Alternative Payment Models in health care An introduction

Jeroen Struijs, PhD

National Institute for Public Health and the Environment, Department Quality of care and Health Economics Leiden University Medical Centre-Public Health and Primary Care – Health Campus The Hague

February 8th 2023, Leergang Leiderschap Netwerkzorg Vlissingen

Learning Objectives Workshop After this workshop, you should be able to:

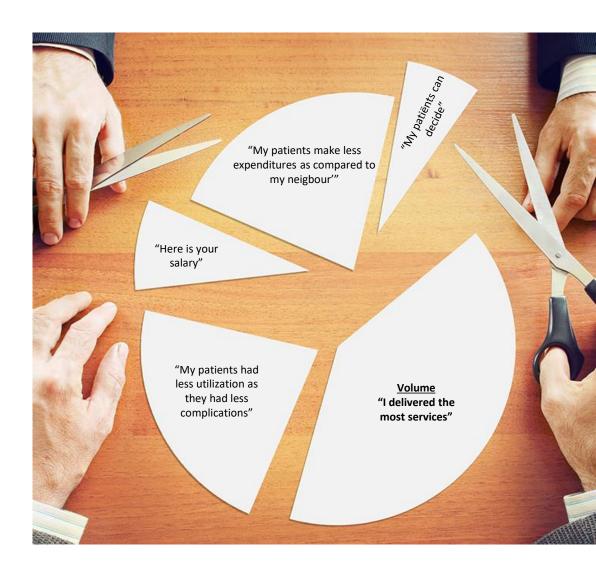
1) Critique and form economic arguments for and against particular payment policies (the 'why')

2) Describe key design elements of alternative payment models including shared savings and bundled payments (the 'what')

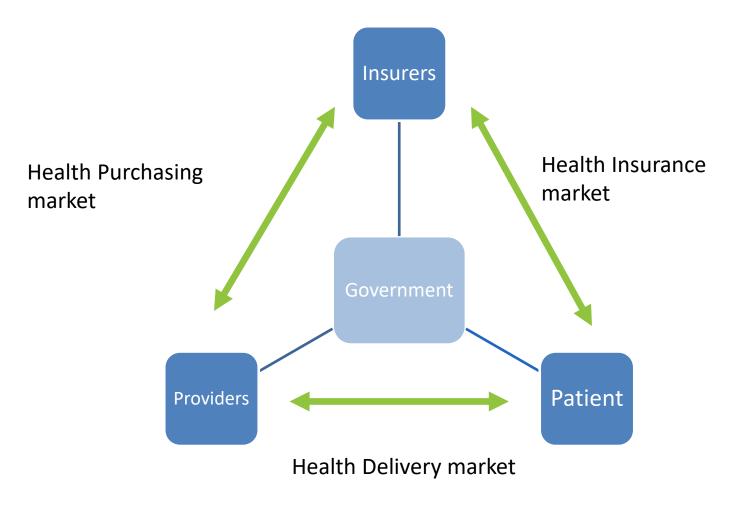
3) Discuss the ACP and the five building blocks for an APM (the 'how')

Financing vs. Paying

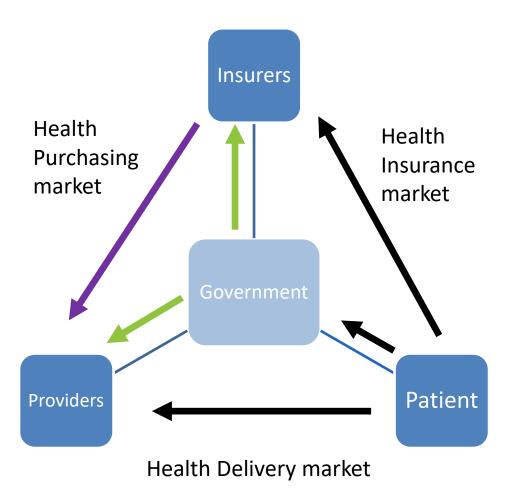
- Financing (in Dutch: financiering):
 - How is the cake built up?
- Payment (in Dutch: Bekostiging:
 - How do we *divide* the cake?
 - Now: mostly volumebased, i.e. you get more of the cake when you produce more.



Managed competition model (Health Insurers Act)

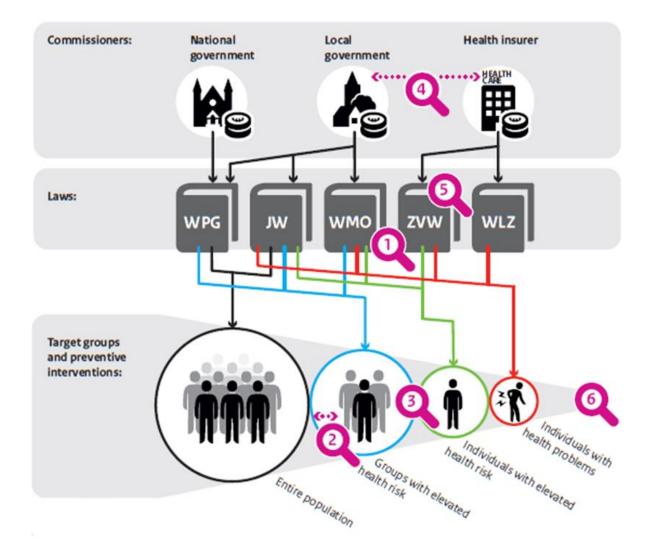


Managed competition model (Health Insurance Act)

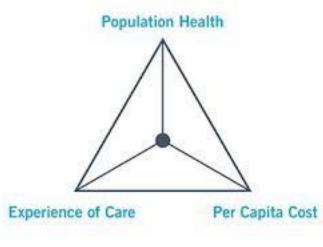


- Employers, citizens / patients pay taxes, premiums, copayments
- Governmental bodies partly fund purchasers and compensate risks via the risk equalization scheme, and partly fund providers directly
- Purchasers contract with providers and pay claims

Health promotion: even more complex as parts are in different laws

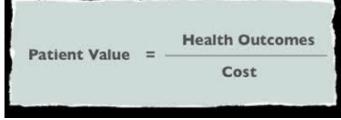


The IHI Triple Aim



Value-based health care



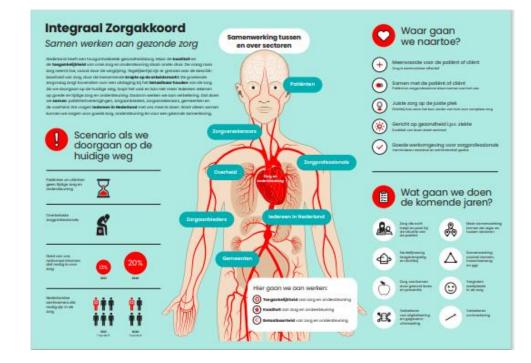


Source:

Berwick, D. M., Nolan, T. W., & Whittington, J. (2008). The triple aim: care, health, and cost. *Health affairs*, *27*(3), 759-769.

Source:

Porter, M. E. (2010). What is value in health care. *N Engl J Med*, *363*(26), 2477-2481.









Learning Objectives Workshop

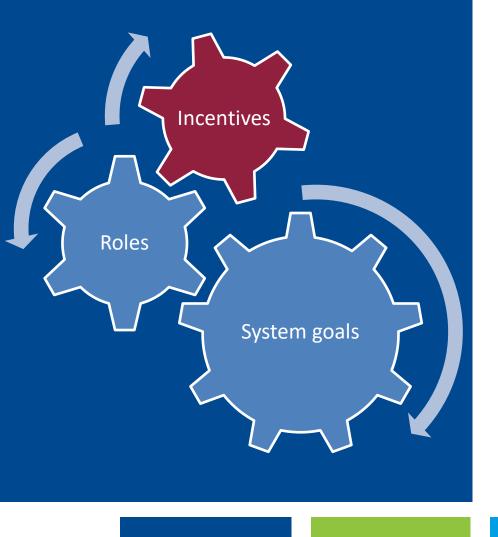
After this workshop, you should be able to:

1) Critique and form economic arguments for and against particular payment policies (the 'why')

2) Describe key design elements of alternative payment models including shared savings and bundled payments (the 'what')

3) Discuss the ACP and the five building blocks for an APM (the 'how')

Why payment reforms?

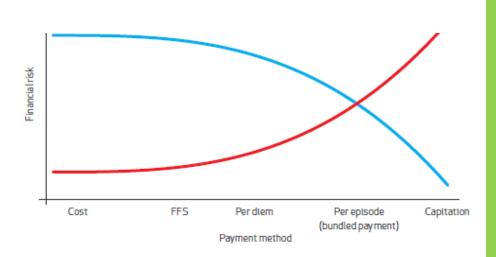


Payment models and incentives are part of the contract between payer and provider

Providers are in the best position to identify ways to:

- reduce overuse and waste
- coordinate care across settings
- steer patients to the most appropriate, high-quality providers
- provide needed care by reducing underuse

Providers react on financial incentives, mostly in the theoretically expected way

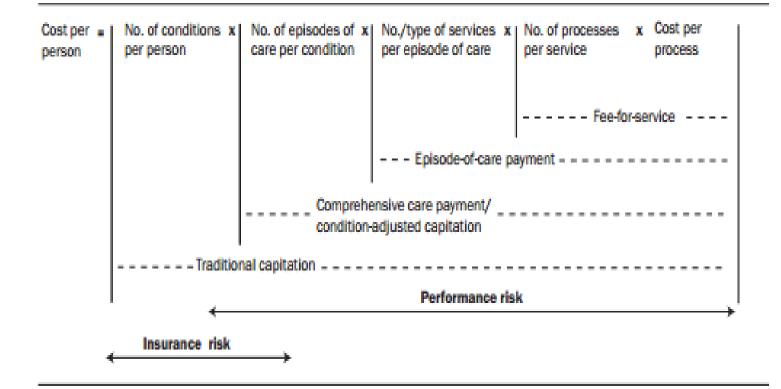


Financial Risk Of Care For Provider And Payer, By Payment Method

Allocation of risk

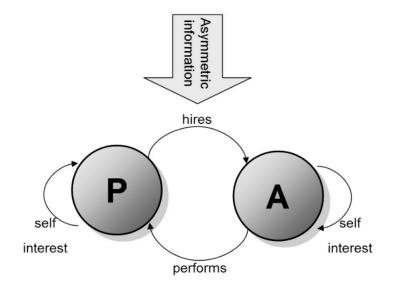
Frakt et al., (2012) Beyond capitation: How new payment experiments seek to find the 'sweet spot' in amount of risk providers and payers beat 1

Allocation of risk



Source: Miller, H.D., From volume to value: Better ways to pay for health care. Health Affairs, 2009.

Agency theory



Information asymmetry may be problematic in case of conflicting interests

The agent may then exploit his information surplus, giving rise to agency problems

Examples?

How can we design payment models in such a way that provider incentives are better aligned with the overarching system goals?

The challenge

Before we continue: No payment model is perfect!

- All systems may have unintended consequences
- We rely greatly on the intrinsic motivation and professionalism of providers. It is very important that payment systems do not undermine that professionalism.
- Payment reforms are not about paying providers less (or more) but about paying providers differently

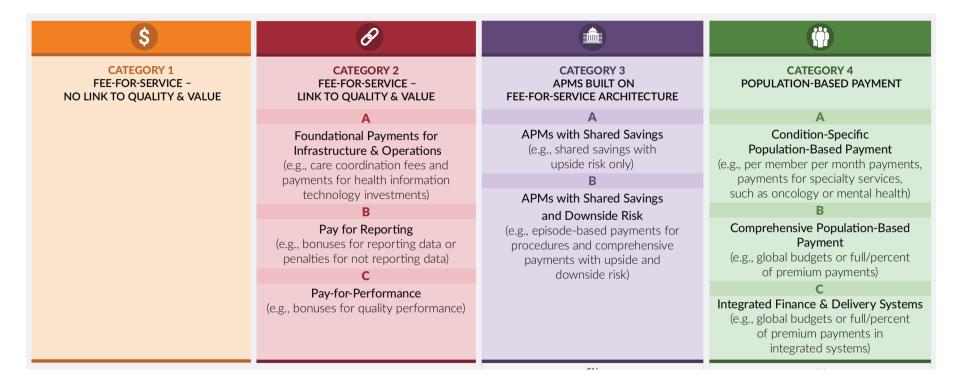
Learning Objectives Workshop After this workshop, you should be able to:

1) Critique and form economic arguments for and against particular payment policies (the 'why')

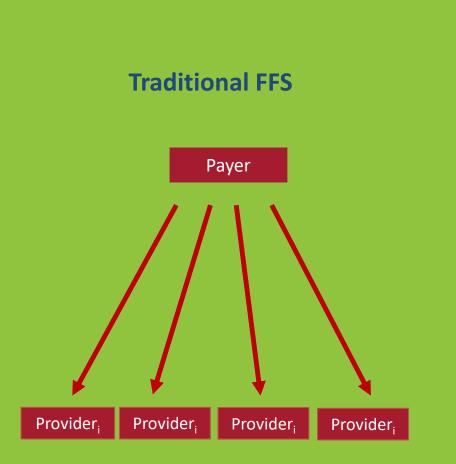
2) Describe key design elements of alternative payment models including shared savings and bundled payments (the 'what')

3) Discuss the ACP and the five building blocks for an APM (the 'how')

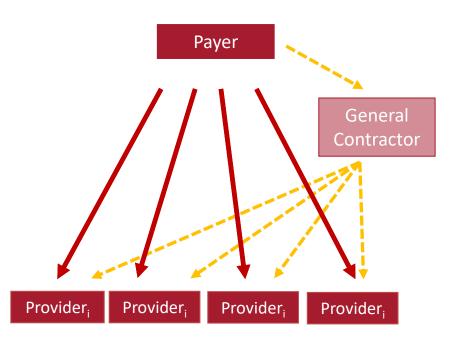
'HCP-LAN' APM framework

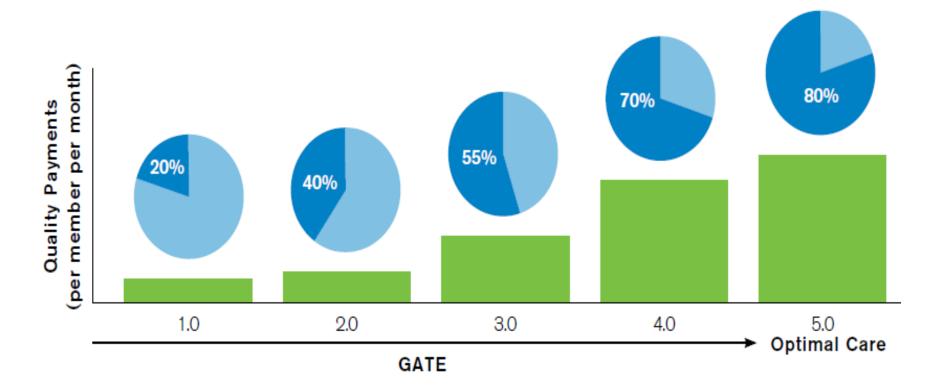


Source: https://hcp-lan.org/



Shared Savings (category 3)





Quality Performance Incentive

Provider Share of Surplus (increases as quality improves) Provider Share of Deficit (decreases as quality improves)

Alternative Quality Contract (US)

The NEW ENGLAND JOURNAL of MEDICINE

SPECIAL ARTICLE

Health Care Spending, Utilization, and Quality 8 Years into Global Payment

Zirui Song, M.D., Ph.D., Yunan Ji, B.A., Dana G. Safran, Sc.D., and Michael E. Chernew, Ph.D.

ABSTRACT

BACKGROUNE

M.E.C.), the Department of Medicine, Massachusetts General Hospital (Z.S.), the Department of Medicine, Tufts Uni-versity School of Medicine, and Haven (D.G.S.), Boston, and the Graduate School of Arts and Sciences, Harvard University, Cambridge (Y.J.) — all in Massachusetts. Address reprint requests to Dr. Song at the Department of Health Care Policy, Harvard Medical School, 180A Longwood Ave., Boston, MA 02115, or at song@hcp.med.harvard.edu.

This article was updated on July 18, 2019, at NEJM.org. N Engl | Med 2019;381:252-63.

DOI: 10.1056/NEIMsa1813621 Copyright @ 2019 Massachusetts Medical Society.

From the Department of Health Care Population-based global payment gives health care providers a spending target for Policy, Harvard Medical School (Z.S., the care of a defined group of patients. We examined changes in spending, utilization, and quality through 8 years of the Alternative Quality Contract (AQC) of Elue Cross Elue Shield (BCES) of Massachusetts, a population-based payment model that includes financial rewards and penalties (two-sided risk).

METHODS

Using a difference-in-differences method to analyze data from 2006 through 2016, we compared spending among enrollees whose physician organizations entered the AQC starting in 2009 with spending among privately insured enrollees in control states. We examined quantities of sentinel services using an analogous approach. We then compared process and outcome quality measures with averages in New England and the United States.

RESULTS

During the 8-year post-intervention period from 2009 to 2016, the increase in the average annual medical spending on claims for the enrollees in organizations that entered the AQC in 2009 was \$461 lower per enrollee than spending in the control states (P<0.001), an 11.7% relative savings on claims. Savings on claims were driven in the early years by lower prices and in the later years by lower utilization of services, including use of laboratory testing, certain imaging tests, and emergency department visits. Most quality measures of processes and outcomes improved more in the AQC cohorts than they did in New England and the nation in unadjusted analyses. Savings were generally larger among subpopulations that were enrolled longer. Enrollees of organizations that entered the AQC in 2010, 2011, and 2012 had medical claims savings of 11.9%, 6.9%, and 2.3%, respectively, by 2016. The savings for the 2012 cohort were statistically less precise than those for the other cohorts. In the later years of the initial AOC cohorts and across the years of the later-entry cohorts, the savings on claims exceeded incentive payments, which included quality bonuses and providers' share of the savings below spending targets.

CONCLUSIONS

During the first 8 years after its introduction, the BCES population-based payment model was associated with slower growth in medical spending on claims, resulting in savings that over time began to exceed incentive payments. Unadjusted measures of quality under this model were higher than or similar to average regional and national quality measures. (Funded by the National Institutes of Health.)



- AQC the most comprehensive evaluated shared savings model
- Evaluation after 8 years FU:
 - slower growth in medical spending on claims
 - resulting in savings that over time began to exceed incentive payments
 - Unadjusted measures of quality higher than or similar to average regional and national quality measures

Similar results in the Netherlands

Dutch shared savings program targeted at primary care: Reduced expenditures in its first year

Arthur Hayen^{a,*}, Michael Jack van den Berg^b, Jeroen Nathan Struijs^b, Gerard Pieter Westert (Gert)^c

^a Tilburg University, PO Box 90153, 5000 LE, Tilburg, the Netherlands

^b National Institute for Public Health and the Environment, PO Box 1, 3720 BA Bilthoven, the Netherlands

^c Radboud University (Radboud University Medical Center), PO Box 9101, huispost 114, 6500 HB Nijmegen, the Netherlands

ARTICLE INFO

Article history: Received 7 October 2019 Received in revised form 16 October 2020 Accepted 26 January 2021

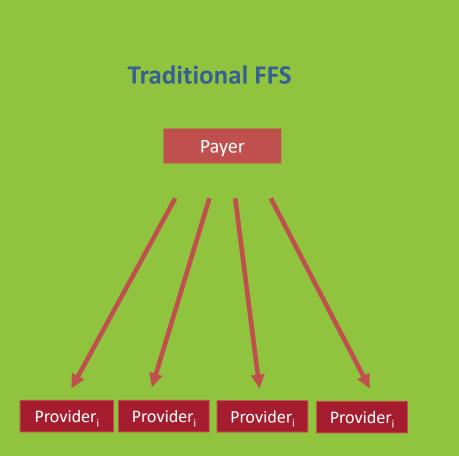
Keywords: Payment reform Shared savings Primary care

ABSTRACT

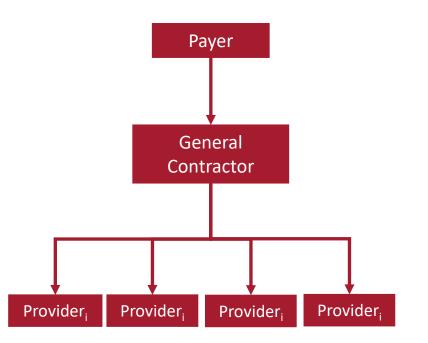
In countries where GPs fulfill a central role in the health care system, like in the Netherlands, the lack of value-based incentives in GP payment systems may have negative consequences for value delivered in other parts of the health care spectrum. We evaluate an experiment in which GPs were allowed to share in savings in total health care expenditures, conditionally on achieving quality targets. At least in theory, these so-called 'shared savings contracts' incentivize GPs to become critical gatekeepers, coordinate the provision of care and substitute for specialist services when appropriate. This study evaluates a Dutch shared savings program targeted at GPs. This study employs a difference-in-differences design using a regional control group of non-participating GPs. We find that program participation led to savings in health care expenditures (-2%), while patient satisfaction was unaffected and while the results for other quality indicators were ambiguous. Additional analyses show that savings have been predominantly realized by lowering the volume of specialist care, and that almost every participating GP displayed cost-saving behavior. This finding suggests that shared savings contracts, even when added as a mere complemented to existing volume-based payment models, already elicit substantive effort to increase the value of health care provided.

© 2021 The Authors. Published by Elsevier B.V. This is an open access article under the CC BY license (http://creativecommons.org/licenses/by/4.0/).

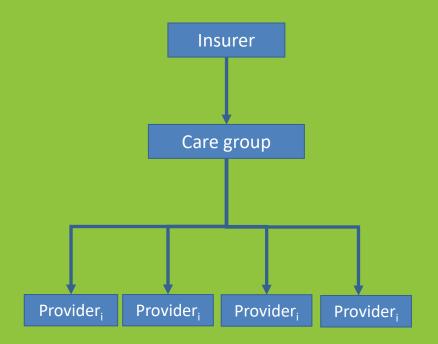
Source: Hayen, A., van den Berg, M. J., Struijs, J. N., & Westert, G. P. (2021). Dutch shared savings program targeted at primary care: reduced expenditures in its first year. *Health Policy*.



Bundled Payment (category 4)



Bundled payment for diabetes care (2007; n=110)



The NEW ENGLAND **JOURNAL** of **MEDICINE**

PERSPECTIVE

Integrating Care Inrough Bundled Payments — Lessons from the Netherlands

Jeroen N. Struijs, Ph.D., and Caroline A. Baan, Ph.D.

these challenges have been introduced, including, in the United States, the concept of the accountvehicle for implementing comprehensive payment reform and rein an effort to control growth in health care costs and improve value.2-4 In the Netherlands, numerous initiatives were introduced to enhance the quality and continuity of care for chronic diseases. but their fragmentary funding hampered the establishment of long-term programs. In 2007, the Dutch minister of health therefore approved the introduction of a bundled-payment approach for integrated chronic care, initially on an experimental basis with a focus on diabetes. In 2010, the bundled-payment concept was agement.

a legal entity formed by multiple ered by the standard insurance evaluation of 10 care groups.

number of people with chron- often exclusively general practiic diseases continues to increase, tioners (GPs). The care group asputting tremendous pressure on sumes both clinical and financial ious approaches to addressing nents of diabetes care, the care example, care groups are domidesign of the health care system market into two segments dividual providers, be they GPs, tories. The price for the bundle of services is freely negotiated by insurers and care groups, and the fees for the subcontracted care providers are similarly freely negotiated by the care group and providers.

tient services to be covered in the were launched on an experimendiabetes care bundle were made tal basis in 2007, focused only on approved for nationwide imple- at a national level and are codi- type 2 diabetes. The implemenmentation for diabetes, chronic fied in the Dutch Diabetes Fed- tation process for the bundledobstructive pulmonary disease eration Health Care Standard (COPD), and vascular risk man- (DFHCS) for type 2 diabetes, tion, and data from electronic which was approved by all na- health records of 10 care groups, Under this system, insurers tional provider and patient asso- extensive interviews with stakepay a single fee to a principal ciations. The DFHCS is limited holders, and patient questioncontracting entity --- the "care to generic diabetes care and spec-- naires are being used to assess group" - to cover a full range of ifies only the treatment activi- the satisfaction of all stakeholdchronic disease (diabetes, COPD, ties to be included, not who is to ers and the quality of delivered or vascular disease) care services provide them or by what means. care.5 for a fixed period. A care group is The services in the diabetes buna newly created actor in the dle are provided free of charge health care system, consisting of to patients, since they are cov-

In industrialized countries, the health care providers, who are package that all Dutch citizens must carry.

The aims of these care groups are similar to those of ACOs, as health care systems. At the same responsibility for all assigned pa- currently conceived in the United time, there is a growing need for tients in the diabetes care pro- States, but there are differences more patient-centered care.1 Var- gram. For the various compo- in some essential features. For group either delivers services it- nated by GPs, whereas ACOs may self or subcontracts with other comprise a wide range of procare providers. The bundled-pay- viders - at least primary care able care organization (ACO) — a ment approach supersedes tradi- physicians, specialists, and one tional health care purchasing for or more hospitals. In addition, the condition and divides the patients are to be assigned to ACOs on the basis of their patone in which health insurance terns of service use, whereas pacompanies contract care from care tients are assigned to a care groups and one in which care group on the basis of their disgroups contract services from in- ease (beginning with diabetes). In addition, the care group bears specialists, dietitians, or labora- the full financial risk for the cost of care, whereas ACOs won't bear the risk of higher-than-expected costs.4

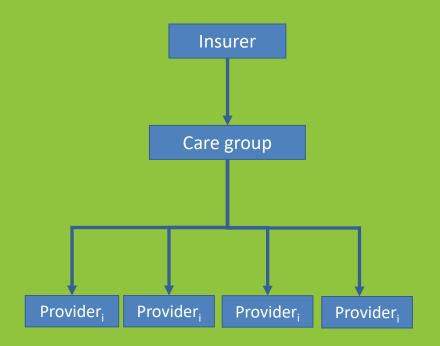
Both concepts are relatively new: the ACO concept has not been fully tested, and the Medicare ACO program doesn't begin General decisions about pa- until January 2012; care groups payment system is under evalua-

> Nevertheless, a number of lessons can be taken from the Dutch experiment on the basis of the

Source:

Struijs, J. N., & Baan, C. A. (2011). Integrating care through bundled payments—lessons from the Netherlands. N Engl J Med. 364(11), 990-991.

Bundled payment for diabetes care (2007; n=110)





How Bundled Health Care Payments Are Working in the Netherlands

by Jeroen N. Struijs

October 12, 2015



The system for paying health care providers is extremely fragmented. In response, both the United States and the Netherlands are now experimenting with <u>bundled</u>payment models, whereby a single prospective payment is made for all services for a patient with a given condition, even when multiple providers deliver that care. I believe that the ongoing Dutch experience with bundled payments has unique

Source: Struijs, J. N. (2015). How bundled health care payments are working in the Netherlands. *Harvard Business Review.*

Similar results around the world

ISSUE BRIEF APRIL 2020

Bundled-Payment Models Around the World: How They Work and What Their Impact Has Been

Jeroen N. Struijs, Eline F. de Vries, Caroline A. Baan, Paul F. van Gils, and Meredith B. Rosenthal

ABSTRACT

ISSUE: Understanding the impact of bundled-payment models on value in health care requires a better understanding of how design choices and implementation strategies affect cost and quality.

GOAL: To describe the key design elements of bundled-payment models and evaluate empirical evidence about their impact on quality of care and medical spending.

METHODS: Scan of the scientific and grey literature.

FINDINGS AND CONCLUSIONS: We identified 23 initiatives in eight countries that have implemented bundled-payment models, focusing on procedures such as total joint replacements and cardiac surgery, as well as chronic conditions like diabetes and breast cancer. Of the 35 studies retrieved, 32 reported effects on quality of care and 32 reported effects on medical spending. Twenty of 32 studies reported modest savings or a modest reduction in spending growth, while two studies (both based on the same initiative) demonstrated increased spending in the early years of the bundled-payment model's implementation. Eighteen of 32 studies reported quality improvements for most evaluated measures, while other studies showed no difference in measured quality. Our study provides evidence that bundled-payment models have the potential to reduce medical spending growth while having either a positive impact or no impact on quality of care.

TOPLINES

- An eight-country study reports predominantly positive impacts — irrespective of country, medical procedure, or condition — of bundledpayment models that aim to impact both spending and quality of care.
- Privacy laws that affect information-sharing and the difficulty of defining quality criteria are among the operational challenges of implementing bundled-payment models around the world.

Empirical evidence

- QoC: 18 of 32 studies reported improvements for most evaluated measures, while other studies showed no difference in measured quality
- Spending:
 - 20 of 32 studies reported modest savings or a modest reduction in spending growth,
 - two studies (both based on the same initiative) demonstrated increased spending in the early years of the bundled-payment model's implementation
- Key message: BP models have the potential to reduce medical spending growth while having either a positive impact or no impact on quality of care

Source:

https://www.commonwealthfund.org/sites/default/files/2020-04/Struijs_bundled_payment_models_around_world_ib.pdf

Learning Objectives Workshop After this workshop, you should be able to:

1) Critique and form economic arguments for and against particular payment policies (the 'why')

2) Describe key design elements of alternative payment models including shared savings and bundled payments (the 'what')

3) Discuss the ACP and the five building blocks for an APM (the 'how')



Define the population

Define included care services



Benchmark definitions



Distribution of (Shared savings)



Quality of care /Outcomes

DESIGN: Refining the building blocks

Hayen, A. P., van den Berg, M. J., Meijboom, B. R., Struijs, J. N., & Westert, G. P. (2015). Incorporating shared savings programs into primary care: from theory to practice. *BMC health services research*, *15*(1), 1-15.

PhD-thesis Arthur Hayen



1. Define the population and ACP

For <u>which</u> patients is <u>the ACP</u> going to be held accountable?

- <u>ACP</u>: Which provider or groups of providers is the entity you want to held accountable for 'solving' your case?
- <u>Which:</u> What's the basis for patient assignment?
 - Disease, demographics, health care use, geographic location, combination
 - Prospective or retrospective assignment?
 - Patients or patient years?

Shared savings PhD thesis	All-in tarief	Bundled payment
All insured who were registered with the partipating GPs for the entire year	All insured who are registered with the participating GP, as determined by the start of the quarter	Breast cancer: women diagnosed with breast cancer, excl: reoccurence + conservative treatment Maternity care: Every pregnant women who uses a service within the network

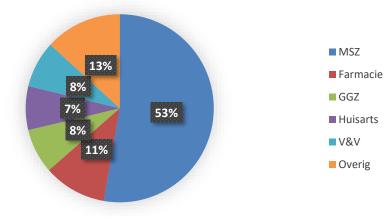
Define the scope of the model

For which services is the ACP being held accountable, and to what extent?

- <u>Services:</u> for what health care services can the ACP truly be held accountable?
 - Accountability implies accountability for prices, volumes and product mix;
 - Don't let them 'take the gamble';

- <u>Extent</u>: .. And to what extent?
 - Cap expenditures
 - Exclude services?
 - Exclude patient groups?

Aandeel zorgsoorten in totale zorgkosten ZVW (2017) - vektis



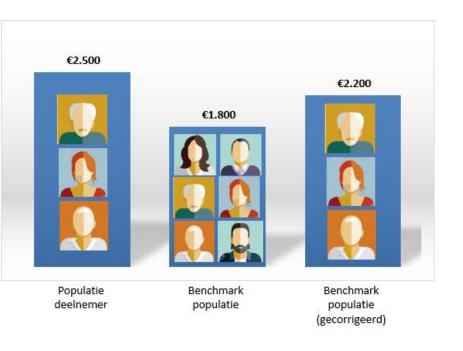
(continued)

Shared savings	All-in tarief	Bundel
Total health care expenditures, under both basic and supplemental health insurance, no dental health services, and capped at 25.000 dollar	Total GP expenditures	Cataract: surgery, outpatient care and diagnostic care (120 days before and after the surgery), aftercataract

Define the expenditure benchmark

What's a good benchmark (or price)?

- Price (bundled payment, capitated fee) or benchmark (shared savings)
- How to set a price?
 - Should be lower than the mere sum of its parts (incentive to lower costs!)
 - Different prices for different risk profiles
- Benchmark:
 - 'Counterfactual' of 'challenging', but always *realistic*
 - E.g. own historical expenditures, but national growth trend
 - When should we compare apples and oranges?





(continued)

Shared savings	A three-year weighted expenditure average, multiplied by the growth in expenditures of the control group during the performance year
All-in	Historical expenditures + annual inflation correction
Bundled payment	Hip/knee: price surgery last year + Dutch per capita average of complication costs + other included care services Matenity care: 9 modules based on prenatal, natal and postnatal phase

How are savings/losses being shared?

- Not all APMS share savings or losses (APM Framework)
- When you underspend the benchmark, does this truly reflect savings?
 - Statistical test
 - P-value: what's the chance of observing this particular savings result when in reality, GPs have not put any effort in realizing savings?
- Why do we share savings?
 - What happens if we would share all savings in the GP case?
 - Safety net (in case of losses)
 - Cap: 5% 7,5% revenue
 - Introduce 'shared losses' in exchange for a higher sharing rate in case of savings
- Sharing rate based on quality (analogue to AQC)

(vervolg)

Shared savings	Sharing rate with a cap; savings – preinvestment costs;
All-in	No sharing
Bundled payment	No sharing + lifting the volume restriction in case quality improves

Tying quality to payment model

- Integrating both incentives for costs and quality is what make APMs unique
- Helps in keeping intrinsic motivation of providers intact
- Reward both improvement and performance in an absolute sense
- Focus on the downside of your APM when thinking about (additional) quality indicators

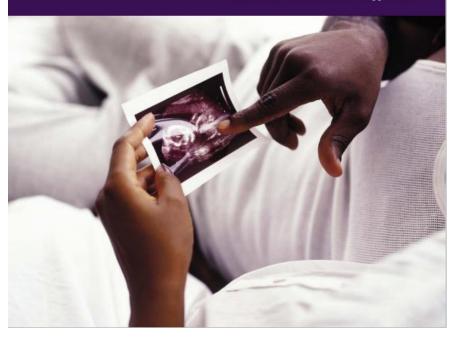
(vervolg)

Shared savings	Patient satisfaction, Adherence to guidelines, accredition (score based on both absolute quality and improvement)
All-in	Not dependent on quality
Bundled payment	Lifting the volume ceiling: PROMS, revisions, post- operative infections, and cost drivers (bv: length-of-stay)



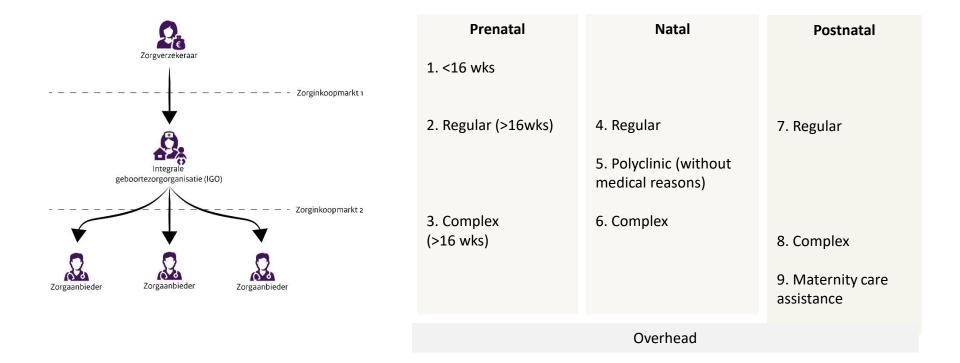
Riiksinstituut voor Volksgezondheid inisterie van Volksgezondheid, Welzijn en Sport

Integrale bekostiging van de geboortezorg: ervaringen na drie jaar en de eerste zichtbare effecten

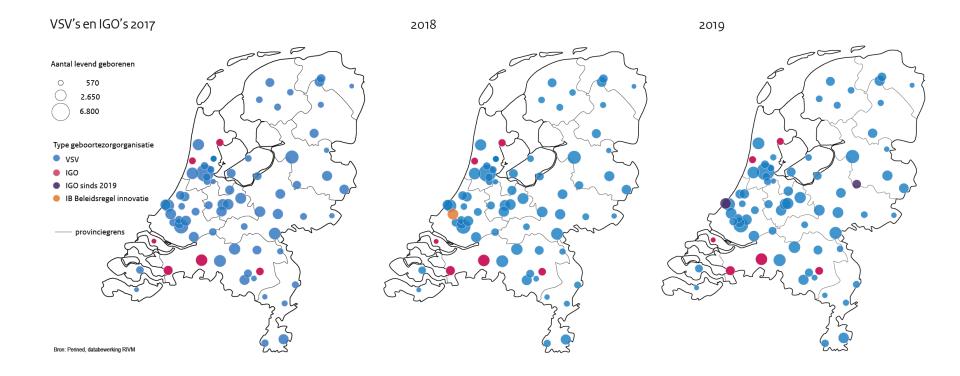


Update RIVM monitor **Bundled** payments for maternity care

Outline Dutch BP model for maternity care



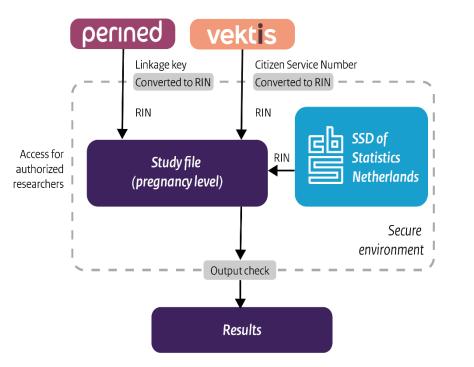
Development of IMCOs during 2017-2019



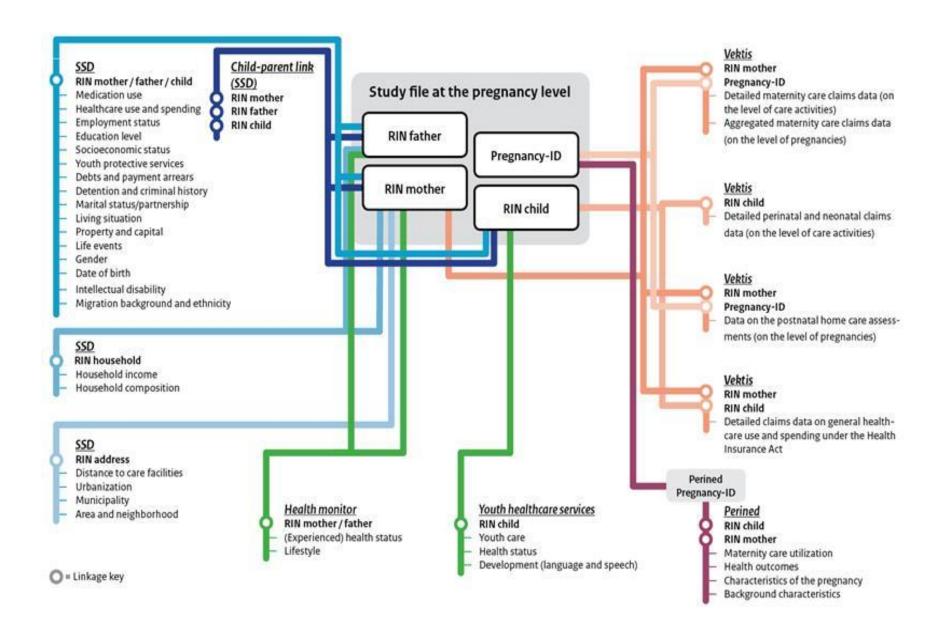
Gain insights in:

- the experiences with organizing an integrated maternity care organization (imco) and working with bundled payments
- The effects on quality of care and medical spending and health outcomes of maternity care (Today's presentation)

OBJECTIVES

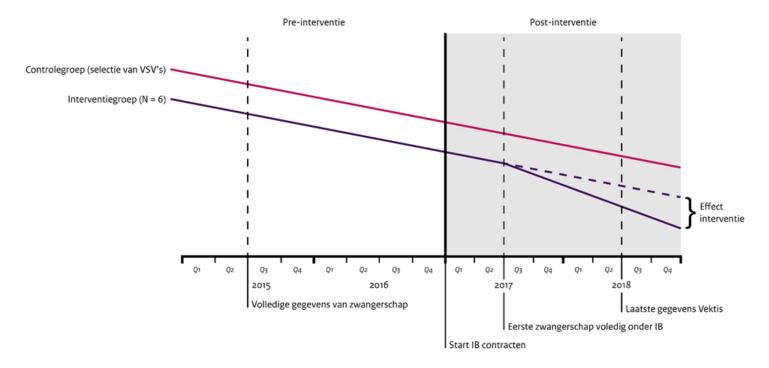


DIAPER (Datainfrastructure for Parents and Children)





Conceptueel: difference-in-differences

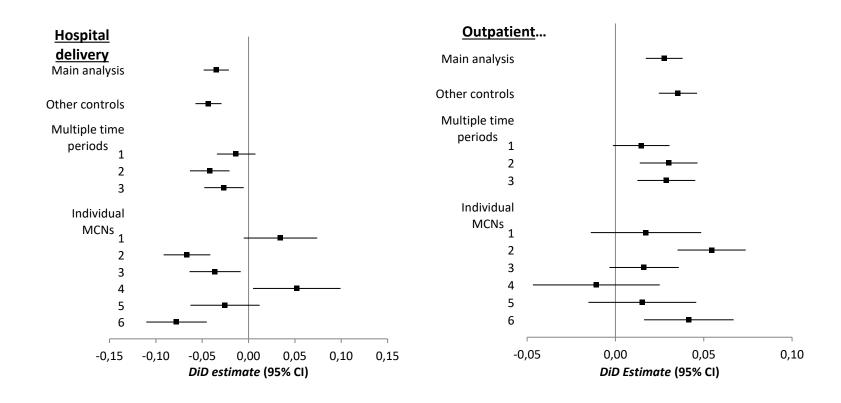


Matching on level IMCOs-regional partnerships

#cluster=15: #controls=24, Diff.preg=-92.292, Diff.urban=-0.014 4.0 3.5 c_gemiddeldurbanisatievsv 3.0 2.5 2.0 1.5 1.0 5000 10000 15000 20000 c_aantalzwangerschappen

Integrale Bekostiging van de Geboortezorg

Analyse uit rapport 2020





Key messages Bundled payment for maternity care in the Netherlands

Experiences

All actors positive about collaboration Administrative burden is an enormous bottleneck Transition in culture not yet realized

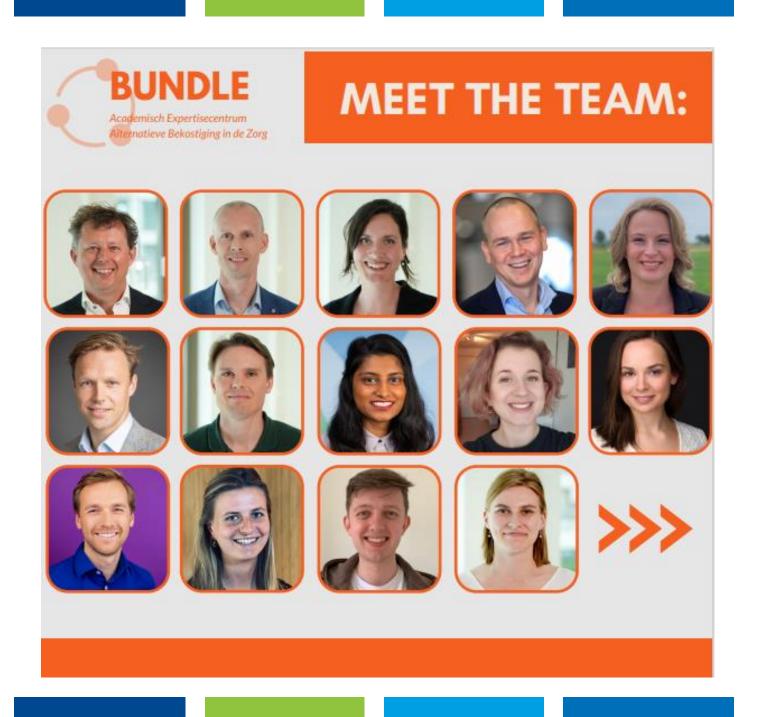
First tangible effects Small changes in place of births and activities Smaller spending growth No effects on health outcomes

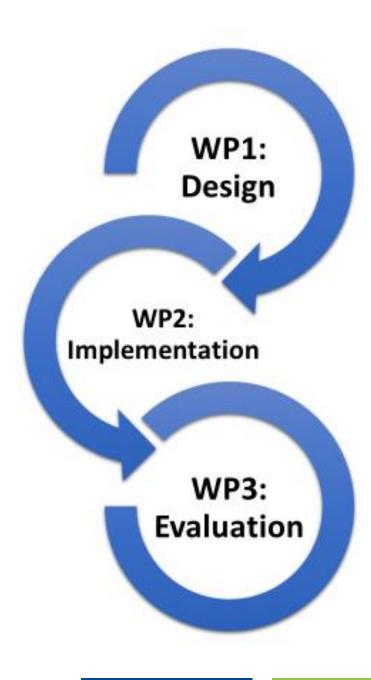
Discussie

Administrative burden risk for maintaining support How incentive translate into practice differs Longterm effects unknown

Academisch expertisecentrum alternatieve bekostiging in de zorg







The "Why" and the "What"

- Theoretical underpinning and considerations
- Contextual factors
- · Building blocks for design choices

• The "How"

- Field experiments
- Identifying effective implementation strategies
- Strategic Roadmap to enhance APM adoption

The "Effects" via mixed methods approach

- Realist Evaluation (Context-Mechanism-Outcomes)
- Causal inference approaches

Activities BUNDLE

Workshops / Lectures Goal: to create a common language between different stakeholders

In-company support Goal: Guidance in developing an APM

Evaluations Goal: Evaluation of the designed and implemented APM



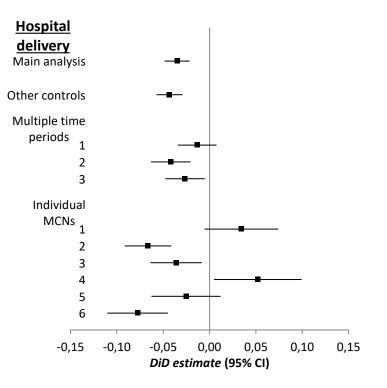




Current projects

Commissioned by: Ministry of Health, Welfare and Sport

Bundled payment for maternity care

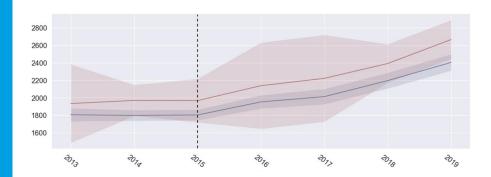


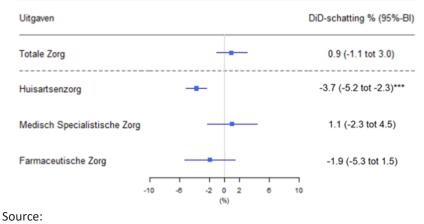
Source: Scheefhals et a., in preparation

Current projects (II)

Commissioned by: Ministry of Health, Welfare and Sport

Population-based funding for GPs (i.e. 'consultloos abonnementstarief')

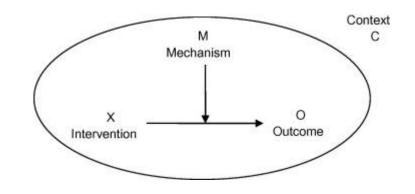




Steenhuis et al., in preparation, Faiq et al., in preparation

Current projects (III)

Commissioned by: ZonMw Research project BUNDLE: a realist evaluation approach within 7 different APM contracts



Current projects (IV)

Commissioned by: Stichting Phoenix Vernieuwde hartfalenzorg: aanneemsom voor hartfalenzorg (Rdgg-DSW)

Populatiebekostiging kan een eind maken aan inkoopcircus

Elk jaar maken zorgaanbieders en zorgverzekeraars opnieuw afspraken met elkaar. Deze manier van bekostigen moedigt niet aan om te investeren in een slimmere organisatie van zorg of preventie. Maeke Stumpel van Zorgvuldig Advies schrijft over hoe het Reinier de Graaf Gasthuis en zorgverzekeraar DSW het anders aanpakken.

Current projects (V)

Commissioned by: Commonwealth Fund, NYC

APMs and their role in decarbonization of the health care system



1 East 75th Street New York, NY 10021 212.606.3800

commonwealthfund.org

Affordable, quality health care. For everyone.

June 30, 2022

Jeroen Struijs Associate Professor LUMC Health Campus The Hague Leiden University Medical Center jeroen.struijs@rivm.nl

Dear Jeroen,

On behalf of The Commonwealth Fund, I am pleased to inform you that your proposal "An Untouched Opportunity: Value-based Purchasing to 'Green' the Health Care System" has been selected for funding through the Harkness Senior Fellow Small Grant Program.

in collaboration with:





Concluding Remarks

- Provider-led entities which assume financial risks are still in their early stages...
- Translating of provider incentives differs between settings
- Knowledge base is growing supporting the potential of payment reforms as a strategy toward more value-based health care delivery
- Joy of the workforce is too often neglected: design in cocreation to maintain support
- Real outcome-based payment models still in its infancy

Interested?

COURSERCI education for everyone

H

Browse > Health > Healthcare Management

Population Health: Alternative Payment Models

**** 4.9 9 ratings

Jeroen Struijs



Expertisecentrum Alternatieve Bekostiging

<u>BUNDLE - Expertisecentrum</u> <u>Alternatieve Bekostiging in de</u> <u>Zorg: LinkedIn</u>

