contribution of CAM to strategies and main challenges



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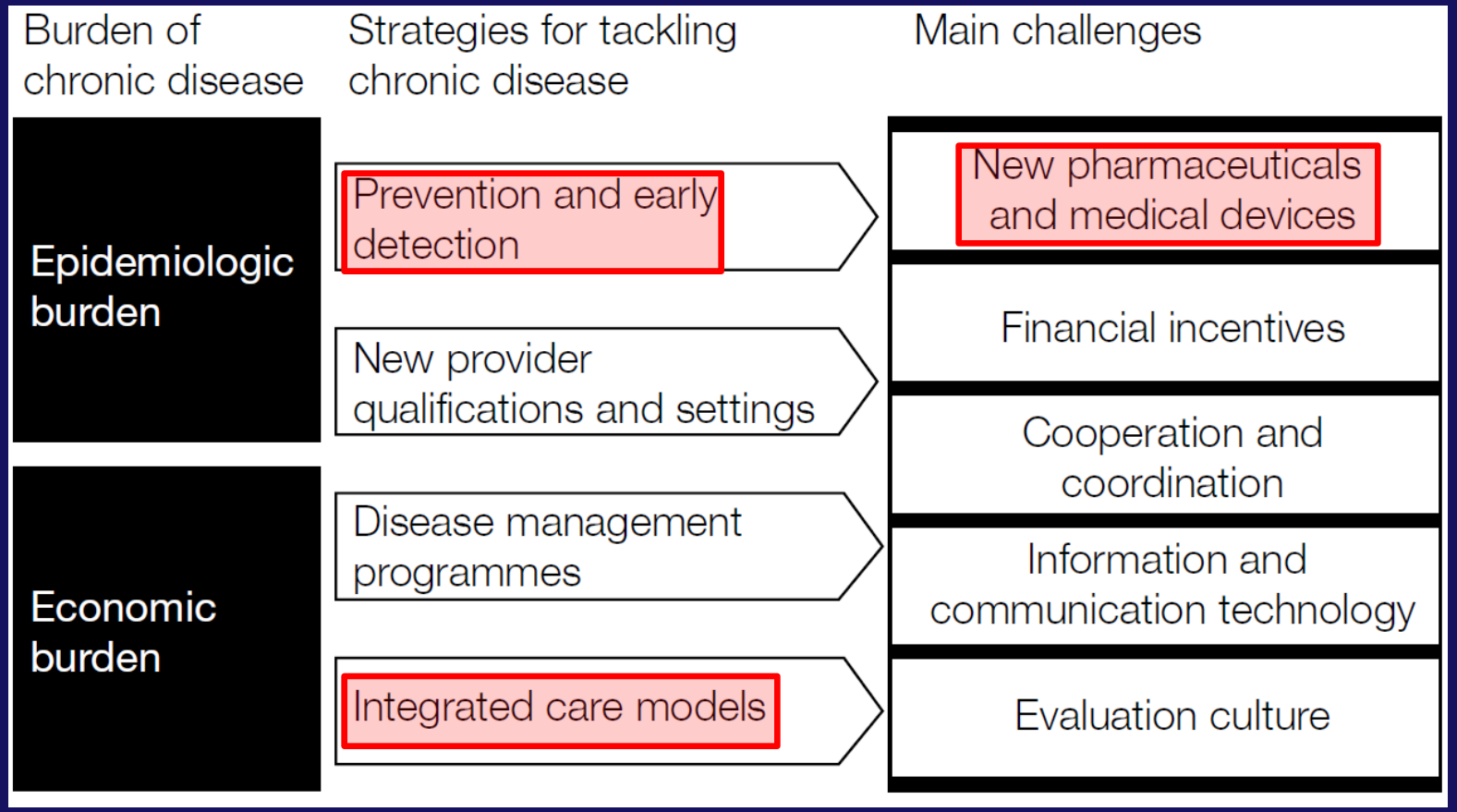
Current status of chronic disease management Contribution of CAM to strategies and main challenges



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Evidence

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Evidence: Example 1

- Patients' need for CAM
  - Review (51 reports, 49 surveys, 15 countries)
  - Outcomes:
    - Estimates of 12-month prevalence of any CAM use (excluding prayer) from surveys:
      - UK (28%, 26%; 1998, 2005); Norway; Sweden (20%; 2000); Italy (29%; 1996/1997)
      - USA (36%, 38%; 2002, 2007) and Australia (49%, 52%, 52%; 1993, 2000, 2004)

> Relatively stable need for CAM

Harris et al. (2012). Prevalence of complementary and alternative medicine (CAM) use by the general population: a systematic review and update. Int J Clin Pract, October 2012, 66, 10, 924–939. doi: 10.1111/j.1742-1241.2012.02945.x

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Evidence: Example 1

- Patients' need for CAM
  - Outcomes:
    - Population: CAM versus conventional medicine (stable throughout studies):
      - More severe and chronic illnesses
      - Younger, more female, higher education

> Stable population in need for CAM

e.g. Heiligers et al. BMC Complementary and Alternative Medicine 2010, 10:3

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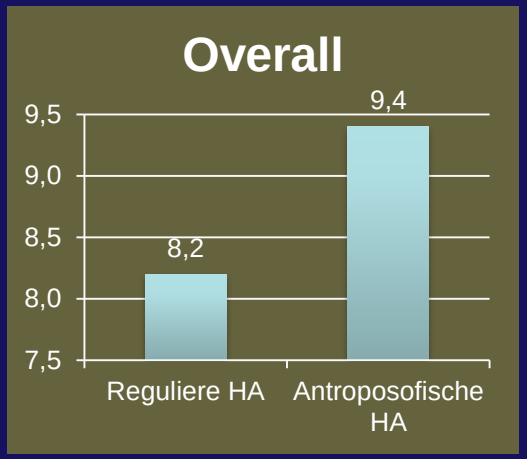
Evidence: Example 1

- Patients' need for CAM
  - Outcomes:
    - Client satisfaction with AM GPs (conventional versus AM):
    - 2.099 patients from 20 AM GP practices in the Netherlands



> There is a relatively stable group of European patients with chronic diseases that want CAM

Koster et al. (2011). Development and validation of the "consumer Quality index – Anthroposophic healthcare" to measure patient experiences systematically . Poster ECIM Conference 2011.

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Evidence: Example 2

- Salutogenesis/ sense of coherence (SOC) and health
  - Reviews (458 scientific publications & 13 dissertations)
  - Outcomes:
    - SOC was strongly related to perceived health, especially mental health.
    - SOC seemed to have a main, moderating or mediating role in the explanation of health. Furthermore, the SOC seemed to be a predictor of health.
    - The stronger the SOC the better their quality of life.

> SOC is associated with better health and better QoL

Eriksson (2007). Unravelling the Mystery of Salutogenesis. The evidence base of the salutogenic research as measured by Antonovsky's Sense of Coherence Scale. Åbo Akademi University Vasa. PhD Thesis.

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Evidence: Example 2

- Sense of coherence (SOC) and health
  - Cross-sectional study (20.579 people)
  - Outcomes:
    - *"A strong sense of coherence was associated with **a 30% reduction in mortality from all causes** (rate ratio = 0.69, p < 0.0001), **cardiovascular disease** (rate ratio = 0.70, p = 0.001), and **cancer** (rate ratio = 0.74, p = 0.003), independent of age, sex, and prevalent chronic disease. These associations were consistent by sex, except that no association was observed for cancer mortality in women. The association for all-cause mortality remained after adjustment for cigarette smoking history, social class, body mass index, systolic blood pressure, cholesterol, hostility, and neuroticism (rate ratio = 0.76, p = 0.002). Results suggest that **a strong sense of coherence may confer some resilience to the risk of chronic disease**."*

> SOC is associated with better health and better QoL

Surtees et al. (2003). Sense of coherence and mortality in men and women in the EPIC-Norfolk United Kingdom prospective cohort study. Am J Epidemiol; 158(12):1202-9.

Evidence: Example 3

- Acupuncture for chronic pain (TCM)
  - Review of 29 RCTs
  - Back and neck pain, osteoarthritis, and chronic headache
  - Outcomes:
    - Acupuncture was superior to both sham and nonacupuncture control for each pain condition
    - Modest specific effects & larger overall effects

> Acupuncture is effective for the treatment of chronic pain and is therefore a reasonable referral option

Vickers et al. (2012). Acupuncture for Chronic Pain. Individual Patient Data Meta-analysis. Arch Intern Med. Published online September 10, 2012. doi:10.1001/archinternmed.2012.3654

Evidence: Example 4

- Mistletoe treatment for cancer (AM)
  - Two reviews (26 RCTs & 10 non-RCTs/ 41 publications)
  - Cancer
  - Outcomes:
    - Survival: increasing association with better survival
    - QoL: positive impact (most studies) on QoL
    - Safety: good tolerability & no major side effects

> Mistletoe treatment is associated with better survival rates and QoL, good safety and is therefore a reasonable referral option

Kienle & Kiene (2010). Influence of Viscum album L (European Mistletoe) Extracts on Quality of Life in Cancer Patients: A Systematic Review of Controlled Clinical Studies. Integrative Cancer Therapies 9(2) 142–157. DOI:10.1177/1534735410369673
Ostermann et al. (2009). Survival of cancer patients treated with mistletoe extract (Iscador): a Systematic literature review. BMC Cancer,9(1):451. DOI:10.1186/1471-2407-9-451

Evidence: Example 5

- Mind-body interventions (MBI's) for essential hypertension
  - Review
  - Outcomes:
    - Small yet meaningful reductions in blood pressure (monotherapy or in conjunction with traditional pharmacotherapy).
    - Transcendental meditation and mindfulness-based stress reduction may produce clinically significant reductions in systolic and diastolic blood pressure.

> MBI's may produce blood pressure reduction and is therefore a reasonable referral option

Goldstein et al. (2012). Current Perspectives on the Use of Meditation to Reduce Blood Pressure. International Journal of Hypertension, vol. 2012, Article ID 578397, 11 pages, 2012. doi:10.1155/2012/578397

Evidence: Example 6

- St. John's wort for depression

  - Reviews (29 trials with 5.984 patients)
  - Major depression
  - Outcomes: the evidence suggests that hypericum extracts:
    - are superior to placebo in patients with major depression;
    - are similarly effective as standard antidepressants;
    - and have fewer side effects than standard antidepressants

> St. Johns's wort for depression is associated with equal effects and fewer side effects than standard antidepressants and is therefore a reasonable referral option

Linde et al. (2008). St John's wort for major depression. Cochrane Database of Systematic Reviews 2008, Issue 4. Art. No.: CD000448. DOI: 10.1002/14651858.CD000448.pub3

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Evidence: Example 7

- Cost-effects

Table 3 Effects of complementary care on costs per insuree age category

	Linear			Log-linear		
	Dummy for GP-CAM anthroposophy	Dummy for GP-CAM homeopathy	Dummy for GP-CAM acupuncture	Dummy for GP-CAM anthroposophy	Dummy for GP-CAM homeopathy	Dummy for GP-CAM acupuncture
Age 0–24						
Total	6[a]	100	−32	0.016	−0.138**	−0.052
GP	1	−2*	1	0.015	−0.043*	0.019
Hospital	3	76	−5	0.064	−0.153*	−0.034
Pharmaceutical	1	25	−27	−0.078*	−0.250***	−0.108
Paramedic	2	0	−1	0.048	−0.006	−0.008
Age 25–49						
Total	14	−50	−66*	0.022	−0.160**	−0.106**
GP	2***	−3***	0	0.030**	−0.045**	−0.004
Hospital	3	4	−47**	0.008	−0.161**	−0.135**
Pharmaceutical	8	−51**	−17	−0.035	−0.365***	−0.136*
Paramedic	1	−1	−2***	0.032	−0.029	−0.060***
Age 50–74						
Total	63	−48	−2	−0.030	−0.153**	−0.084
GP	4***	0	0	0.040*	−0.001	0.017
Hospital	60	−121	−64	0.032	−0.145	−0.073
Pharmaceutical	−7	69	61	−0.204***	−0.352***	−0.162
Paramedic	6*	4	1	0.080	0.016	−0.009
Age 75+						
Total	−405**	81	214	−0.130	0.077	0.184
GP	−2	6	7	−0.030	0.058	0.111
Hospital	−263**	52	87	−0.029	0.069	0.171
Pharmaceutical	−125*	31	127	−0.169	0.048	0.196
Paramedic	−15	−8	−7	−0.106	−0.085	0.034

***, **, * indicate a statistically significant difference with conventional GP at the 1, 5, and 10% level, respectively

[a] Costs of healthcare are in Euros per quarter. Each row is based on two regressions with either costs (left panel) or the natural logarithm of costs (right panel) as the dependent variable. Explanatory variables are gender, age (linear, within each age category), dummies for each quarter, dummies for anthroposophy, homeopathy, and acupuncture; the table reports the coefficients on the latter dummies. All regressions control for 6-digit insuree postcode fixed effects; standard errors clustered at the insuree level

Kooreman & Baars (2011). Patients whose GP knows complementary medicine tend to have lower costs and live longer. Eur J Health Econ. DOI 10.1007/s10198-011-0330-2

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Evidence: Example 8

- Healthy ageing

Table 4 Effects of complementary care on mortality

	Dummy for GP-CAM anthroposophy	Dummy for GP-CAM homeopathy	Dummy for GP-CAM acupuncture	Combined
Logit with fixed effects	0.031	−0.198	−0.333*	−0.128
LPM with fixed effects	−0.005*	−0.004	−0.009**	−0.006***
Women				
Logit with fixed effects	0.034	0.010	−0.203	−0.031
LPM with fixed effects	−0.007*	0.004	−0.008	−0.005*
Men				
Logit with fixed effects	0.020	−0.627*	−0.493	−0.291*
LPM with fixed effects	−0.003	−0.014	−0.013**	−0.008**

Dependent variable: death in 2006, 2007, 2008, or 2009

The table is based on models with the following explanatory variables: gender, age, dummies for anthroposophy, homeopathy, and acupuncture (dummy for complementary in the last column); the table reports the coefficients on the latter dummies

LPM regression controls for 4-digit insuree postcode fixed effects

***, **, * indicate a statistical significance at the 1, 5, and 10% level, respectively

Kooreman & Baars (2011). Patients whose GP knows complementary medicine tend to have lower costs and live longer. Eur J Health Econ. DOI 10.1007/s10198-011-0330-2

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Conclusions and future perspectives

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Conclusions

- There are professional CAM contributions to CDM
- The innovations and added values of CAM for CDM in Europe:
  - Fulfill a large group of EU citizens'/ patients' needs
  - Provide positive health outcome & improvement of Quality of Life
  - Provide positive benefit/risk balances
  - Result in lower healthcare costs, and
  - Are more and more evidence-based
- More development of and research on CAM contributions to CDM are required

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Future perspectives

- EU research framework should invest in:
  - Improvement of the quality of CAM for CDs & Integrative Medicine in clinical practice
  - Improvement of the quality of research on CAM for CDs
    - Comparative Effectiveness Research > more evidence on added value of CAM for CDM
    - Single-case methodology for further development of individualized diagnostics and treatment
    - Monitoring of safety
  - Further development of whole system approach:
    - Clinical programs
    - A European regulatory framework for medicinal products with a whole system background
    - Research methodology

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Thank you for your attention!

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  - http://www.louisbolk.org/nl/home/

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