



The Finnish Health Care System:

A Value-Based Perspective

*Juha Teperi, Michael E. Porter,
Lauri Vuorenkoski and Jennifer F. Baron*

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Foreword

It is well known internationally that the publicly organized Finnish health care service system has been a success story. Since the turn of the new millennium, the expenditure on health and social care has significantly exceeded our national GDP growth but this development over the long-term will not be sustainable. The retirement age of the baby boom generation is almost at our door, and the proportion of the retired population will grow rapidly within the near future. There will be fewer people to pay for the health and social care of the quickly aging population. The rather recent report from the OECD includes Finnish health care, and it clearly indicates that inequality to access of the services has started to grow. Lower income citizens do not have access to the same number of services as those with a higher standard of living.

Sitra, the Finnish Innovation Fund, started its Health Care Programme at the beginning of 2005. Our intention was to help municipalities to modernize the service system and improve its efficiency. We quickly learned that there is an intimate symbiosis between health care service procurement and supply; when the service buyer and supplier are one, there is no imminent need to optimize cost or quality. A clear separation between purchase and supply would immediately call for significant change in the transparency of cost and quality indicators. In 2006, Professors Michael E. Porter and Elisabeth Olmsted Teisberg authored a book *Redefining Health Care, Creating Value-Based Competition on Results*. One of the key messages of this book is to move from an activity based service system to a new approach where the patient is in the centre and where his or her health outcomes are given the guiding role.

Quite soon after this, Parliamentary elections took place in Finland in early 2007. In its publicly available plan, the new government wanted to profoundly renew the legislation concerning health and social care. Hopefully, the new emerging laws will enable the further evolution and modernization of the Finnish health and social services and for them to be maintained at the best

possible standard. Here at Sitra, we were fortunate enough to bring together Professor Michael E. Porter and some of the best experts on the Finnish health care system from the Ministry of Social Affairs and Health. It was jointly agreed to produce a white paper titled *The Finnish Health Care System: A Value-Based Perspective*. It is in our best interest that this new document will help those responsible for the Finnish health and social care system to create a vision and strategy to maintain and improve our nationally available services in a sustainable way for the years to come.

On behalf of Sitra, I would like to sincerely thank the authors of this document, Dr Juha Teperi, Dr Michael E. Porter, Dr Lauri Vuorenkoski and Ms Jennifer F. Baron, for their invaluable contribution. I wish to extend my gratitude also to the Ministry of Social Affairs and Health for the opportunity of the Finnish authors to give their significant contribution to this document.

Hannu Hanhijärvi
Executive Director
Sitra, the Finnish Innovation Fund

List of abbreviations

DRG	Diagnosis Related Group
EPR	Electronic Patient Record
EU	European Union
EU15	Countries that joined European Union before 2004
Finohta	Finnish Office for Health Technology Assessment
GDP	Gross Domestic Product
HTA	Health Technology Assessment
IPU	Integrated Practice Unit
MSAH	Ministry of Social Affairs and Health
NAM	National Agency for Medicines
NAMLA	National Authority for Medicolegal Affairs
NHI	National Health Insurance
OECD	Organisation for Economic Co-Operation and Development
PHC	Primary Health Care
ROHTO	Centre for Pharmacotherapy Development
RAY	Slot Machine Association
SII	Social Insurance Institution
Sitra	Sitra, the Finnish Innovation Fund
Stakes	National Research and Development Centre for Welfare and Health
THL	National Institute for Health and Welfare
TEH	Total Expenditure on Health
Tekes	Finnish Funding Agency for Technology and Innovation

Contents

Foreword	5
List of abbreviations	7
About the authors	12
Tiivistelmä	15
Arvoon perustuva terveydenhuolto	15
Suomalainen terveydenhuolto arvoon perustuvasta näkökulmasta tarkasteltuna	16
Kokonaisarvio ja suositukset	18
I Introduction	20
II Principles of value-based delivery	23
The fundamental goal is value for patients	24
The only way to truly contain cost and increase value is to improve health outcomes	25
Care should be organized around medical conditions over the full cycle of care	26
Value is increased by provider experience, scale, and learning at the medical condition level	29

Value must be universally measured and reported	30
Reimbursement should be aligned with value and reward innovation	31
Competition should occur for patients based on value, while encouraging the restructuring of care	33
Electronic medical records must enable the restructuring of care delivery, support integrated care and produce outcome measures	34
Health plans or funding agencies should contribute to value, rather than act as passive payers	34
III Overview of the Finnish health care system	36
IV Access and standards for coverage	39
Municipal health care system	40
National health insurance system	42
Private insurance	42
Occupational health care system	43
Assessment	44
V Structure of health care delivery	47
Providers	47
Employers	72
Patients	74
Suppliers	78
Clinical guidelines	81
VI Health information technology	83
Assessment	84
VII Results measurement	86
Use of measurement data in health care management	91
Assessment	92

VIII Overall assessment and recommendations	94
Intensify outcome measurement and link it to incentives and management	95
Create integrated practice units	97
Strengthen primary health care	100
Create true health plans	102
Reimburse full cycles of care	103
Increase value by service consolidation combined with competition	105
Encourage innovation in care delivery and its structures	106
Invest in health information technology	108
Increase the role of patients in health care	110
Moving to action	112
References	113

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Jennifer Baron is a Senior Researcher at the Institute for Strategy and Competitiveness, managing a growing body of domestic and international health care work. Her current research includes US and other advanced economy health system analysis, health care policy and reform, and approaches to health care delivery in resource-poor settings. Jennifer earned her MBA from Yale School of Management, her MPH from Yale School of Public Health and her BA from Georgetown University.

Michael E. Porter, MBA, PhD

Bishop William Lawrence University Professor, Harvard Business School



Michael E. Porter is a Bishop William Lawrence University Professor at Harvard Business School. A leading authority on competitive strategy and the competitiveness of nations and regions, his work is recognized by governments, corporations, non-profit organizations and academic circles across the globe. Professor Porter has recently devoted considerable attention to understanding and addressing the problems in health care evident in the United States and abroad. His book, *Redefining Health Care* (with Elizabeth Teisberg) develops a new framework for understanding how to transform the value delivered by the health care system.

For more information, visit the Institute for Strategy and Competitiveness website at www.isc.hbs.edu.

Juha Teperi, MD, PhD

Juha Teperi was trained as a medical doctor and health services researcher at the University of Helsinki. After working as a researcher in Finland and abroad, Dr Teperi has held various senior management positions in Stakes (National Research and Development Centre for Welfare and Health) since 1997. In August 2007, he moved to the Ministry of Social Affairs and Health, in order to head a national service innovation programme in health and social care. Dr Teperi has published extensively on health technology, health services and health policy.



Lauri Vuorenkoski, MD, PhD

Lauri Vuorenkoski is a senior researcher at the National Institute for Health and Welfare (THL). He is trained as a medical doctor and received a PhD in child psychiatry from the University of Oulu in 2001, after which he worked at THL and its predecessor Stakes. He has recently authored the book *Finland: Health System Review* for European Observatory on Health Systems and Policies series. Currently, he is working part time as a health policy expert in the Finnish Medical Association.



Tiivistelmä

Tässä raportissa on kolme osaa, joista ensimmäinen esittelee ”arvoon perustuvan terveydenhuollon” periaatteet. Toisessa kuvataan Suomen terveydenhuoltoa niin, että rakenteita ja toimintaa arvioidaan suhteessa näihin periaatteisiin. Kolmannessa osassa annetaan suosituksia suomalaisen järjestelmän kehittämistä arvoon perustuvan terveydenhuollon suuntaan. Raportin tavoite on antaa aineksia laajapohjaiselle keskustelulle terveydenhuollon kehittämistä, eikä se esitä yksityiskohtaisia ehdotuksia.

Arvoon perustuva terveydenhuolto

Michael E. Porterin ja Elizabeth Olmstead Teisbergin vuonna 2006 ilmestyneessä ”Redefining Health Care” -teoksessa hahmotellaan strateginen viitekehys tulevaisuuden terveydenhuollolle. Porter ja Teisberg kutsuvat tavoittelemaansa ihannemallia nimellä ”value-based health care” (”arvoon perustuva terveydenhuolto”). Terveydenhuollossa arvo on potilaille (tai sairastumisvaarassa oleville) tuotettu terveys suhteutettuna käytettyihin voimavaroihin. Arvoon perustuva terveydenhuolto tarkoittaa tehokkaasti terveyttä tuottavaa järjestelmää.

Nykyisiä terveydenhuoltojärjestelmiä ei ole organisoitu tuottamaan tehokkaasti terveyttä. Nyt niiden tärkein tuotos näyttäisi olevan hoito, ei terveys. Porterin ja Teisbergin johtajuus on se, että tulevaisuuden terveydenhuollossa kaikkien toimijoiden toiminta tähtää yhteiseen maaliin, arvon tuottamiseen.

Terveydenhuollon organisaatiot sovittavat toimintansa vallitseviin pelisääntöihin. Arvoon perustuvan terveydenhuollon säännöt on laadittu niin, että parhaiten terveyttä tuottavat organisaatiot menestyvät. Kustannusten siirtämistä toisille toimijoille ei palkita, ei myöskään oman organisaation tulojen varmistamista kokonaisuudyn kustannuksella.

Terveyden tehokas tuottaminen hillitsee kustannuksia kestävästi. Hoito on järjestettävä potilaan terveysongelman mukaisesti yhtenä kokonaisuutena. Hoitoa ei pidä pilkkoa erillään tuotettuihin ja erillään rahoitettuihin osiin. Arvon tuottaminen vaatii osaamista, jonka varmistaa tarpeeksi suuri palvelujen määrä kussakin tuottajaorganisaatiossa.

Pelissäännöt eivät riitä, jos hoidon vaikutuksia terveyteen ja kustannuksiin – siis arvoa – ei seurata kattavasti. Palvelun järjestäjien ja rahoittajien merkitys on ratkaiseva arvoon perustuvassa järjestelmässä. Niiden on aktiivisesti varmistettava kohdentamiensa voimavarojen terveyshyöty.

Palvelutuotannon hinnoittelu- ja korvausjärjestelmät tukevat arvon tuottamista ja uudenlaisia toimintamalleja. Kilpailun pitää perustua paremmuuteen arvon tuottamisessa ja sen on rohkaistava rakenteellisiin uudistuksiin. Sähköisten potilastietojärjestelmien on tuettava palvelutuotannon uudistamista ja varmistettava hoitoprosessin tulosten hahmottuminen yhtenä kokonaisuutena.

Suomalainen terveydenhuolto arvoon perustuvasta näkökulmasta tarkasteltuna

Suomen terveydenhuolto oli monessa suhteessa takaperoinen vielä 1960-luvulla. Nyt se on johtavien järjestelmien joukossa. Se on pystynyt kohtuullisin kustannuksin tarjoamaan laajan palveluvalikoiman harvaanasutussa maassa. Kansainvälisten mittareiden valossa järjestelmä tuottaa terveyttä melko tehokkaasti ja kansalaiset ovat siihen kokonaisuutena tyytyväisiä.

Suomalainen terveydenhuolto perustuu valtaosaltaan julkisesti tuotettuihin, pääasiassa verorahoituksella maksettuihin palveluihin. Perustuslain mukaan julkisen vallan on tarjottava riittävät palvelut kaikille. Valtiovallan tehtävä on määrittellä terveydenhuollon yleiset kansalliset linjaukset. Sosiaali- ja terveysministeriö valmistelee terveydenhuoltoa ohjaavan lainsäädännön, määrittää uudistusten ja kehittämistoimien yleiset päämäärät sekä seuraa ja ohjaa niiden toteutumista.

Kunnilla on vastuu palvelujen järjestämisestä. Kuntaverotuksen, valtionosuuksien ja käyttäjämaksujen turvin ne tuottavat valtaosan palveluista itse tai keskinäisinä yhteenliittyminä. Kunnat järjestävät palveluja myös ostamalla niitä yksityisiltä ja ns. kolmannen sektorin tuottajilta. Vähän käytetty malli on hankkia palveluja julkisilta yksiköiltä oman alueen ulkopuolelta.

Perusterveydenhuollon palveluja tuottaa noin 250 terveyskeskusta. Perustason sairaanhoidon lisäksi ne tarjoavat ehkäiseviä palveluja ja osallistuvat kunnan asukkaiden terveyden edistämiseen. Monista muista maista poiketen perustason yksiköihin on koottu hyvin monialaista osaamista. Terveyskeskuspalvelujen saatavuus on viime vuosina huonontunut.

Erikoissairaanhoitoa varten kukin kunta kuuluu yhteen 20 sairaanhoitopiiristä, joista kussakin on yksi tai useampi sairaala. Kunnat ohjaavat piirien toimintaa niiden valtuustojen ja hallitusten kautta. Alueellisesti toimivilla sairaaloilla ei juuri ole kilpailijoita. Jokainen sairaala tuottaa laajan kirjon palveluja, joista osan pienille potilasmäärille.

Suomessa pysyvästi asuvat henkilöt kuuluvat pakollisen sairausvakuutuksen piiriin. Se korvaa osan potilaiden itse hankkimien terveyspalvelujen kustannuksista. Yksityiset palvelut painottuvat erikoislääkäreiden avohoitokäynteihin. Sairaalahoidoista viitisen prosenttia tuotetaan yksityisissä sairaaloissa.

Työterveyshuoltoa varten on oma rahoituskanava. Se perustuu pakolliseen työtulovakuutukseen, joka rahoitetaan työntekijöiden ja työnantajien maksuilla. Työterveyspalveluja tuottavat niin kunnalliset ja yksityiset toimijat kuin suurien yritysten omat työterveysyksiköt.

Monet asiantuntija-arviot ovat kiinnittäneet huomiota rinnakkaisten rahoituskanavien luomiin ongelmiin. Uudistuksia on tehty lisäämällä uusia malleja entisten rinnalle. Näin on syntynyt kannustimia siirtää kustannuksia toisten kannettavaksi. Rahoituskanavien runsaus ohjaa omien tulojen varmistamiseen kokonaishyödyn kustannuksella. Terveiden tehokas tuottaminen estyy. Monikanavaisuus myös kohdentaa monia terveyspalveluja hyvässä taloudellisessa asemassa olevia suosien.

Ikääntyneiden pitkäaikaista hoivaa tarjotaan kotiin annettuina palveluina, palveluasunnoissa, vanhainkodeissa ja terveyskeskuksissa. Kolme ensin mainittua ovat useimmiten osa kunnallista sosiaalitoimea tai yksityistä palvelutuotantoa. Eri palvelumuodoissa rahoitus perustuu eri painotuksin kunnalliseen rahoitukseen, sairausvakuutukseen ja asiakasmaksuihin. Monikanavainen palvelujen rahoitus estää ikääntyvän väestön palvelujen linjakkaan kehittämisen.

Lääkekustannukset ovat Suomessa nousseet muita terveydenhuollon menoja nopeammin – muiden maiden tapaan. Lääkekustannukset katetaan kahta kautta. Laitoshoitopotilaiden kustannuksista vastaa kunnallinen terveydenhuolto. Muuten lääkekustannuksia korvaa porrastettu sairausvakuutus niin, että käyttäjien rahoitusosuus on kansainvälisesti vertaillen korkea. Rinnakkaiset rahoitusmallit vaikeuttavat lääkehoidon niveltämistä kiinteäksi osaksi hoitoprosessia.

Potilaiden asemaa on viime vuosina vahvistettu. Suomi oli ensimmäisiä maita, jossa säädettiin erillinen laki potilaiden oikeuksista. Potilaiden mahdollisuus valita palvelunsa kunnallisen järjestelmän sisällä on ollut kansainvälisesti vertaillen rajallinen. Useimpien palvelujen käyttäjämaksut ovat kohtuullisia, mutta mm. lääkkeiden, hammashuollon ja yksityisten palvelujen korkeat omavastuuosuudet nostavat kotitalouksien suorien maksujen osuuden terveydenhuollon rahoituksesta korkeammalle kuin useimmissa muissa Euroopan maissa.

Sähköiset sairauskertomukset on Suomessa otettu käyttöön kattavammin kuin useimmissa muissa maissa. Sähköisen tietohallinnon hyödyntäminen hoitoprosessien uudistajana on kuitenkin vielä toteuttamatta. Sairaalahoitaja koskeva rekisteri- ja tilastotuotanto toimii, mutta perusterveydenhuollon tie-

topohja on heikko. Johtamiseen kytketyt tuottavuuden ja vaikuttavuuden seurantajärjestelmät ovat vasta idullaan.

Kokonaisarvio ja suositukset

Viime vuosikymmenten saavutukset luovat pohjan tuleville uudistuksille. Taloudellisesti kestävästi toteutettujen palvelujen järjestäminen yhtäläisesti kaikille Suomessa asuville säilyy välttämättömänä tavoitteena, mutta se ei yksin riitä. Palvelujen tuottaman terveyshyödyn lisääminen hyödyttää yksittäistä potilasta ja varmistaa sekä taloudellisesti että sosiaalisesti kestäväen palvelutuotannon.

Alueelliseen järjestämisvastuuseen ja julkiseen rahoitukseen perustuva kaikille avoin järjestelmä on mahdollistanut viime vuosikymmenten kiistatottomat saavutukset. Samalla on syntynyt tilanne, jossa palvelutuottajien ei ole tarvinnut kilpailla keskenään kyyllä tuottaa mahdollisimman paljon terveyttä. Kannustimet palvelujen ja niitä tuottavien organisaatioiden uudistamiseen ovat jääneet heikoiksi.

Moni raportin suosituksista liittyy ajatukseen kilpailun vahvistamisesta terveydenhuollossa. Kilpailu ei ole tavoite itsessään, vaan työkalu ja käyttövoima palvelujen kehittämiseksi. Kilpailun lisääminen ei ole kannanotto julkisen tai yksityisen palvelutuotannon paremmuuteen. Kilpailua tarvitaan kenties enemmän julkisen tuotannon sisällä kuin julkisen ja yksityisen välillä.

Toimet palvelutuotannon arvon lisäämiseksi eivät onnistu, ellei tulosten mittaamista ratkaisevasti vahvisteta. Jo nyt on tarjolla useita mittausjärjestelmiä, joiden käyttö on vähäistä. Tarvitaan myös terveystulosten uusien mittausjärjestelmien kehittämistä. Sekä vanhat että uudet mittausjärjestelmät on kytkettävä kannustin- ja johtamisjärjestelmiin.

Suomalaisessa terveydenhuoltojärjestelmässä on useita sellaisia integraatiota vahvistavia rakenteita, joihin muualla vasta pyritään. Terveyskeskukset kokoavat yhteen mittavan määrän osaamista. Valtaosa ihmisten terveysongelmista voidaan ratkaista tehokkaasti ja taloudellisesti lähellä heidän arkeaan ja yhteisöjään. Kääntöpuolena on se, että perusterveydenhuollon ja erikoissairaanhoidon välinen raja jakaa vastuun monien terveysongelmien hoitamisesta liian erillisille yksiköille.

Yhtäältä tarvitaan esimerkiksi merkittäviin kansansairauksiin erikoistuneita hoitoyksiköitä, jotka yhdistävät erikoissairaanhoidon ja perusterveydenhuollon toimintoja yhden johdon ja budjetin alle. Toisaalta tarvitaan perusterveydenhuollon vahvistamista vastaamaan niihin haasteisiin, jotka eivät liity tiettyyn sairauteen: perusterveydenhuollon toimintayksiköiden on erikoistuttava esimerkiksi yleensä terveiden lasten ja työikäisten terveyden ylläpitämiseen, raihnaiden iäkkäiden hoitoon sekä monisairaiden hoitokokonaisuuden koor-

dinointiin. Perusterveydenhuollon erityinen vahvuus on saumaton yhteistyö sosiaalipalvelujen kanssa.

Monissa terveydenhuoltojärjestelmissä maksajan rooli jää passiiviseksi. Suomessa palvelujen järjestämisestä vastaavat nykyään kunnat, ja niillä on vaikeuksia ohjata erityisesti erikoissairaanhoidon tehokkaampaan suuntaan. Palvelun järjestäjälle on luotava kannustimet ja työkalut ohjata potilaita palveluihin terveyshyödyn mukaan, ei maantieteeseen tai palveluorganisaation omistajuuteen perustuen. Palvelujen järjestäjän roolin vahvistamiseksi on selkeytettävä yksityisen työterveyshuollon ja muun yksityisen palvelutuotannon suhdetta kuntien järjestämään erikoissairaanhoidon.

Ratkaiseva uusi näkökulma liittyy palvelujen hinnoitteluun. Yksittäisistä toimenpiteistä, hoitajakoista tai käynneistä maksamisen sijasta tulisi palkita terveysongelman ratkaisemisesta. Tämä tarkoittaa niputettua hinnoittelua. Palvelutuottaja saa korvauksen terveyden palauttamisesta mahdollisimman hyvälle tasolle, riippumatta käytetyistä toimenpiteistä. Näin estetään palvelujen perusteeton säännöstely ja niiden ylituotanto sekä rohkaistaan etsimään kokonaan uusia palvelumalleja.

Suomessa pienetkin sairaalat pyrkivät tuottamaan mahdollisimman laajaa palveluvalikoimaa. Tuottavuus- ja laatuhyödyt jäävät saavuttamatta, kun terveystuloksiin perustuvaa kilpailua ei ole ja potilasmäärät ovat pieniä. Organisaatioiden pitää erikoistua. Samalla on otettava riittävästi huomioon palvelujen saatavuus.

Terveydenhuollon kehittämiseen on suunnattu runsaasti tutkimus-, kehitys- ja innovaatorahoitusta. Vaikutukset uudistuneina palveluina eivät ole vastanneet tehtyjä investointeja. Syynä on osin ollut terveyshyötyyn perustuvan kilpailun puuttuminen ja heikot uudistumisen kannustimet. Tulosten mittaamisen ja siihen perustuvan kilpailun lisäksi tarvitaan uusia tapoja tilata palveluja. Julkisilta ja yksityisiltä tuottajilta palveluja tilattaessa tulee siirtyä pitkäaikaisiin, koko hoitokokonaisuuden kattaviin ja terveyshyötyihin sidottuihin sopimuksiin.

Informaatioteknologian käyttöä palvelutuotannon uudistamisessa hidastaa terveydenhuollon järjestämisvastuun pirstaleisuus. Viime vuosina on otettu lupaavia edistysaskeleita, mutta vauhti ei riitä. Nyt tarvitaan laaja-alainen konsensus vahvasta kansallisesta ohjauksesta ja voimavaroista informaatioteknologian hyödyntämiseen.

Potilaan rooli on liian passiivinen. Potilaan aseman vahvistaminen aktiiviseksi toimijaksi lisää terveydenhuollon tuottamaa arvoa monella tavalla. Sekä ehkäisyn että pitkäaikaissairauksien hoidon tulokset riippuvat paljolti niistä päätöksistä, joita suomalaiset tekevät omista elintavoistaan. Usein potilas on oman sairautensa hoidon paras asiantuntija. Oikein toteutettuna potilaan vallinnan vapauden lisääminen vahvistaa terveydenhuollon kannustimia kehittyä yhä tehokkaammin terveyttä tuottavaksi kokonaisuudeksi.

I Introduction

In only a few decades, Finnish health care has developed from a somewhat rudimentary health care system into one that is internationally acclaimed. Every permanent resident in the sparsely populated country has access to an extensive set of services, yet total per capita health care costs remain lower than in most comparable countries. Despite recent concerns about equity issues, Finns are generally very satisfied with their health care services.

However, as in any country, Finland cannot rest on its laurels. Advancing medical science raises a new bar for quality in terms of the outcomes achieved in the treatment of illness. An aging population and rising public expectations threaten to increase costs and impede timely access to care, thus jeopardizing sustainability. One challenge in particular, the aging Finnish workforce, affects not only patient demographics but also the availability of clinicians. The upcoming wave of retiring health care professionals will occur at just the time when Finland will need more of them.

To overcome these challenges, every health care system will have to use its resources more effectively; the achievements of past decades are to be maintained and built upon. Access and equity will remain necessary characteristics of optimal health care systems, but they are insufficient goals in terms of improving quality and achieving financial sustainability. Instead, the value created by the system as a whole must be continuously improved; for each euro spent, more health needs to be achieved.

The large variations in health care quality and costs have been described and documented in many advanced economies, signalling a lack of consensus concerning best practices, not only in individual care processes but also in the organization of care delivery itself. Finnish researchers, for example, have shown that outcomes like disease-specific mortality rates vary across and even within providers in a way that cannot be explained by the severity of the condition or other initial patient conditions. A similar variability exists in the costs

of care. Often, there is no significant correlation between condition-specific health outcomes and their respective costs. Thus, lower costs are not associated with worse outcomes. Similarly, higher spending often does not result in better care.

Most health care systems have not yet addressed these issues. In many health care systems, data on health outcomes and costs is crude or nonexistent, masking the extent of variability and inhibiting providers' ability to improve substandard models and more closely examine those that succeed.

Another obstacle to redefining health care delivery is the reliance on asynchronous structures and care processes. In the era of chronic conditions, one component of cost-effectiveness is the ability to manage disease within the context of patients' everyday lives. Yet most services require patients to visit physician offices or to be admitted to hospitals, which can be both inconvenient and costly.

In 2006, Porter and Teisberg published *Redefining Health Care* (HBS Press), a new framework for health care delivery based on value for patients, defined as health outcomes achieved per unit of cost spent. The authors drew upon decades of experience analyzing strategy, organization and management issues in other industries to formulate a set of value-based principles for health care delivery.

This framework provides a powerful new lens with which to examine health systems in any country. The most appropriate and effective ways to implement value-based care delivery models will depend on the particular circumstances of each setting. This report seeks to examine the current state of the Finnish health care system and accelerate the identification and implementation of value-based reforms within the Finnish context. It aims to contribute to the discussion and introduction of value-based reforms in Finland that are already underway.

This report consists of three parts. Section 2 presents a brief overview of the general principles of value-based care delivery. Sections 3 to 7 then utilize these principles to analyze the Finnish health care system as it looks today. While the text aims to cover the essential features of the Finnish system, special attention is paid to aspects that are crucial from a value-based perspective.

Finally, Section 8 proposes a set of general conclusions and recommendations for Finland. The aim is not to provide a comprehensive road map for Finnish health care; rather, the recommendations highlight the key implications of a value-based approach to strategic decisions in Finnish health care policy. The aim is also not to lay out in detail how health care in Finland should look, or how individual policies to achieve a value-based system should be designed and implemented, but to offer an overall strategic framework together with the major directions of the change required.

The principal goal of this report is to catalyze discussion in Finland. If these recommendations help key stakeholders engage in mutual dialogue aimed at defining common goals conducive to improving the health of the Finnish people, this exercise has been worthwhile.

II Principles of value-based delivery

The reform of a national health care system has historically been approached from an issue-by-issue perspective, with reforms focused on solving individual problems such as cost, reimbursement, incentives, prevention, IT, safety, privatization or primary care. Lacking is an overall normative framework for the optimal organization of the system as a whole, and the appropriate roles of individual system actors. Many health professionals themselves were frequently unaware of the overall operation of their own health care system, and focused solely on the parts in which they participated.

Today, faced with aging populations and rising health care costs, governments and other stakeholders across the globe are pursuing health care reforms with a new sense of urgency. Particularly in advanced economies, analyses of health care system performance are becoming more prevalent. While many of these efforts contain valuable insights and they have served as resources for this paper, a systematic approach based on a rigorous normative framework has been absent.

We can examine any health care system using the framework introduced recently by Michael Porter and Elizabeth Olmsted Teisberg in *Redefining Health Care* (Porter and Teisberg 2006, see also Porter 2008). The value-based delivery framework is based on the central goal of value for patients, defined as health outcomes achieved per unit of cost spent. It offers general principles for how providers, patients, payers, employers, government and the health care system as a whole can maximize value.

Every health care system aims to improve value through better health outcomes and more efficient care, but no system is currently organized around value. Underlying the failure to focus on value is a misconception that health care, and not health, is the output. When health care is viewed as a product, it naturally follows that universal and equitable coverage is the end goal, or providing all citizens with access to care. However, from the patient perspec-

tive it is clear that care itself is not the goal but merely a means to achieve and maintain good health. Given a choice between more care and more health, a patient's choice is obvious. But health care systems around the world remain organized to deliver treatment, not to maximize health and the efficiency with which it is achieved.

How can Finland and other countries move toward a health care system that will continuously improve value? A value-based system is based on a series of core principles that begin by clearly defining the goal and move to the structure of health care providers, which are at the heart of the system. Then the roles of payers, patients, employers, suppliers and government follow. Each actor must contribute to value through its choices and priorities.¹

Every country, like Finland, has its own unique history and starting position, and thus different strengths and weaknesses. However, many health care systems share a set of common problems, largely due to the similar historical structure of medical practice in every country.

The fundamental goal is value for patients

Providing access to care is surely important, but the purpose of a health care system is to deliver good value for patients, which is defined as the health outcomes achieved per euro spent. Universal and equitable coverage is essential to a value-based health care system, but it is not enough. While this might sound simple, it rarely occurs in practice. Increasing access without improving value will yield poor health outcomes while leading to unsustainable cost increases.

It is impossible to have a truly high-value system without universal coverage. The United States is a prime example of the ill effects of a large uninsured population without access to primary and preventive care, the prevalence of late and expensive acute treatment, and the distortive effect of cross-subsidies to care for the uninsured. However, even countries like Finland that have achieved universal coverage are encountering both rising health care costs and uneven quality of care. How universal access is achieved, then, is important to value. In many countries, inadequate risk pooling across individuals means that payers focus on selecting healthier individuals, selectively contracting to achieve discounts, or limiting services, rather than measuring and improving member health.

The goal is to increase value, not just contain costs. Value is measured by the overall health outcome achieved relative to the total costs of care over the full cycle of the patient's illnesses. Value-based health care delivery seeks to minimize the overall cost of care, not focus just on minimizing the cost of

¹ A detailed discussion of these principles is contained in *Redefining Health Care*, especially chapters 4–8. See also “What is Value in Health Care”, Institute for Strategy and Competitiveness discussion paper, 2008.

individual services or interventions. Value-based care delivery spends more on appropriate services in order to save through early intervention, reducing mistakes, minimizing complications, and forestalling disease recurrences.

In many countries, providers focus on volume, not value. This leads most providers to offer full services, rather than those services where they are truly expert and cost effective. The result is access to care but lower value in the care actually delivered.

Value is the goal, not whether the providers are public or private, and non-profit or for-profit. In countries with public systems, for example, contracting with private providers should focus on value, not outsourcing per se. Outsourcing should be a tool for stimulating the measurement of value and improvements to the public system.

The only way to truly contain cost and increase value is to improve health outcomes

Ironically, setting a goal to reduce costs is one of the surest ways to increase the costs of long-term health care. The activities and programmes often rationed or cut in order to control costs are frequently among the highest-value. Much cost control is really cost shifting or cost delaying rather than cost reduction. For example, a system seeking to reduce spending often chooses to scale back on office visits and consultative care, even though these produce better diagnoses and patient engagement in managing their disease. Insurers limit the use of diagnostic imaging that detects problems early or leads to better diagnoses, and raise co-payments for costly medications for chronic conditions, which then leads to less patient adherence and costly complications, and payers cut back on mental health or social services, which then creates the need for expensive inpatient or institutional care.

In the near term, costs may in fact decrease. Over the longer term, costs are higher and outcomes are worse.

In the medium and long run, the best way to contain costs is to improve quality (Midwest Business Group on Health 2003, Fuhrmans 2007, Porter and Baron 2008). Better health is less expensive than poor health. This basic truth is magnified when the full costs to society of poor health are taken into consideration (e.g. poor worker productivity and the ability to maintain employment and live independently).

How does better quality drive down costs? This starts with prevention of disease through healthier living practices, which forestall the need to treat illness; early detection usually improves the ability to achieve a good outcome, while significantly reducing costs. An accurate diagnosis makes a good outcome more likely due to appropriate care. Faster treatment often improves outcomes while reducing costs, and so on.

The best way to achieve cost containment in health care is to drive quality improvement, where quality is health outcomes. Care delivery should be structured to achieve outcome improvements, as should the activities of health insurers, employers, and other actors. Unfortunately, health care delivery is rarely designed this way. What is worse, many health care experts believe that quality improvement is more costly, not less. Instead, health care is one of the fields where the maxim “quality is free” is most striking.

Care should be organized around medical conditions over the full cycle of care

Most care delivery is not currently organized in a way that maximizes value. Care is organized by specialty or intervention, not the multidisciplinary care of the patient’s medical condition whether it be diabetes or breast cancer. Primary care, outpatient care, inpatient care and rehabilitation are separate entities, often with competing interests. In the current system, patients see a sequence of specialists each delivering discrete interventions. Each specialist has separate scheduling, administration, and often billing. Each specialist is also a generalist in his or her field, seeing the full range of patients in their specialty, who can have widely varying medical problems. A neurologist cares for stroke patients, migraine headaches and head trauma, for example, and each requires different expertise and coordination with widely differing other providers.

Providers involved with a patient work separately and not as a team. There is little communication to determine a coordinated care plan. Even clinicians working within the same hospital are typically organized by functional department. Each time a patient is passed from one department or provider to another, there are administrative costs and delays as well as unnecessary opportunities for miscommunication and value destruction. Moreover, care tends to be measured and improved in the way it is organized; surgeons focus on improving their surgery as if this determined value, even if a non-surgical intervention would be a better value or the value created by the procedure is later negated by improper follow-up care.

Value for patients is created by the entire set of activities needed to address a patient’s medical condition, not a single intervention. We term this the cycle of care, which extends from primary and preventive care through to treatment, rehabilitation or long-term management. It may require a few visits or chronic care, depending on the medical condition. A medical condition is a set of interrelated patient medical circumstances best addressed in an integrated way, defined from the patient’s perspective. The medical condition is the unit of value creation in health care. It includes the most common co-occurrences for medical conditions such as diabetes, breast cancer, stroke, asth-

ma and congestive heart failure. Such co-occurrences will include sequelae or complications resulting from the medical condition in question. The scope of sequelae and other co-occurrences included in each IPU will depend on both the medical condition as well as the patient population. For example, the medical condition of diabetes involves renal disease, eye disease, cardiovascular complications as well as foot and other circulation problems. Diabetes IPUs serving primarily or exclusively type I patients may include a slightly different set of services than an IPU serving type II patients. IPUs serving older diabetics may also offer different scopes of care than those serving younger individuals.

Value-based care delivery is organized around the patient's medical condition. Value-based care delivery combines the set of specialties and activities required to address a medical condition into a dedicated unit.² Care is integrated across both specialties and time. The providers involved in care for a medical condition become a true team. The term "integrated" has come to mean many things. Integration is different from coordination; multidisciplinary provider teams actually work together to maximize coordination and minimize the need for handoffs. Care integration is improved by the co-location of providers in dedicated facilities (Porter and Teisberg 2006).

Value-based care delivery therefore requires integrated practice units (IPUs). IPUs include the specialties and services necessary during the cycle of care, including those needed to anticipate and to treat common co-occurrences and complications. In diabetes care, for example, specialists in cardiovascular disease, kidney disease, eye disease, podiatry and other diseases should be part of the integrated practice unit. IPUs involve dedicated physicians and staff who are expert in the medical condition. In a diabetes IPU, the nephrologists are experienced in managing the complications of diabetes, not generalists in renal problems; similarly, social workers are expert on the issues of diabetes control. Some specialists may work part-time in an IPU, depending on the volume of patients.

IPU boundaries for a particular medical condition can vary for particular patient populations. For example, a team serving primarily elderly patients may require additional social services to maximize the value of care that are not necessary for a provider serving a younger population.

IPUs should provide care in a single dedicated facility in which all necessary services are conveniently located in order to maximize both patient and provider efficiency and effectiveness. Less complex services in the care cycle

² Professor Michael E. Porter and his colleagues at the Institute for Strategy and Competitiveness at Harvard Business School are developing a body of case studies highlighting organizations moving toward value-based care delivery approaches. Profiled organizations include The University of Texas MD Anderson Cancer Center, The Cleveland Clinic, The West German Headache Center, and The Joslin Diabetes Center. A complete list of published and in-progress case studies is available on the Institute website at http://www.hbs.edu/rhc/health_care_delivery_curriculum.html.

may be provided at separate locations convenient to the patient, but they need to be managed by the same organizational unit in order to achieve true coordination and the integration of care. IPU's should have a single administrative structure to schedule appointments, assemble records, communicate with patients and ensure follow-up.

The IPU model is designed to bring together the expertise in a medical condition and seamlessly integrate the care needed by every patient with that condition. In a value-based system, patients with multiple unrelated medical conditions will be treated by more than one integrated practice unit. In this case, an additional coordinating structure is needed, which may be the primary care physician or a dedicated unit designed to coordinate care for particularly complex patients such as the elderly or disabled. In the IPU model, coordination for multiple conditions can rely on a single team captain. In contrast, today's care delivery models require that each individual clinician serving a complex patient attempts to coordinate with all the others involved in that patient's care, which is not practical or effective even if there is one designated coordinator.

Patient involvement

The IPU structure greatly facilitates the patients' engagement in their care compared to current structures. Health and health care value are co-produced by the patient and clinician, so that the patient must be a member of the care delivery team. Patient adherence to drug or other treatment regimens, compliance with scheduled appointments, and lifestyle modifications are some of the ways in which patient involvement has a major influence on value. Patient involvement is also essential to success in preventive care and disease management.

Today's fragmented systems, organized around discrete interventions, work against patient engagement and involvement for a number of reasons. When patients see many clinicians across multiple sites, no individual provider has the time or responsibility to ensure that patients understand what is expected of them. Because each provider is seeing multiple types of patients with different diseases, attention on patient engagement can necessarily be limited. The complexity and delays introduced by multiple, uncoordinated visits leads to confusion over patient responsibilities, missed appointments, uncertainty about who to ask for guidance regarding medications or treatment and the lack of a clear point of contact. No single unit has the time or scope to focus on education or compliance.

In contrast, the IPU structure easily incorporates educators, case managers or other patient interfaces within the care delivery team. Such staff are in a position to work closely with patients, and all the relevant providers identify

adherence problems and deal with them. The IPU model dramatically raises the efficiency of patient engagement and spreads its cost over the patient's total care, and not one intervention.

The role of primary care

Primary care is an essential element of any health care delivery system. Primary care involves a set of services that include preventive care and screening, and they address the routine health problems that are necessary for every individual. Primary care is also the locus for initial diagnosis and guiding patients to the appropriate IPU or IPUs. IPUs for medical conditions make primary care more effective, and do not replace it. IPUs offer a much more effective structure for caring for the patient's medical condition, which will coordinate and divide responsibility better with the primary care practice (PCP). Primary care practices will also often supervise ongoing disease management in close collaboration with IPUs. PCPs, then, should act as intake mechanisms and follow up mechanisms for more complex and specialized care.

Primary care practices themselves can improve value if the practices are tailored to defined patient populations. A primary care practice equipped to serve elderly disabled patients, for example, can develop expertise, IPU relationships, and structures tailored to the needs of these patients, including home visits and the more intensive use of social services.

In a value-based delivery system, primary care practices should be connected to IPUs, and not be seen as stand-alone units. Through partnerships and combined electronic medical records, PCPs and IPUs can leverage hand-offs in both directions, providing continuity of care in the most cost effective setting and maximizing patient compliance.

Value is increased by provider experience, scale, and learning at the medical condition level

In today's fragmented care delivery systems, most providers offer a broad range of services but the volume of care for any one service is small. Providers attempting to offer care for virtually every medical condition are rarely good at all of them.

When too many providers offer the same types of care, a number of problems arise. By trying to be all things to all people, providers lack the knowledge, facilities and staff to achieve true excellence. They also fail to further improve and expand areas of excellence to serve more patients. Patients and providers would be better off if providers thought more strategically about service line

choices and offered only the types of care for which they were best equipped and highest value relative to other organizations.

When fewer providers care for each medical condition, patient volumes at the medical condition level will increase for most providers. As clinicians achieve greater patient volume for a medical condition, they gain experience, scale, and even more skill, thus improving patient outcomes (Morris 1999, Kizer 2003). A self-reinforcing “virtuous circle” is thereby created in which patient volumes justify dedicated clinical and support teams as well as facilities tailored for effectiveness and efficiency in caring for a particular medical condition (Porter and Teisberg 2006, Porter 2008). Dedicated teams accumulate experience more rapidly than ad hoc teams since they continuously care for a single medical condition or a small group of conditions. Higher patient volume allows providers to cover more of the cycle of care for the medical condition. Patient engagement is more effective and efficient. As experience improves, medical innovation accelerates because having treated many similar patients, clinicians are better able to modify and improve care delivery methods. Experience, scale and learning ultimately lead to better patient outcomes that attract more patients and increased patient volume. And so the virtuous circle continues.

Value-based health care delivery thinking will lead many providers to narrow somewhat the scope of the medical conditions they treat. However, the value-based model does not imply a movement to single-specialty hospitals (although single-specialty hospitals have a place in a value-based system). Larger providers will continue to offer multiple services. However, care will be organized around integrated practice units for medical conditions rather than departments and divisions.

Value must be universally measured and reported

In order to improve value, value must be measured. This begins with outcomes of care and ultimately, the full costs of achieving the outcomes. Measuring and reporting results is critical for innovation and competition to work.

Despite this basic truth, comprehensive measurement of actual provider-level health outcomes is rare in virtually every country; providers tend to be chosen based on reputation, convenience or cost. The virtuous circle relies upon the ability of high-value providers to attract more patients (i.e. through positive-sum competition). This allows those providers to achieve even greater experience and scale and expand services geographically in order to improve the convenience of care.

Quality measurement efforts are becoming increasingly common around the world but they generally focus on the processes of care rather than true health outcomes (Joint Commission on Accreditation of Healthcare Organization 2005, National Committee for Quality Assurance 2008). Documenting processes of care and evidence-based guidelines can be valuable, especially for interventions that are closely linked to health outcomes. However, process measurement is not a substitute for tracking the actual results of care for three principal reasons.

First, no set of evidence-based care delivery guidelines can account for all aspects of care and every possible patient circumstance. Process guidelines are invariably incomplete and for some patients, they may be incorrect. Should providers that withhold care that could be harmful to a patient be penalized for failing to adhere to prescribed process guidelines? Second, while certain types of care may be strongly associated with particular health outcomes, individual patients receiving the same types of care still have different results. Third, process guidelines can stifle innovation. Clinical research is ongoing, while care delivery guidelines are typically slow to change and require consensus from a decision-making body that can be difficult to achieve. Requiring providers to practice medicine in a certain way can effectively freeze the state of care delivery until guidelines are amended.

To achieve a high value delivery system, there is no alternative but to measure results in terms of outcomes and costs. Outcomes can only be measured properly at the medical condition level, not the specialty level. Moreover, true outcomes encompass the full cycle of care, and not a single intervention or episode. Those current measurement efforts that do examine actual health outcomes usually focus only on the immediate results of a particular procedure or intervention, such as a surgery, and do not consider the longer-term outcomes of care. Other outcome measurement efforts only track one or two metrics, frequently patient survival, without considering the range of other factors affecting patient health and well-being.

Each medical condition will have a unique set of outcome measures (Porter 2007), and the relative importance of particular outcomes will often vary according to individual patient preferences. Finally, to avoid provider or health plan incentives to “cherry pick” healthier patients, outcomes must be risk-adjusted to reflect initial patient conditions.

Reimbursement should be aligned with value and reward innovation

Today, care is normally reimbursed in the way it is organized. In practice, this takes place in two ways. One is a global budget, which provides a fixed pay-

ment irrespective of the actual medical needs of patients. This creates insurmountable incentives to ration care while not encouraging high-value care for each medical condition. The other common payment model is payment for discrete services or inpatient episodes. Payment for individual treatments introduces incentives to deliver more services, regardless of whether they create value within the overall cycle of care. Since complex procedures are often the most generously reimbursed, current payment methods often create financial incentives for these types of care at the expense of potentially high-value services such as prevention, education and consultative care that are often not well reimbursed or reimbursed at all.

Like the organization and measurement of care delivery, proper reimbursement should occur at the medical condition level. Payment must shift to bundled prices, or “medical condition capitation”, and they should cover all of the care needed to address a patient’s medical condition. Bundled payments should include the services delivered by all provider types (e.g. inpatient, outpatient, drugs, device), and span the entire cycle of care. For chronic conditions, payments may cover patient care for a period of time (e.g. one payment would cover all of the care for a diabetic patient for one year).

Bundled reimbursement focuses attention on maximizing the overall value of care, and encourages care coordination and integration. It leaves providers with the task of best allocating resources and valuing the individual components of care. Bundled reimbursement also rewards improvement and innovation by providers, unlike the typical models that work against them.

Bundled reimbursement levels should be adjusted for patient risk or severity levels in order to reward providers for the good management of difficult cases. Supplemental reimbursement mechanisms should be available for unusual or unforeseeable complications, but only for rare circumstances. Overall, reimbursement must shift from individual services to full care cycles at the medical condition level, or for horizontal bundles of services such as overall health management for complicated patients with multiple conditions.

Bundled reimbursement is most effective if outcomes are universally measured and reported. This way, there is no risk that providers will try to improve profits by skimming on beneficial care.

In an ideal system, bundled prices become price caps, allowing high volume providers to reduce prices and attract more patients. This improves volume and experience even further through the virtuous circle of value.

Competition should occur for patients based on value, while encouraging the restructuring of care

Structured properly, competition can be a powerful force to encourage continuous improvement in value. However, having witnessed the damaging effects of competition on the US system many policymakers are understandably sceptical of the ability of competition to drive value. But not all forms of competition are similar. Actors in the US health care system, and to a lesser extent in many other countries, engage in “zero-sum” competition. This competition shifts revenue and costs from one party to another or restricts services rather than creating value for patients. Zero-sum competition is manifested in over reliance on bargaining power, selective contracting, price discounting, and restricting choice instead of improving the outcomes and efficiency of care.

In contrast, value-based, or “positive sum”, competition aligns the success of each actor with value for patients. In such competition, all actors work together to improve value, and the success of one actor does not come at the expense of others, including the patient. In value-based competition, every provider must compete for patients through excellent performance, as does every health plan. In value-based competition involving bundled reimbursement and outcome measurement, profit, or net income, for each actor is aligned with value.

Positive-sum competition applies equally to for-profit, non-profit and publicly owned entities. As patients seek care from excellent providers, or enrol in high-value health plans, those organizations will grow and expand, including to new geographic areas. In this way, more patients will ultimately have access to the best care.

Value-based competition should extend over geographic boundaries. In most countries, care delivery is highly localized and choice is often limited to providers in a single state or municipality. While much care will be delivered locally, patient value is increased if complex care is provided in high-volume centres. Patient travel for today’s relatively short inpatient stays is much more feasible, and more beneficial, in view of the rising level of sophistication of care. Moreover, excellent providers should be encouraged to expand geographically in order to boost value and allow more convenient care for patients. At the same time, care delivery should be integrated across facilities and regions, rather than organized in stand-alone units. This feeds the virtuous circle of value even more.

Although organizations should compete for patients in a value-based system, patients cannot be expected to navigate the health care system alone. Since patients are not health experts, they rely heavily upon their referring physicians and health plans to guide them towards high-value care. The consumer

alone cannot restructure health care, but consumers will constitute an important force for improvement in a value-based system.

Electronic medical records must enable the restructuring of care delivery, support integrated care and produce outcome measures

Information technology has enabled value creation in many industries but it has been slow to penetrate health care. Although electronic patient records, order entry and scheduling systems are becoming common in many countries, the full benefits of IT go far beyond simply automating paper-based systems. Ultimately, IT will support the restructuring of care delivery by organizing data around the patient rather than individual specialties, interventions or administrative functions. IT enables tests, diagnoses, notes and interventions to be collected in a system organized around the total patient. IT systems need to be able to handle and aggregate all types of patient data throughout the full cycle of care and be accessible to all authorized parties.

Today's health care IT systems consist of numerous incompatible applications for departments, functions and administration. A truly integrated medical review system combines all of these aspects in a system that can easily exchange information with others. This requires specific national and international standards for data definition, data architecture and communication protocols. No country has yet moved aggressively enough on standards, and most countries have allowed too many disparate and incompatible IT initiatives and solutions to develop.

An essential function of health information technology is the ability to collect, analyze and report results. Properly structured EMRs will allow easy tracking of complete outcomes over the full cycle of care. Although IT alone cannot fix a broken health care system, it can enable a new value-based approach to care delivery and measurement.

Health plans or funding agencies should contribute to value, rather than act as passive payers

Health plans play important roles in adding value to health care delivery, such as by accumulating and monitoring subscribers' overall health circumstances and enabling preventive care and disease management. Health plans can monitor and enhance member compliance with treatment and healthy living practices. They can assist patients in locating excellent providers for their med-

ical condition, and they can take a leadership role in measuring outcomes, pioneering bundled reimbursement and reorganizing care.

Unfortunately, most plans and government authorities still act as passive payers and fail to contribute to value. Staff are ill equipped to contribute to value. Instead, payers in many countries remain preoccupied with cost containment, price discounting and selecting healthier members.

Every health plan or payer agency should be required to maintain and report health results by medical condition for every member, adjusted for risks. Only in this way will payers be held accountable for their most important role and will citizens be able to understand whether health premiums, or taxes, are well spent.

* * *

Many of these principles are vastly different from the way most health care is delivered today. However, all of them have been proven actionable. Individual provider organizations throughout the world are already moving toward value-based care delivery models, without waiting for the government to take the lead. Some health plans are moving to add value, understanding that this is in their self-interest. Other health system actors, such as employers and suppliers, have begun to embrace value-based principles. Some governments have also begun to implement policies in line with value-based principles. The achievements and challenges experienced by these pioneering organizations can serve as a source of information for the progress of a growing number of like-minded efforts now underway across the globe.

III Overview of the Finnish health care system

The Finnish health care system has undergone substantial change since the Second World War. In the 1940s, a dense network of maternity and child health clinics were established, which was followed by an almost nine-year increase in female life expectancy over the next decade. (Valkonen, 1983) The 1950s and 1960s saw heavy investment in building hospitals at the expense of other provider types. The new hospital network ultimately recruited 90% of an already small pool of Finnish physicians; at the time, Finland had the third lowest density of medical doctors in Europe after Turkey and Albania. (Teperi & Vuorenkoski 2006)

By the latter half of the 1960s, the newly strengthened hospital system found that it could not effectively manage many serious, common health problems such as cardiovascular disease, because the system's primary care and preventive resources were weak. Gains in life expectancy also slowed during this period as an increase in cardiovascular disease met with inadequate preventive care and early intervention. Life expectancy for Finnish males aged 40 was the lowest in Europe and women ranked only slightly better.

The next two decades were dedicated to building up the Finnish network of primary health care centres. The health centres offered a wide range of services within a single facility, including GP services, maternity and child welfare, dental care, school health care, and long-term inpatient care. Simultaneously, new medical schools were established at universities and the number of physicians working in primary health care nearly tripled in only a few years.

Population health has improved in recent decades, and life expectancy has increased more rapidly than in other European countries even though Finnish females already live longer than most other Europeans (Finnish males are roughly on par with the rest of the EU). In 2007, the Finnish infant mortality rate was also among the lowest in the world at 2.7 deaths per 1,000 live births.

Today, the Finnish health care system strongly resembles those in other Nordic countries. It offers universal coverage for a comprehensive range of health services delivered primarily by publicly owned and operated providers funded mainly through general taxation. However, the Finnish system is more decentralized and mixed in its funding than other Nordic countries are.

The national administration does not organize services itself, but defines general health policy guidelines and directs the health care system at the state level. Policy guidance in social security, social welfare and health services fall under the responsibility of the national Ministry of Social Affairs and Health. The ministry sets broad development goals, prepares legislation and other key reforms and oversees their implementation, and it engages in dialogue with political decision-makers.

The majority of Finnish health care services are organized and provided by the municipal health care system. Municipalities are legally required to organize adequate health services for their residents. There are currently 348 municipalities in Finland with a median size of less than 6,000 inhabitants. To fund these services, municipalities levy taxes and receive state subsidies. Specialist care in the municipal system is provided by 20 hospital districts, each of which is owned and funded by its member municipalities. Each hospital district has one or several hospitals, one of which is a central hospital.

In addition to the public municipal system, Finns can receive partial reimbursement for private health care services through the obligatory National Health Insurance (NHI) system. A separate, third funding mechanism renders occupational health care a distinct form of care, even though occupational services are often delivered by private and municipal providers. While there is some overlap, significant differences exist in the scope of services, user-fees and waiting times across the three systems.

Total health expenditure in Finland, including long-term elderly care, amounted to 13.6 billion euros in 2006 (2,586 euros per capita), or about 8.2% of GDP versus the OECD average of 9.0%. (Stakes 2008) The comparatively low salaries of Finland's health care professionals serve as a partial explanation for Finland's relatively low health care expenditure. However, studies have shown that the unit costs of Finnish hospital services, even after control for wage levels, are the lowest of the four largest Nordic countries. (Häkkinen & Linna 2007)

One of the proxy indicators of health care effectiveness is mortality amenable to health care (i.e. avoidable mortality). In a comparative study (Nolte et al. 2003) using an aggregate measure of amenable mortality (not including ischemic heart disease) from 1998, Finland ranked eighth out of 19 OECD countries, behind countries including Sweden and Norway.

According to Eurobarometer public opinion surveys, about 70% of Finns believe that their health care system runs "quite well" or "only minor chang-

es are needed to make it work better” (unpublished). Finland has repeatedly ranked among the top two of the 15 “old” EU member states. However, a recent and more detailed survey showed that Finns’ general satisfaction might not apply equally to all types of health care services. For example, Finns are more worried about the quality of and their access to primary care than are residents of most EU countries. (Special Eurobarometer 2007)

Table 1: Key measures on health and the health care system in Finland and EU15 countries (2005)

	Finland	EU avg.
Life-expectancy at birth – Years	78.9	79.4
Infant mortality – Deaths /1,000 live births	3.0	3.9
Obese population –% total pop., BMI>30kg/m ²	14.1	13.4
Population: 65 and over – % total population	15.9	16.2
Total expend. on health – % gross domestic product	7.5	9.2
Public expend. on health – % total exp. on health	77.8	76.4
Doctors’ consultations – number /capita	4.3	5.8
Acute care bed days – number /capita	0.9	1.1
Practicing physicians – density /1,000 pop. (HC)	2.4	3.4

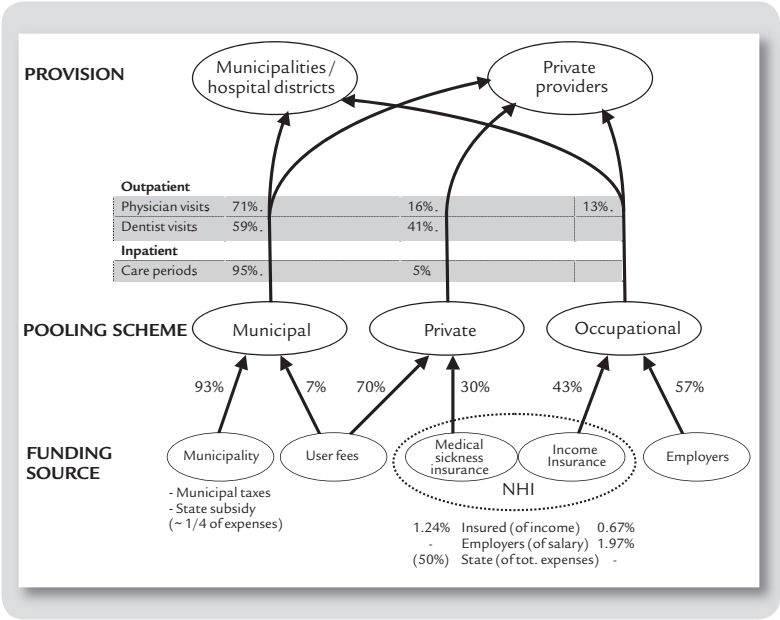
Source OECD Health Data 2007, October 2007

IV Access and standards for coverage

The Constitution of Finland states that public authorities shall guarantee for everyone adequate social, health and medical services and promote the health of the population. Every Finnish resident has the right to adequate health services regardless of ability to pay or place of residence. The fair distribution of services as well as costs is one of the principal, longstanding goals of Finnish health care policy.

Like all health care systems, Finland's is the product of a series of consecutive initiatives and reforms. In the Finnish case, however, the reforms have typically not replaced existing structures. Instead, parallel solutions have been introduced to co-exist with the earlier system. As a result, Finland has both an extensive tax-funded municipal care delivery system and an obligatory National Health Insurance (NHI) reimbursement system covering the use of private services. Figure 1 illustrates both the parallel funding and parallel care delivery systems.

Figure 1. The parallel funding and provision arrangements in Finnish health care



Municipal health care system

The public municipal health care system organizes the majority of health care services in Finland. Each municipality covers all people registered as permanent residents within its borders. Municipal health centres will also provide essential emergency care to anyone, including residents of other municipalities. Asylum seekers are entitled to the same level health services as permanent residents.

In the absence of national minimum coverage standards, each municipality is free to determine its own scope of the services it covers. Generally, the range of services is very broad and includes a wide set of preventive and primary care, specialized care, rehabilitation, long-term-care (together with social services) and dental care. The preventive services include 11–15 antenatal care visits for pregnant women, regular check-ups for virtually all children (0–6 year-olds visit child health clinics, while older children receive school health care services), and services from family planning clinics.

The scope of specialty care coverage is high in international terms, and even the most expensive diagnostic and treatment procedures are available to anyone at no extra charge. Access to specialized care in the municipal system requires referral from either a municipal or a private physician. The municipal system covers inpatient drugs, but outpatient drugs are reimbursed separately by the statutory National Health Insurance.

It is important to highlight the fact that the Finnish health care system is decentralized and national steering is rather weak. Since each municipality determines its own scope of coverage within general limits set by national legislation, a fair amount of variation exists geographically and outpatient service volumes for primary care visits, dental care, mental health care and elective surgery differ across municipalities. Significant age-adjusted variations in outpatient service volumes across five university hospital regions have also been observed. (Häkkinen et al. 2006) The volume of inpatient cases and surgical procedures per capita also vary markedly across hospital districts (adjusted by age and sex), including the treatment of ischemic heart disease (Häkkinen et al. 2002) and orthopaedic surgeries. (Mikkola et al. 2005)

Significant differences across municipalities in resource allocation for health care delivery persist after needs adjustment. These differences are due to factors including the differing evolutions of care delivery structures over time in various regions, financial resources, availability of health professionals, and the way in which each population's health care needs are perceived by municipal decision makers.

Substantial variation in waiting times for care among municipalities has been of particular concern, and it has led to national regulation of timely access to services; since 2005, the public system has been required to guarantee immediate contact with a health centre during working hours either by phone or by personal visit. Non-urgent appointments must take place within three working days of a patient's first contact with the centre. The treatment needs of patients referred to hospitals must be assessed within three weeks of referrals. Hospital clinicians may make assessments based either solely on referrals or through in-person patient examinations. Non-urgent hospital-based treatment must be provided within six months of the assessment.

In connection with the 2005 access legislation, the Ministry of Social Affairs and Health (MSAH) developed condition-specific criteria to define the patients for whom non-urgent specialty care guarantees should be granted. These criteria are mainly based on existing national clinical guidelines and have been released for about 190 diseases, treatment groups or conditions and they cover about 80% of non-emergency hospital care. The guidelines are non-binding, and physicians autonomously decide whether their individual patients need treatment. The true long-term effects of the legislation and MSAH criteria remain to be seen.

National health insurance system

The statutory National Health Insurance (NHI) scheme covers all Finnish residents, and it is run by the Social Insurance Institution (SII) through approximately about 260 local offices all over the country. SII falls under the authority of Parliament, and its responsibilities include coverage of some family benefits, National Health Insurance (NHI), rehabilitation, basic unemployment security, housing benefits, financial aid for students and state-guaranteed pensions.

NHI funding is divided into two pools: Medical Sickness Insurance and Income Insurance (see Figure 1). The Medical Sickness Insurance is funded equally by the insured (via fees collected through taxation) and the state. The Income Insurance is funded by the insured (also via fees collected through taxation) and employers. The contributions by insured individuals and employers are income-based, calculated as a fixed proportion of employee wages. Occupational health care, and sickness and maternity leave allowances are covered by the income insurance pool; the medical sickness insurance pool covers the remaining services.

The NHI system offers varying levels of reimbursement for outpatient drugs, care from private providers, transport costs to health care facilities, sickness and maternity leave allowances, and some rehabilitation services. The NHI also partially reimburses occupational health care costs for services delivered to employees, but not to dependents.

The NHI offers a more explicit scope of coverage than the municipal system, especially in terms of outpatient drugs. The NHI assigns each drug to one of three categories, each of which is associated with a different reimbursement level (42%, 72% and 100%; see Section 5 for additional information). The NHI reimburses around 30% of the cost of any private health care services deemed by a physician to be necessary for the diagnosis or treatment of a disease, pregnancy or childbirth without payment ceilings or limitations. The NHI does not cover private health services that are considered unnecessary to treat a disease (e.g. cosmetic surgery). However, the legislation only vaguely defines the line between conditions considered diseases and those that are not.

Private insurance

Voluntary (private) sickness insurance is uncommon in Finland. In 2005, 375,000 children (about one third of all children) and 237,000 adults (about 5% of the population) had voluntary health insurance. Private sickness insurance is usually unavailable to elderly people. The relatively high number of private policies purchased for children is partly explained by the fact that children

do not have access to the occupational health care services commonly used by employed people as an alternative to the municipal system.

The scope of voluntary insurance coverage (both sickness insurance and accident insurance) is usually limited, and great variation exists across different schemes. Private insurance might cover the costs of treatment and other compensation due to permanent disabilities, loss of income, or death. Public regulation of voluntary insurance is limited, and insurance companies can design their schemes freely.

Most individuals who purchase voluntary health insurance do so to limit their out-of-pocket payments for private care and the portion of outpatient drug charges not covered by the NHI. Additional reasons include shorter waiting times, the ability to choose a physician, direct access to a specialist, and the perception of better quality services. Patients do not need referrals to private hospitals if they intend to pay for their care with partial reimbursement from the NHI. Private providers can also offer patients shortcuts to municipality-run hospitals, as private providers may be more willing to refer patients for specialty care. In contrast, public health centres may be more conservative about referrals because they are run by the municipalities that also pay for specialty care delivered by public hospitals.

Occupational health care system

The Occupational Health Care Act of 1979 obliges employers to provide occupational health care services for their employees (see Section 5 on Employers). The Act defines compulsory occupational health care as health services necessary to address work-related health risks. Services must include physical examinations and first aid for employees at the workplace, and employers are obliged to check the health status of all employees whose work might endanger their health.

Most large or medium-sized employers also provide curative outpatient services through their occupational health care programmes; about 13% of all outpatient physician visits in Finland are provided by the occupational health care system. In 2004, approximately 90% of employees with access to compulsory occupational health care services also received some curative services from their employers. Significant differences exist in the scope of curative service coverage across employers. Notably, despite a separate funding mechanism and distinct legislative framework, occupational health care services most often fall functionally within the scope of primary health care.

Assessment

The backbone of Finnish health care is the municipal system, since it provides truly universal access to a wide array of health services. The ultimate responsibility for the costs involved in a patient's health care is borne by the municipality of residence. This structure favours prevention, since it is in each municipality's interest to avoid the high long-term costs of poor health by investing in the avoidance of disease. As a result, efficient structures for delivering such services exist throughout the country. Finland's infant mortality is among the lowest in the world, with only 2–7 deaths annually since 2000. (Statistics Finland 2006) Finland was also the first country to eradicate measles through a comprehensive vaccination programme.

As geography determines each municipality's pool of beneficiaries, there is no means of excluding high-risk or high-cost beneficiaries. A needs-based system of allocating state subsidies to municipalities (described later), together with a risk pooling system for high-cost treatments between municipalities belonging to the same hospital district, prevents individual municipalities from assuming excessive burdens of health care costs for high-cost individuals.

However, many experts are concerned about potential cost shifting trends, particularly due to incentives introduced by parallel funding mechanisms for public and private care (discussed in greater depth later in this Section). Some health centres are struggling to provide timely services, particularly for preventive care, because rising specialty care costs are driving some municipalities to increase hospital funding relative to the funding of health centres. From a value-based perspective, however, resources should be directed to areas with the greatest potential to improve outcomes (and value), irrespective of patients' ability to pay. In response, the current government has cited strengthening primary care among its principal health policy goals. In addition, municipalities must pay for public hospital care for patients referred by private or occupational providers. As a result, municipal gatekeeper policies requiring patients to obtain primary care referrals before seeking non-emergency hospital care cannot be universally enforced.

From the legislative and organizational perspectives, the Finnish system does a good job of guaranteeing universal access to care. Evaluated from the perspective of actual use of services, however, a somewhat different picture emerges, with significant variations in the use of services persisting across both geography and socioeconomic status (i.e., income, education or profession).

Several factors may explain the geographic differences in access to health services. A national shortage of physicians (more severe in rural municipalities) and differential access to private and occupational health care services (more common in cities) are among the factors contributing to unequal access in various parts of the country.

The 2005 introduction of maximum wait times for municipal care has improved timely access, especially for hospital-based services. However, some health centres and hospital districts still fail to comply with the guarantee. Legislation has also not yet defined maximum wait times for health centre physician appointments for non-acute care amid deteriorating access to these services. In April 2008, 37% of Finns lived in municipalities with waits of more than two weeks for non-acute physician appointments, up from 25% in September 2005.

Differences across socioeconomic groups in mortality amenable to health care are wide and seem to be expanding. (Arffman et al. 2007) In 2000, the extent of income-based inequity in access to physician visits in Finland was among the highest of any OECD country, along with the United States and Portugal. (Van Doorslaer et al. 2006) There are also significant income-based differences in screening, dental care, coronary revascularizations and some elective surgeries. (Teperi et al. 2006)

Among the most important reasons for socioeconomic differences in access to services is the expedited access to care offered by private and occupational health care providers in relation to municipal care. Private and occupational services are more commonly used by wealthy people and this contributes to differential access according to socioeconomic status. (Häkkinen 2005) To some extent, social inequalities may also arise from the fact that occupational health care is offered free of charge, whereas the patients of municipal health care have to pay modest user-fees.

The municipal system also limits competition for patients. In a value-based system, both the payers (i.e. “health plans”) and providers of care compete on value or to deliver better health outcomes per euro spent. In Finland’s public system, municipal “health plans” do not compete for members since individuals do not choose their municipalities of residence based on factors related to health care.

Competition is also limited on the provider side. In theory, municipal providers could compete with private providers on the basis of value. However, in practice, municipal providers have not competed meaningfully with the private system, which does not provide a full spectrum of services. (Competition between providers is discussed in detail in the next Section.)

Instead, cost shifting takes place both within the public system and between public and private organizations. Within the public system, cost shifting between municipalities and the NHI leads to perverse incentives vis-à-vis value creation. Since municipalities pay for most care but the NHI compensates residents for lost wages, hospitals have little financial incentive to treat patients quickly. During the years, this has led hospitals to use lengthy queues to balance the demand and supply of services. Municipalities pay for medications delivered in hospitals, but the NHI pays for drugs taken at home. Hospitals

therefore have incentives to prescribe outpatient medications in lieu of inpatient drugs or treatment.

For long-term care, municipalities are responsible for outpatient drug costs in residential homes rather than the NHI. For this reason, a vast number of residential homes have been administratively changed to “sheltered living units”, officially defined as independent housing, rather than long-term care facilities. In this way, municipalities are able to shift drug costs to the NHI.

V Structure of health care delivery

Providers

Finland has two parallel systems for providing health services: the municipal health care system and the private health care system. Although occupational health care services are delivered by private and municipal providers, it is generally viewed as a third care delivery channel with its own funding mechanism and governed by separate legislation.

The parallel systems are not mutually exclusive, but rather they can complement – or at times overlap – each other. An employed individual can choose to see a primary care physician at a municipal health centre, a private occupational health unit and at a private non-occupational health facility during a single week.

As such, the systems are not separate from a care cycle perspective, and municipal hospitals accept referrals from any licensed physicians, including those working in private practice. According to a population survey, about 45% of physician visits by employed individuals occurred in occupational health care settings, 35% in municipal health centres and 15% in private facilities. (Perkiö-Mäkelä et al. 2006) For unemployed people, however, the municipal health care system is in practice their only option.

The parallel systems are not cleanly separated by care delivery settings. Some municipalities contract with private providers to deliver certain services, in which case the care is considered as delivered by the public system and patients are not required to pay private rates. This has become common practice for specialties such as orthopaedics and rheumatology, where two private foundation-based hospitals have created national centres of excellence that frequently contract with municipalities to care for public patients. There are no regulations limiting the geographic location of private services purchased

by municipalities, which, at least in principle, is positive from a value-based perspective.

In 2006, annual per capita health care spending by municipalities ranged from less than 1,100 euros to about 2,900 euros. Variations in total spending are due in part to each municipal population's age structure and morbidity profile as well as to differences in access to and the use of services. However, differences in the structure and organization of care delivery have evolved over the decades, leading to varying degrees of technical efficiency and productivity that also impact spending levels. Indeed, studies have shown significant differences in case-mix adjusted costs between Finnish hospitals.

This Section categorizes and analyzes providers according to functional headings. In this context, primary care includes a range of preventive services, curative care overseen by general practitioners, rehabilitation, outpatient mental health care and long-term care. In the Finnish system, primary health care units also have in-patient wards that mainly serve long-term patients because public hospitals and rehabilitation facilities normally offer only short-term in-patient care. Primary care also includes health promotion targeted at the local population, such as health education, environmental health, and the implementation of local policies conducive to public health.

Specialized care refers to care provided by specialists and specialist-led teams. Besides hospital-based inpatient and outpatient services, some specialized care is delivered at private specialists' offices or, more recently, in patients' homes ("hospital-at-home").

Primary health care

The Primary Health Care Act obliges each municipality to have a "health centre" that organizes and delivers preventive public and primary health care services to its residents. Each health centre may be owned by a single municipality or jointly by a federation of several municipalities. Often, a health centre is not necessarily comprised of a single building or location where services are provided. For example, maternal and child health care or school health care might be provided at a location separate from the main health centre. In general, patients must use the health centre within their municipality and cannot choose their own providers (see more about patient choice in Section 3).

Larger cities usually offer several health stations located in different areas. For example, the City of Helsinki has 29 health stations that collectively form the health centre. In sparsely populated areas such as Lapland, the distance to the nearest health centre facility is much greater than in the more densely populated south.

Currently, only about one in four health centres serves a population base of 20,000 or more. In January 2007, Parliament introduced a law requiring

municipal primary health care services to be delivered by centres covering at least 20,000 inhabitants by 2012, following a four-year transition period. The initiative aims at creating a stronger structural and financial basis for the delivery of health care services, which will lead to improved quality, effectiveness, availability and efficiency as well as to and technological advancement.

Historically, all municipal primary care services were provided by municipally owned and run health centres. In 1993, municipalities were given the freedom to purchase services from private providers. In these cases, antitrust legislation requires contracting through open competitive tenders. Municipalities choosing to contract with private providers do so primarily due to difficulties in recruiting physicians and other health care personnel. A few midsize cities have contracted with private providers to deliver all services at certain health stations, while others have contracted only for specific services such as emergency care. Today, municipalities purchase a small proportion of municipal primary care from private providers, although the proportion is expected to increase.

Some municipalities, including the cities of Tampere, Oulu and Raisio, have introduced internal purchaser-provider splits into their management structures. In these cases, purchaser and care delivery functions are separated within the municipal administration, making it easier for municipalities to contract with private providers and to objectively compare services across sectors.

Health centres offer a wide variety of services, including preventive, maternity and child health services, general outpatient care, care on inpatient wards (in larger cities, these are often classified as GP-run hospitals), dental care, school health care, occupational health care, care of the elderly, family planning, physiotherapy, laboratory services, imaging, and some ambulatory emergency services. Many health centres also provide ambulatory psychiatric care. It is estimated that only about 5% of health centre visits lead to specialty care referrals (Puhakka et al. 2006), indicating that the wide scope of expertise in health centres can cope with most health needs.

Tasks are often divided among health centre clinicians according to the needs and circumstances of the individual centre and the experience or interest of its staff. Teamwork between doctors, nurses and other professionals has increased in recent decades, which has led to a high degree of “horizontal integration” or care coordination within the health centre. For example, some health centres have assembled multi-professional rehabilitation teams and diabetes teams dedicated primarily or exclusively to care for particular types of medical conditions. Some health centres have also arranged for specialists to perform regular on-site consultations, such as for a radiologist from the local hospital to interpret patients’ x-rays at the centre.

Legislation does not stipulate in detail how most health centre services should be provided, leaving this to the municipalities’ discretion. However, the

national administration (primarily the Ministry of Social Affairs and Health) has devised guidelines in certain areas, including maternity and child welfare clinics, school health care, and screening.

Most health centres staff a wide range of clinicians, including general practitioners, physicians from other clinical specialties, nurses, public health nurses, midwives, social workers, dentists, physiotherapists, psychologists and administrative personnel. Health centre staff are generally employed by the municipality, although municipalities may also hire some physicians from private organizations (see Section 3). The ratio of health centre physicians to local residents varies, averaging at about one physician per 1,500–2,000 inhabitants.

A typical health centre's GP-run inpatient department has between 30 and 60 beds. The vast majority of inpatient care delivered by health centres is actually long-term care for chronically ill elderly individuals (the average age of these patients is 75 years), with 54% of inpatient days involving patients residing in the unit for more than 6 months. In practice, health centre inpatient wards function similarly to residential homes.

Municipal health centres play a central role in disease prevention and health promotion, including maternal, child health and school health care. Besides school-based health care, children and young adults are eligible for extensive preventive dental care. Municipalities are also responsible for providing immunizations and breast cancer and cervical cancer screenings. These services are free of charge and available for all residents.

Concerns have been raised about the quality of primary care and disease management for major chronic conditions like diabetes or atherosclerosis. One major barrier to improvement in these areas has been a lack of information on the quality of primary and chronic care, and some quality improvement programmes are now targeting primary and chronic care delivery. Perhaps the most well known is the Development Programme for the Prevention and Care of Diabetes (DEHKO), which is coordinated by the Finnish Diabetes Association (NGO). The programme aims to prevent type 2 diabetes and diabetes-related complications by improving the quality of diabetes care and supporting people with diabetes in their own disease management and self-care efforts. The programme constructs new clinical practices that have been implemented in health centres and hospital districts throughout Finland. It focuses on screening people at high risk of diabetes, managing risk factors through lifestyle counselling and preventing complications among newly diagnosed people with type 2 diabetes by bringing them within the sphere of appropriate treatment.

The current government has made a firm commitment to revitalize Finnish primary health care. The Minister has overseen the launch of a major initiative known as the "Effective Health Centre." This action plan includes a

number of elements aimed at improving access to care and practices within health centres, as well as administrative, managerial and structural arrangements.

Patients are also free to use private general practitioner services, and the NHI reimburses patients for part of the cost of private care (on average 30%). Physicians do not have to enter into individual agreements with the NHI in order for their patients to receive NHI reimbursement; any patient treated by a private licensed medical doctor will be partly reimbursed by the NHI. Private providers are free to set their own fees as they see fit.

Ambulatory physician services are the most commonly sought type of private care, with visits to private physicians comprising 16% of all outpatient appointments; for specialist appointments, the proportion is about 25–30%. In 2006, there were 3.5 million outpatient visits to private doctors (compensated by the NHI), of which 79% were visits to specialists. (SII 2007b) The specialties with the highest proportions of private health services were gynaecology and ophthalmology, which comprised more than one-third of private specialty visits. In addition, the private system provides about 41% of outpatient visits to dentists.

Private outpatient services are provided through three organizational models: physicians' private practices housed in their own facilities (currently rare), physicians' private practices located in shared facilities owned by private companies and physicians directly employed by private firms (a new trend). Currently, two large national companies (Mehiläinen and Terveystalo) operate multiple inpatient and outpatient units throughout Finland. These units serve private patients and contract with employers to deliver occupational health care services.

Private GP services are mainly provided in the large cities. Ten percent of physicians work full-time as private doctors, and 30% are employed by the public sector but also have private practices outside their regular working hours. Provision of occupational health care is described in Section 3.

Specialized health care

Most hospital care in the municipal system is provided by the country's 20 municipality-owned district hospitals. In addition, some large municipalities (such as Helsinki) provide some specialist level outpatient and inpatient services themselves rather than purchasing them from their hospital districts. Finns very rarely visit foreign providers due to geographical and language barriers.

Each municipality must belong to one hospital district. The largest hospital district covers over 1.4 million inhabitants, while the smallest covers only 65,000 people (2008). Of the 20 districts, 12 serve populations of less than 200,000. The number of member municipalities within a hospital district

ranges from 6 to 58. Each hospital district has one central hospital and other hospitals as necessary, depending on the size of the district. Five of the central hospitals are university teaching hospitals. Physicians and other personnel in public hospitals are salaried employees of the hospital district. Hospital districts are funded by the member municipalities mainly on a fee-for-service basis (see the Section on reimbursement).

Hospital districts generally aim to provide a complete set of services, as illustrated by the list of providers offering selected services along with their patient volumes as presented in Table 2. Many services are completely decentralized; for example, every Finnish hospital district has a high tech cardiology centre. In the event of some common but costly procedures requiring specialized teams, some hospital districts have limited the number of providers within their borders who deliver that form of care. Examples include joint prosthesis surgery and childbirth. It has been especially challenging for smaller districts to secure both economic efficiency and the dedicated teams needed to provide high quality services.

Table 2: Number of selected procedures per hospital in 2006 (Finnish municipal health care system)

Operation	number of hospitals	number of procedures		
		range	average procedures	hospitals having <50 proced./year
Operation on the meniscus of knee	52	12-680	185	12%
Primary prosthetic replacement of hip joint	49	4-945	191	18%
Total excision of uterus	45	5-971	134	27%
Partial excision of prostate	39	1-281	91	28%
Implantation or replacement of permanent transvenous cardiac pacemaker	26	1-668	110	42%
Mastectomy	41	1-364	57	56%
Fracture surgery of wrist and hand	46	2-465	59	67%
Thyroid gland operation	40	1-184	45	67%

Source: Hospital discharge register, THL

By government decree, hospital districts are grouped into five tertiary care regions organized around the five university teaching hospitals. The main function of these regions is to centralize care delivery for some complex or rare conditions, surgeries and other forms of treatment at the tertiary care region level. The hospital districts within the tertiary care region determine which procedures should be regionally centralized.

Care is further centralized at the national level for around 20 conditions or treatments, in that only one or two tertiary care regions serve those patients. The Ministry for Social Affairs and Health determines the types of care to be centralized nationally and the hospitals that will deliver the care. This is the case, for example, for organ transplants (performed by one hospital) and care for life-threatening burn injuries (delivered by two hospitals). Efforts to centralize the delivery of certain types of care in particular hospitals and hospital districts are formalized through contracts that do not involve any formal competitive proposals or other processes.

Hospital districts provide specialized outpatient care, inpatient care and day surgery, usually in the same facilities. Hospital districts have created regional guidelines for the care required over the entire course of some common diseases. These guidelines set out the division of labour between health centres and hospitals across care cycles. Patient information is transferred from health centres to hospital districts by written referrals. Hospitals communicate information back to health centres via an “epicrisis” (a patient record summary for the episode of care) sent electronically in some hospital districts. Patients need referrals from their health centre physicians, or any other licensed physicians in private or occupational health organizations, in order to access non-emergency outpatient or inpatient hospital care.

Day surgery, or invasive procedures that do not require overnight hospital stays, has become increasingly common in Finland. The number of day surgery operations has risen from 77,000 in 1997 to 171,000 in 2006, when day surgery represented about 40% of all surgical procedures (versus 19% in 1997).

Private hospitals provide about 5% of hospital care in Finland. There are about 40 private hospitals, most of which are small. The largest private hospitals provide orthopaedic and related services throughout the country, with most care procured by the municipalities. Two of the large hospitals are not-for-profit foundations (Orton, Reumasäätiö) and one is a public company (Coxa, Hospital for Joint Replacement).

The role of the private sector is much more prominent in specialized outpatient care. About 25–30% of specialized outpatient visits are conducted by private sector organizations. One advantage of private providers is their ability to expand geographically, unlike the municipal sector.

Some municipalities and hospital districts purchase certain specialty services (such as surgical operations) from private hospitals; however, this is not

very common. When municipalities and hospital districts do purchase services from private providers, contracts and payment mechanisms vary considerably. Due to antitrust legislation, these contracts must be arranged through open competition.

One of the trends in specialized health care has been to establish condition-specific care units, a movement driven largely by hospital districts. Instead of the traditional divisions organized by individual specialties, these units are organized around medical conditions, groups of conditions or types of care, and they bring together a wider combination of competencies. For example, providers within a hospital district may offer cardiac care units, musculoskeletal disease units, gastroenterological units and stroke units.

The idea is to bring experts from various specialties to work together in a single unit containing all of the personnel and equipment needed to treat what are often complex cases. Within these units, nursing personnel can specialize in caring for a specific group of patients, which can lead to a more active role for nurses in the care delivery process. The ultimate aim is to create multidisciplinary and multi-professional teams capable of re-engineering care processes to produce superior value.

Typically, these units are located within hospitals, with each unit forming an administrative division. The head of the unit generally does not report to a traditional specialty-based division but rather to the director of a broader department.

Health professionals

In 2005, physician density in Finland was 2.4 practicing physicians per 1,000 population (Table 1), slightly below the EU15 average. In 2006, 47% of physicians worked in hospitals, 23% in health centres, 5% in occupational health care, 6% in academic medicine and 11% in full-time private practice. (Suomen Lääkäriliitto 2006)

The majority of physicians are full-time employees of the municipal health care system. Only 1,700 out of approximately 16,000 physicians of working age are employed full-time in private practice. However, 30% of physicians employed in the public sector operate private practices outside their regular working hours for an average of four hours per week. (Suomen Lääkäriliitto 2006)

Medicine is a rather prestigious profession in Finland. The salaries of physicians employed by a municipality are relatively high when compared with many other public sector professions, but they are not as high as private sector salaries.

In 2005, Finland had 12 registered nurses of working age per 1,000 inhabitants. According to the European Health for All Database, the number of Finnish nurses is on par with the EU average. More than half of Finland's den-

tists, dental hygienists and dental assistants work in the private sector because the majority of dental services are delivered by private providers.

Physicians are trained at five public universities in Finland, where education is free of charge. Admission is based on high school grades and entrance exams. Basic medical education lasts six years and includes a considerable amount of guided practical training. After university medical studies, physicians must complete two years of practical work and training in both hospitals and health centres before they are granted their licenses to practice medicine independently. After graduation, continuous medical education is provided by employers of health professionals, medical societies, universities and pharmaceutical companies. Dentists are trained in three university medical faculties, and their studies last five years.

To become specialists, physicians and dentists must register with a faculty of medicine for their relevant specialty training programme. To obtain specialist diplomas, physicians must complete specified theoretical studies and pass a national examination in addition to fulfilling clinical requirements. Specialization lasts five to six years after basic medical training, depending on the specialty. In 2006, about 63% of physicians of working-age had specialist training (the majority of the remainder worked as general practitioners) and 22% had PhDs. (Suomen Lääkäriliitto 2006)

The training of nurses and other health care personnel such as physiotherapists, midwives, and laboratory personnel takes place at universities of applied sciences (former polytechnics). Nursing students have common training in general nursing, which is complemented by training in a specialty of their choice: 1) nursing for surgery and internal medicine, 2) paediatric nursing, 3) aesthetic and operating theatre nursing or 4) psychiatric nursing. The training programme for public health nurses lasts three and a half years and four and a half years for midwives.

The division of labour between physicians and nurses is rather rigid in Finland. Physicians have sole responsibility for making diagnoses and determining treatments. The role of nurses is primarily to assist physicians with these activities. Recent years have seen discussions about increasing the roles and responsibilities of nurses, for example to provide nurses with limited prescription authority, but few such reforms have been implemented to date. In several cases, physicians have opposed expanding other professionals' rights and duties.

Health professionals in the municipal health care system

General practitioners are normally municipal employees. The compensation system for general practitioners working in municipal health centres varies across municipalities. The traditional payment method, which currently ap-

plies to about half of health centre physicians, is a monthly salary supplemented by fee-for-service payments for performing certain time-consuming services or minor procedures (e.g. placement of intrauterine contraceptive device, measurement of intraocular pressure and sinus puncture).

Some municipalities allow patients to choose their primary care physicians. Others have a “personal doctor system” that assigns each patient to a particular general practitioner, usually based on place of residence. The system was introduced in the 1980s and 1990s to improve access and continuity of care because physicians do not change between visits. Currently, approximately half of the physicians working in health centres participate in the personal doctor system. These doctors receive a combination of basic salary and capitation and fee-for-service payments. Although physicians in this scheme are municipal employees, they enjoy relative autonomy and can set their own working hours.

In some municipalities, health centre GPs have specialized in treating specific patient groups (e.g. people with diabetes). However, specialization is difficult to implement in a personal doctor system that is based on geographical division, and it has been one of the arguments against the personal doctor model.

Municipalities currently face considerable difficulties recruiting clinical staff, including physicians, dentists and nurses, especially in rural areas. In October 2006, 9% of health centre physician posts were not filled. In the Kainuu region in northeastern Finland, this figure was 26%. (Parmanne et al. 2006) The shortage is even more significant among dentists, with about 12% of health centre dentist posts vacant in 2007.

Importing foreign physicians is often proposed as a longer-term way to address the shortage. However, language barriers, the ethical dilemma of depriving other nations of their badly needed health professionals and the somewhat negative attitude of trade unions are among the factors working against this option. According to a 2007 estimate by the Finnish Medical Association, 360 of about 17,000 physicians licensed in Finland were non-Finnish nationals. The largest groups of foreign physicians were from Estonia and Russia.

Despite a significant rise in the number of Finnish nurses and auxiliary nurses since 1990, health care providers are now finding it increasingly difficult to recruit enough nurses. A relatively large proportion of Finnish nurses are working in fields other than health care or abroad, which indicates the relative unattractiveness of the nursing profession in Finland.

The shortage of physicians stems from the early 1990s, when Finland was in the midst of an economic recession. Until that time, unemployment among physicians, dentists and nurses was practically nonexistent but the reductions in health care budgets led to significant staffing cuts. Medical schools also reduced their annual class sizes in the early 1990s, which forecast a decreasing

need for physicians. As the public sector gradually recovered from the economic crisis in the late 1990s, a significant physician and dentist shortage developed. In response, the annual intake of medical students has increased gradually since 1995. However, it will take many years before the increase has a significant impact on the shortage.

Municipal health centres are unable to wait for new physicians to rise through the system, and they have begun to lease physicians employed by private companies. The practice is particularly common for physician shifts outside normal business hours, although municipalities have recently also entered into long-term contracts for staffing during regular office hours. Private physicians negotiate their salaries with the firms that employ them. While the conditions of employment for municipal health centre physicians are largely determined at the national level by the Finnish Medical Association and the Association of Finnish Local and Regional Authorities, private firms are free to offer higher compensation and more flexible working conditions.

In 2004, about 5% of Finnish physicians worked for private firms, especially young physicians interested in more flexible contracts. The private system also allows physicians to partly avoid income tax (which is rather high in Finland) and receive part of their salaries as capital income.

The shortage of professionals may turn out to be a critical factor in the development of Finnish health care. Due to its older population structure, Finland is about to enter an era of a declining labour force that will lead to a general increase in competition for workers. As the resources dedicated to Finnish health care expanded in the 1970s and 1980s and were cut back in the 1990s, the age structure of clinicians is skewed, particularly for nurses; about 40% of active health professionals are over 50 years of age. There is a great need for a clear national health care human resource strategy.

Long-term care

Long-term care for older people is provided in four different settings: home care (including care delivered at patient homes or at day-care centres); sheltered housing (apartment complexes for the elderly offering onsite services such as meals, nursing care, and assistance with activities of daily living); residential homes (institutions for elderly people requiring more demanding services, and in which residents do not have their own apartments); and health centre inpatient wards. In 2005, 12% of over 75-year-olds used regular home care services, 6% lived in sheltered housing (of which a little more than half had 24-hour assistance), 4% lived in residential homes, and 2% received long-stay care in health centre inpatient wards. (Stakes 2007) Long-term inpatient care at health centres has decreased somewhat since 1990.

Inpatient wards are part of the municipal health care system, while most other forms of elderly care are organized under the umbrella of municipal social services. The majority of residential homes and about half of sheltered housing for older people are owned by municipalities and run by the social welfare service sector. There are also a number of private companies and NGOs providing these services; in 2006, 12% of residential home services and 57% of sheltered housing services were delivered by private organizations. Health centres also work closely with municipal residential homes; most health centre physicians usually deliver care to public residential home patients once or twice a week.

Various documents concerning health and social policy have stressed the need to improve support services in order to enable older people and people with disabilities to live in their own homes. The number of traditional residential homes has decreased since the early 1990s, and the volume of sheltered housing has increased. The shift has been prompted by public sector support for independent living as well as by municipalities' financial incentives. For patients in sheltered housing, access to national social insurance benefits are similar to those available to home care patients. Drug costs, for example, are covered by the NHI, and not by municipalities. In contrast, residential homes are classified as institutional care settings, which places financial responsibility for drugs and other services solely on the municipalities.

Recent reforms to overcome service delivery fragmentation

The municipal health care system is decentralized, with organizational responsibility divided among approximately 350 municipalities and 20 hospital districts. Decentralization has been valuable in terms of ensuring the accountability of municipal health systems to local citizens. Recently, however, several trends have made small municipal health systems increasingly vulnerable. Population movement from rural municipalities to cities, particularly among citizens of working age, has led rural populations to age at an even faster rate than in urban areas. The rising demand for health services is even greater among the elderly population, and is exacerbated by a limited pool of health professionals, tight public-sector finances, and an increasing demand for expensive new equipment and technology.

In recent years, concerns have grown that the problems of decentralization outweigh the advantages. One of the most commonly discussed changes to the public sector health care system has been the creation of larger geographic units to take responsibility for the organization of health services (i.e. The Project to Restructure Municipalities and Services). The number of municipalities has already decreased from 452 in 2000 to 348 in 2009. Many

believe that the appropriate number of municipalities is still much lower, and that regional co-operation should be stronger than at present. Municipalities are not eager to merge, and the mergers achieved have been partly motivated by extra state subsidies.

It is generally believed that co-operation between primary and secondary care has been limited by the existence of multiple, separate organizations responsible for organizing care. To improve cooperation between primary and secondary care, as well as social welfare services, several local reforms have been enacted. For example, several member municipalities of the Päijät-Häme and the Itä-Savo hospital districts are purchasing primary care services from their hospital districts rather than offering primary care through their own health centres. (Vuorenkoski & Wiili-Peltola 2007)

To lower the barriers between primary and specialist health care and improve cooperation across provider types, the government plans to combine the Primary Health Care Act and the Act on Specialized Medical Care into a comprehensive Health Care Act (see p. 60). It is now believed that too much separation between organizational structures for primary and secondary care has negatively influenced the cooperation and integration between these levels of care. Such separation can hinder the optimal organization of care from both clinical and economic perspectives. For example, transmitting patient records and other information between primary and secondary care providers is currently difficult. In addition, primary care centres are often disadvantaged in terms of resource allocation. Since hospital districts are governed by several municipalities and they charge each municipality for care on a fee-for-service basis, municipalities have less control over hospital expenditure than they do over spending by their own health centres.

These reforms are controversial because they diminish the power of individual municipalities. Some experts fear that closer cooperation between primary and secondary care may shift the balance of power towards secondary services, as hospital districts will become even stronger with respect to municipalities.

New Health Care Act

The current government is planning to merge the Primary Health Care Act and the Act on Specialized Medical Care into a comprehensive Health Care Act. The central aim of the reform is to reinforce the role of primary health care in the municipal health care system. The government set up a working group in 2007 to draft a proposal for the new Act. The proposal was finalized and released by the working group in June 2008. After thorough process to hear the opinions from relevant stakeholders, the government is planning to pass the bill to Parliament in 2010. The key proposals of the reform are to

- increase patient choice by enabling patients to freely use the services of any health centre within the same hospital district and by enabling patients together with the referring physician to choose any hospital within the same tertiary care region;
- lower the barriers between primary and specialized health care and improve cooperation. For example, one proposed model to achieve this is to combine the organizational responsibility for primary and specialized care into the same organization (currently primary health care is organized by the municipalities and specialized care by hospital districts);
- improve the mobility of patient records within hospital districts by allowing the transfer of records between hospitals and primary health care units within a hospital district without the consent of the patient (currently explicit consent is needed);
- centralize the organizational responsibility of ambulance and emergency on-scene services in hospital districts (currently municipalities);
- strengthen the role of tertiary care regions by giving them more responsibilities to coordinate activities in the region (for example the coordination of continuous medical education and the uptake of new medical methods, and the consolidation of service production between hospital districts).

Innovations in care delivery

In any organization, innovation is an important means of improving value for clients. This is particularly true in health care, where much progress has occurred in various fields of clinical research and medical technology. However, innovations dealing with the organization of care delivery also have great potential to drive improvement in value.

Service delivery innovations have been recognized among the key performance drivers of the Finnish health care system, and the government is currently funding municipal projects with these types of innovations in mind. Municipalities can receive government subsidies to develop services, improve efficiency and update care delivery methods. About 50 million euros annually were appropriated for about 1,100 local development projects from 2003 to 2007. The state provides partial funding, while the rest is covered by the actor responsible for the project. Projects are usually implemented by one or more individual municipalities but they can also be undertaken by a federation of municipalities or hospital district.

Future funding by the Ministry of Social Affairs and Health (MSAH) for local development projects (about 25 million euros annually in 2008–2011) will be designated toward activities related to the implementation of the National Development Programme for Social Welfare and Health Care (the “KASTE” programme) drawn up for the term of each government (normally four years). The programme is a cooperation agreement between municipalities and the state.

Other national funding bodies for health care service innovations include the National Technology Agency of Finland (Tekes), the Slot Machine Association (which has a monopoly on gambling in Finland and is governed by the state) and Sitra, the Finnish Innovation Fund. These organizations’ total funding for health care innovation projects well exceeds that of MSAH. Since there is no administrative linkage between MSAH and many of the funding bodies, the coordination of funds coming from several independent organizations has been rather weak.

Reimbursement

More than half of total Finnish health expenditure occurs via the municipal health care system. Functionally, this equates to 70% of all outpatient physician visits, 60% of dentist visits and 95% of inpatient care. The main funding sources are municipal taxation, state subsidies and user fees. The state subsidizes roughly one quarter of municipal expenses, with subsidies varying across municipalities from zero to 2,500 euros per resident. State subsidies for municipal social and health care services are calculated according to factors including the number of inhabitants, age structure, unemployment rate, remoteness and morbidity in the municipality. Subsidy amounts are also determined in part by a municipality’s ability to collect tax revenue. In practice, this means that municipalities with higher average incomes receive smaller subsidies. User fees cover 7% of the costs of municipal health care.

Municipalities spent about 1,300 euros per inhabitant on health care in 2005, representing about 25% of municipal budgets. However, the distribution

of expenditure levels across municipalities is wide. Part of the variation is due to structural differences as in municipal methods of dividing elderly care services across health and social services. However, even after eliminating this effect by combining spending on institutional elderly care and health care, expenditure varied from 940 to 2,310 euros per inhabitant in 2004. After adjusting this expenditure for need, expenditure was still 2.5 times higher in the highest-cost municipality than it was the lowest-cost municipality. (Hujanen et al. 2006)

In primary care, municipalities prospectively fund health centre budgets, which are normally based on previous allocations. In federation-owned health centres, the budgets are constructed in similar ways, but the distribution of costs across municipalities is usually determined by the volume of actual services delivered to the residents of each municipality.

Hospital districts are free to determine how they collect funds from municipalities. Municipalities are invoiced prospectively based on annual contracts for an estimated volume of services. However, the contracts are not binding, and the actual volumes often significantly differ from those stated in the contracts. Finances are balanced retrospectively according to actual services delivered to the residents of each municipality. Reconciliation of reimbursement from individual municipalities occurs independently of whether the referring physicians work in the municipal, private or occupational care sectors. Since private, occupational and municipal physicians can all refer patients for public municipal care, the ability of a single municipality to control or even predict the costs of secondary care is limited.

Every hospital district has developed a special funding pool between member municipalities to cover exceptionally high individual patient expenses, typically above 50,000 euros per admission or care episode.

Hospital district invoicing and pricing are in a continuous process of change, varying from district to district. (Häkkinen 2005) Apart from some special arrangements (e.g. to maintain readiness for events such as large scale traffic accidents or natural disasters), payments of municipalities are mainly based on district-specific price lists organized by individual service items (there are no national price lists) or packages of services such as diagnosis related groups (DRGs). At present, it is difficult to compare services and prices between hospitals and hospital districts.

The NordDRG system was developed collaboratively by the Nordic countries to promote standardization and information sharing. With the NordDRG system, each patient is assigned to one of about 500 diagnosis groups. DRGs are designed such that care for all patients within each group is expected to require similar resources. DRG groups are defined by one or more factors such as diagnosis, comorbidities and the particular procedures required. Prices assigned to each NordDRG group are based on actual historical costs. A 2003 survey found that while NordDRG use was increasing and eight Finnish hospital districts used NordDRG-

based invoicing for somatic inpatient care and day surgery, most districts continued to use their own service grouping systems. (Punkari et al. 2003) Two features of current NordDRG use inhibit their ability to promote value-based care delivery. First, some NordDRG classifications are based on specific procedures rather than medical conditions. Second, NordDRGs typically cover care delivered during single hospital admissions and not during whole care cycles.

Private and occupational health care

Private health care, excluding occupational services, accounts for 6% of total health care expenditure. Private services are mainly funded by out-of-pocket patient fees. Patients usually pay private treatment charges in full, but they may claim partial reimbursement from the NHI. As mentioned earlier, NHI reimbursement does not require any separate agreement between private physicians or providers and the NHI, and it is based on a government tariff system. These tariffs serve as guidelines because private providers are free to set their own prices in excess of tariff rates. Since tariffs have not increased at the same pace as the actual costs of delivering services, private provider charges are generally much higher than the tariffs. So while some private physician services may be reimbursed up to 75% of tariff rates (e.g. for examinations and certain treatments), the average NHI reimbursement remains around 30%.

The occupational health care sector has a funding arrangement of its own, with both employees and employers each paying a percentage of employee salaries to an obligatory NHI Income Insurance pool (Figure 1). One-third of the costs of the Income Insurance pool are covered by employees and the remainder is paid by employers. Overall, occupational health care accounts for 4% of total health expenditure. Although occupational health care has its own funding system, it is not functionally separate from the municipal or private health care systems. Occupational health services are provided by health care units owned by employers or they are purchased from private or municipal providers. When an employer contracts with a municipal health centre to provide occupational services for its workers, employees can choose whether to seek care from the health centre within the occupational system or as municipal residents within the public system.

Employers fund occupational services according to their contracts with private providers or municipalities. Varying payment mechanisms are used, but all contracts require the employer to pay for services in full. Employers are then retroactively reimbursed in part by the NHI based on the employers' actual costs. The NHI reimburses employers 50% of the necessary and appropriate costs of occupational health care up to a maximum of about 60 euros per employee per year for compulsory services and about 90 euros for voluntary services.

Competition

Traditionally, competition between providers has largely been absent from the municipal health care system. Public providers owned by municipalities and hospital districts provide the majority of services and since their catchment areas are based on geography, they do not meaningfully compete with each other for patients. Competition between municipal and private providers has also been minimal. However, municipalities are increasingly purchasing services from private providers via competitive bidding processes based on price and other considerations. Many private providers have been rather small, short-lived enterprises, thus making it difficult for municipalities to enter into long-term contracts with them. In other areas, particularly in rural regions, private services may not even exist.

Competition between private and public service providers is also limited by differences in care delivery capacities between the public and private sectors. The private sector mainly concentrates on specific services, and it does not provide a full spectrum of care on a significant scale. Instead, most private services are marketed either directly to patients as ambulatory services complementing public care or to municipalities seeking to outsource some of their services. For individuals, private services offer direct access to a specialist of their choice. For municipalities, outsourcing has primarily been a way to increase capacity and to respond to clinician shortages. Since private firms can offer better financial and other incentives to clinicians than more rigid municipal systems can, competition for physicians between the public and private sectors has far exceeded the extent of competition for patients across public and private providers.

Assessment of the provider system

As a whole, the long-term development of the Finnish health care system has been a success story. Since the 1960s, a system with fundamental problems has been transformed into one that is often cited as a model from which other countries might learn. Several indicators, including costs and population satisfaction, are competitive in terms of international comparisons.

As a consequence of parallel reforms, structures within the Finnish health care system are complicated. Collecting and pooling the funds needed to deliver services, reimbursement and the actual provision of care involves working within partially intertwined structures. Not surprisingly, this leads to a situation in which incentive structures are not always aligned with improving patient health outcomes.

Primary health care

In recent decades, the Finnish health centre has been an internationally acknowledged model for primary care. At the core of the health centre concept is the wide variety of professionals working under one management structure in order to provide services close to the local communities. This means that prevention, curative services, rehabilitation and long-term care are provided by a single organization. As the Finnish population ages and the prevalence of chronic conditions rises, the health centre concept is more relevant than ever.

However, health centres face challenges in the immediate future. Prevention – the cornerstone of primary care – is, according to most experts, struggling due to the pressures of increased spending on curative care. As suggested by outcome data on chronic disease management, service quality is often sub-optimal. Municipal health centres will also continue to face harsh competition for professional staff.

The Finnish government has identified strengthening primary care as a leading policy goal. It is clear that more effective tools are needed to support municipalities in providing primary services. Among other things, developing new models for integrating primary care with acute and specialty services and increasing the capacity to provide home-based services will require national investment. Recent initiatives in diabetes care may serve as a model that can be applied more generally to the care of other chronic conditions. If successful, the new Effective Health Care programme will be an important step toward securing the sustainable development of primary health care.

One of the most important steps will be to ensure better measurement of value to promote and guide improvement in care delivery. Currently available data consists of aggregate patient volumes and total costs, far from the goal of universal measurement and reporting at the provider and medical condition levels. It is imperative to create and implement uniform measures for the content, costs and outcomes of primary care services at the medical condition level. Without measurement, no meaningful analysis of value creation in primary care, or interventions to improve it, is possible.

Specialized care

In the municipal health care system, hospital-based inpatient and outpatient specialist services have traditionally been provided in the same facilities by the same physicians. Therefore, integration of care delivery is promising in this respect. However, the separation of primary and specialized care has persisted, creating a barrier to true integration encompassing full cycles of care. In this respect, much remains to be done. One meaningful policy step towards pro-

moting integration is the New Health Care Act, which will combine the Primary Health Care Act and the Act on Specialized Medical Care.

Another challenge is that all hospital districts, even the small ones, aim to provide a full spectrum of services. The resulting fragmentation in care delivery for any single medical condition prevents most providers from achieving the condition-specific patient volumes needed to create integrated practice units or centres of excellence. Policy documents and MSAH guidance have stressed the need to secure cost-effective, high quality services by limiting the number of providers delivering certain types of complex care. To date, however, the scope of these guidelines has been too narrow to spur widespread organizational change or improve the results of care.

Better methods of service line rationalization across hospital districts, and in some cases nationwide, are needed to improve value. The new Health Care Act, if passed by Parliament, may provide better tools to improve the quality of care for less common conditions or complex, difficult treatments. The Act would strengthen the tertiary care regions charged with planning the division of labour between hospital districts to concentrate care delivery for each medical condition or service line within fewer providers.

Decisions about the division of labour should be undertaken with a view toward improving the value of care for patients rather than as a top down consolidation process. Ultimately, the providers that offer a particular service line should be determined by their ability to deliver high-value care. Rigorous value measurement will be needed, with measures utilized by patients with the support and guidance of their referring physicians and other caregivers.

Many public hospitals have already established several condition-specific multidisciplinary care units, thus laying a promising foundation for value improvement. However, these units have been pursued unevenly and without an overarching strategy.

Although the number of private inpatient providers is small, some private hospitals have clearly been pathfinders in creating centres of excellence. These examples have served as models for public hospitals as well as other private providers such as ORTON and Coxa. ORTON Orthopaedic Hospital, based in Helsinki and founded in the 1940s, is owned by the ORTON Invalid Foundation, the leading Finnish organization of orthopaedic experts. The hospital offers several services: back surgery, endoprosthetic surgery, paediatric orthopaedics, hand surgery, knee surgery as well as sports medicine, rheumatic surgery and general orthopaedics. Coxa is a limited company founded in Tampere in 2002 to perform endoprosthetic procedures. The firm was founded by a few hospital districts, large municipalities, the ORTON Invalid Foundation and a German private hospital company. In 2006, Coxa performed about 10% of all prosthetic hip replacement procedures in the country.

To produce maximum value for patients, care cycles should be smoothly organized by heavy investment in coordination between primary and specialized services. A key link between primary and secondary care is specialist ambulatory services. According to experts, one explanation for the poor coordination across provider types in Finland's municipal system is that a substantial proportion of specialist consultations are provided by private practitioners. To avoid unnecessary hospital care, new ways to integrate specialist support with "front line" primary services are necessary.

Health professionals

The number of outpatient physician contacts per person in Finland is lower than the EU average. In part, this may be due to different historical practices, such as the roles of nurses, midwives, and public health nurses. A well functioning training system has ensured the high competence of Finnish nurses, thus making it possible to delegate many important functions to nursing staff instead of to physicians. Traditionally, the role of public health nurses in preventive services has been decisive. Now, new ways are being tested to engage nurses in more independent roles for curative services. This should be seen as a means of improving value, since more expensive physician labour can be focused on the types of care that truly require medical training. Furthermore, studies show that in many cases, the value created by nurses can meet or exceed that of physicians (e.g. in inducing adherence to the treatment of chronic conditions). (Buchan and Calman 2005)

Many experts regard human resource management as an underdeveloped function in Finnish health care. Most managers qualify for their position via achievements in their clinical careers rather than investing in management development. A value-oriented provider cannot afford the separate management systems hospitals currently maintain for medical and nursing personnel. These divisions create friction that works against the introduction of high-value care delivery processes and organizational structures. Improved leadership and management systems will be needed throughout the system if the goal is to pursue a path of value improvement despite an aging population and shrinking workforce.

In the future, the diminishing pool of Finnish labour will further increase competition for health professionals such as physicians and nurses. It is unlikely that hiring foreign clinicians alone will solve the problem. Efforts should be made to improve the attractiveness of health care as a long-term working environment.

Almost all hospital-based physicians are salaried hospital district employees, which minimizes the incentive toward over-treatment presented by many forms of productivity-based compensation methods. But with lengthy wait-

ing lists in place throughout much of the country, incentives to see additional patients within the public system may currently be inadequate. Instead of seeing more health centre patients, many municipal physicians accept private patients in order to increase their income.

In contrast, private practitioners earn their salaries based on the volume of services they provide. Fees are paid directly by patients, who are partially reimbursed by the NHI. Although the NHI has introduced some limitations to the care it will reimburse, it generally acts as a passive payer of practically all care delivered by private physicians, thus introducing the risk of over-treatment by private providers. The current fragmentation of care delivery across public and private providers also impedes the continuity of care and creates an inhospitable environment for the introduction of bundled pricing and other developments targeting full cycles of care.

Long-term care

As the proportion of elderly citizens grows, long-term care is becoming a critically important part of health care delivery. Institutional care is provided through a wide variety of models. Such variety may be beneficial to the extent that patients are able to select the kind of services they need and prefer. However, the current role of health centre inpatient wards in long-term care is unsustainable, with many individuals resorting to these wards when other forms of residential care prove unavailable. In some cases, the hospital-like setting of the wards may also limit the independent activity that helps elderly patients to maintain their functional capacity, thus worsening patient health whilst driving costs upwards.

For years, increasing access to home-based care has been among the government's major strategic health policy goals. Such care is believed to promote a better quality of life for patients and their families as well as cost savings by avoiding expensive hospital care. One of the key areas for future reform and policy development will be increasing collaboration between health care organizations and informal caregivers.

Recent reforms to overcome service delivery fragmentation

The "health plan" function, that is enabling patient access to high-value preventive, curative and rehabilitative services, is the most demanding challenge in any health care system. The slow process of consolidation of small municipalities into larger regions is a positive development, but does not represent a decisive future course. Even larger municipalities may find the challenge of managing complicated health care dynamics too demanding. Consideration must be given to the types of resources and support that municipalities will

need to promote the reform of health care delivery within their borders over the coming decades. The burden of integration should not be placed upon service providers alone; they need the support and incentives created by competent and insightful payers.

The link between primary care and specialized services is the subject of active debate in many developed countries, and is equally applicable to Finland. The new Health Care Act would offer provisions to enable the reorganization of care delivery, and it should be used to the maximum if passed. Areas with low population densities would also be able to provide both primary and specialized services through a unified health district (see the Box on the Health Care Act, p. 60).

Innovation in the delivery of care

In any field, innovation is the key to value improvement. Finnish policymakers are to be commended for understanding this and for creating a number of ambitious innovations in the health care sector. However, programme evaluations across a number of funders and implementing organizations have found that despite some very successful projects, the total impact of innovation funding has not met expectations. One challenge encountered repeatedly has been barriers to practical implementation of new care delivery models. Moreover, models created with external funding are not always viewed as permanent solutions. Obstacles to disseminating and adopting high-value delivery models created elsewhere in Finland or abroad seem to be even greater than the barriers facing local efforts. Among several reasons for suboptimal uptake is the small scale of many projects, which are frequently short-term process-focused initiatives evaluated according to productivity benchmarks. Initiatives are often implemented without strategic management guidance or oversight, and many provider organizations have weak expertise in change management.

It is clear that the health care innovation funding described above has been too supply-driven; the state has offered funding to promising projects. The Finnish government is about to adopt a new national innovation strategy, including reviews of public policy and services. One of the strategy's goals is to promote demand-driven innovation models.

In a value-based health care system, providers are rewarded for creating more value than their competitors create. Therefore, they have strong incentives to identify and utilize innovations. In Finland, the positive pressure of competition is bounded by the vertical integration of funding (health plan) and service provision on the one hand and geographical virtual patient monopolies on the other. Controlled steps to loosen the monopolies, increase the diversity of service production, allow more patient choice and, above all,

monitor the value created by each provider at the medical condition level will promote the adoption of innovations benefiting providers and patients.

Reimbursement

In the current system, municipalities have less influence on the volume and costs of hospital-based care than they do on primary care because the municipalities themselves set the budgets for their health centres. As a result, municipalities may be forced to limit primary care services in order to cover the retroactive invoicing reconciliation for hospital-based care. This arrangement threatens primary health care and prevention, especially when municipalities are under the financial pressure they face today.

Elements of managed care are substantially weaker in Finnish health care than, for example, in the US system. As mentioned earlier, very few modes of care are explicitly excluded from the set of services covered in Finland. The existing treatment guidelines are non-binding, and using care methods of suboptimal cost-effectiveness is not penalized. In both municipal and occupational health care, however, the Finnish payers have some functional means to promote patient access to high-value services.

The situation is different for private services. The NHI reimburses all diagnostic procedures and treatments prescribed by any licensed physician. The NHI does not set budget or spending caps that would lead to rationing, and it funds services without assessing patient need or the efficiency of care. The only limitation is the patient's ability to pay. In practice, private health care costs are limited by the fact that patients requiring costly services can obtain care from the municipal system.

Technical aspects of reimbursement arrangements limit comparability of the services delivered, thereby limiting competition between providers. There are no national standards for defining the quality of services, making quality- and value-based comparison nearly impossible. The development of uniform service definitions and costing methods has been recognized as a key step to enable cost comparisons across specialized care, but no definitive policy decisions have been made. Similar standards are needed for primary and chronic care, and appropriate outcome-based quality gauges are required for all types of services.

Competition

In a value-based health care system, health plans and providers both compete for patients on the basis of value, which is defined as health outcomes achieved per euro spent. In Finnish health care, as mentioned previously, public sector health plans (municipalities) and providers are vertically integrated

and they serve geographically defined guaranteed patient populations, creating monopolistic dynamics and limiting competition.

It must be emphasized that the Finnish solution has important strengths. The geographical delineation of municipal responsibilities ensures health care coverage for everyone and access is generally high despite the waiting lists for some public services. Integrated payer-provider models, while admittedly limiting competition, avoid incentives to over-treat. The vertically integrated model can also make it easier to introduce care delivery and reimbursement reforms, although the opportunity to realize system-wide comprehensive, value-based reforms quickly has not yet been meaningfully pursued. The system of local primary care centres also provides a convenient mechanism for delivering and coordinating care in any municipality.

Instead of radically changing the architecture of the system itself, steps could be taken to increase positive-sum competition based on value for patients within the current municipal model. Municipalities and federations should work with their own health centres, hospitals and long-term care facilities to organize care around medical conditions and to encourage providers to offer only those services in which they can deliver truly excellent care. In some cases, this may include combining what are currently considered primary and specialized services within a single organization. The public sector can also work with providers to implement systems of rigorous outcome and cost measurement in order to enable value assessment and improvement. Municipalities and federations can also encourage all of these changes among private providers by basing their private care contracts on results.

In addition to influencing their own public and private providers, municipalities should develop care delivery networks beyond their own borders, especially for complex, specialized services. Based on reliable health and cost outcome data, municipalities should encourage patients to seek care from the best providers for their conditions, both within and outside their own hospital districts. An initial step might involve actively encouraging more value-based procurement and contracting, especially for complex, high-cost care. Once the added value becomes visible in the form of savings, these contracting practices could then be applied to a wider set of conditions. While municipalities might face initial resistance from local clinicians in some cases, municipalities as payers should also be motivated by financial incentives to guide residents toward high-value care. One challenge to value-based contracting is that municipalities may not currently have the purchasing skills needed to implement this type of contracting effectively.

From a value-based perspective, new policies increasing the use of service vouchers are of interest. These policies aim to provide more choice to patients, thus simultaneously increasing value-based competition among providers. So far, the impact of the voucher system on service quality has not been docu-

mented. This could be partly because demand for virtually all services is strong and patients have limited opportunities to choose among providers.

The private health care system has also not acted as a competitor to municipal services but rather as a complementary system that serves as a “safety valve” for patients who wish – and can afford – to choose their physicians or obtain direct access to a specialist with no referrals or delays. Unlike many countries, Finnish physicians can simultaneously work for public providers and as private practitioners. From a municipality’s point of view, it is desirable for patients to receive care from private (or occupational) providers because some or all of the costs are paid through other channels. For patients, private care is much more expensive than municipal services, which limits the proportion of Finns who seek care from private providers. Public-private competition is also limited by the narrow spectrum of services provided by private health care organizations.

Private providers increasingly complement municipal services by contracting with municipalities to deliver care. With a growing shortage of health professionals, the private sector has an advantage in its ability to offer more flexible and attractive compensation schemes. Thus, there is competition to attract and retain clinicians, but not to attract patients on the basis of value. Although some individual businesses and entrepreneurs may benefit, this type of competition creates potential problems for the system as a whole. Services are procured on short-term contracts for private companies in order to provide more or less the same services as municipalities. The potential for private providers to create new care delivery methods in the course of value-based competition has not been properly utilized.

Employers

Employers are obliged to provide preventive occupational health care for their employees, but not for their family members. In 2004, about 84% of all employees in Finland were offered occupational health care by their employers. (SII 2007)

As part of their occupational health care offerings, most large and medium-sized employers also voluntarily provide curative outpatient services. About 90% of employees receiving compulsory occupational health care services also receive some form of extra, voluntary services. Employers are free to determine the scope of these voluntary services (usually GP care). About 13% of all outpatient visits to physicians are provided by the occupational health care system.

Employees are not charged for using these services, which are paid in full by their employers. Employers are partly reimbursed retrospectively by the NHI for about half of the expenses.

Occupational health services can be provided directly by an employer through a company-owned and -run health care unit staffed by clinicians employed by the firm. Some employers choose to run occupational health centres jointly through a partnership with other employers. Employers can also purchase occupational health services from a clinic owned by another employer or employer group, which accounted for 42% of occupational health expenses in 2004; from municipal health centres, at 16% of expenses; from private health care providers, at 29% of expenses; or from other sources, at 12% of expenses.

Assessment

The existence of these three systems can contribute to care cycle fragmentation because primary and specialty care might not only be delivered by separate provider organizations but also belong to separately funded health systems. While municipalities and private providers can and should move toward integrated care delivery models, occupational care is unlikely to evolve beyond simple curative care, thus creating a natural break between occupational providers and the public and private systems.

Employees understandably welcome well-functioning ambulatory care services with no queues or fees at the point of use. Employers benefit from a system that minimizes lost productivity or absences due to illness. From an equity perspective, however, the existence of a separate system for employed people is problematic. To maximize value, all individuals, many of whom are not permanently employed, should have smooth access to care. Therefore, the municipal system should provide at least the same accessibility to services as does the occupational system. Attempts to improve access within the municipal system should not end up weakening the well-functioning occupational system. Instead, health centres should be strengthened to reach or even surpass the level of occupational care.

The role of employers in promoting the health of their employees is in most cases limited to providing occupational health care. However, employers increasingly go further by proactively encouraging and supporting healthy behaviour and lifestyle. Programmes aimed at making physical exercise accessible, fun, and trendy could improve employee health and become part of an employer's competitive image, along with other health and wellness efforts.

Patients

Patient choice

Many citizens can choose to obtain care from the municipal, private or occupational health care systems. However, substantial user fees can limit access to private services, and the scope of occupational health care services is often limited and available only to the employed. Therefore, the municipal health care system is the only option for poor or unemployed people.

Within the municipal health care system, patients have had very limited freedom to choose their health care providers or physicians. As a rule, patients must use the health centre within their municipality of residence, except for emergencies. They cannot obtain public services from another municipality even if they are willing to pay out-of-pocket for their care. There is great variability across municipalities in terms of patients' ability to choose their primary care physicians, with greater opportunities for choice in some areas. In municipalities where the "personal doctor" model is in use, a patient is usually assigned to the doctor responsible for his or her residential area. However, patients wishing to change their doctors within a health centre are usually accommodated.

A referral from a licensed physician is needed to access municipal specialized care (i.e. hospitals), and patients cannot usually choose their hospital or specialists. Instead, health centres have guidelines listing the providers to which patients with certain symptoms and diagnoses should be referred. Normally, patients are treated in a hospital within their hospital district of residence, and their freedom to choose their physicians within the hospital depends on factors including the organization of departments and the number of specialists.

One way to increase patient choice would be to give service vouchers to patients to obtain services from the providers of their choice. However, the use of service vouchers has been rather limited to date. Since the beginning of 2004, a new law has provided a legal framework for the use of vouchers in municipal home care services. At the beginning of 2007, about 25% of municipalities organized some municipal social and health services by offering service vouchers to patients. The services most often included home help and cleaning services as well as services to support informal care delivered by relatives. In 2008, the voucher programme was expanded to include home nursing. Although implementation has been rare, current legislation permits the use service vouchers for other social and health care services as long as patients' out-of-pocket-payments do not exceed maximum legally defined user fees. For example, in 2007, the City of Helsinki began to give service vouchers to some patients in need of dental care. Helsinki has had significant difficulties in recruiting dentists, which has resulted in very long queues for services. With

these vouchers, patients can go to private dentists for care and pay the same user-fee as in municipal health centres.

There have also been pilot projects aimed at increasing patient choice of hospitals. In 2007, the neighbouring hospital districts of Pirkanmaa, Southern Ostrobothnia, Vaasa and Päijät-Häme started a two-year pilot project in which patients from the districts' member municipalities could seek non-urgent care from any hospital within all four participating districts. In spring 2008, Coxa Hospital in the Pirkanmaa hospital district, started a campaign to actively inform patients of their freedom to choose Coxa instead of the hospitals within their local districts. This type of agreement had already been tested by two of the four hospital districts (Vaasa and Southern Ostrobothnia) beginning in 2003. The effort met with minimal success; only about 5% of patients travelled to the other hospital district for care. One challenge for these experiments has been the lack of proper provider-level outcome data; such data must be made available before patients can make meaningful provider choices together with their physicians and other caregivers. It is worth noting that the role of referring physicians is just as important as that of patients in terms of implementing and guiding the value-based choice of provider.

The present government's plans to merge the Primary Health Care Act and the Act on Specialized Medical Care in the near future (see p. 60) include the goal of increasing patients' choice of providers in the municipal health care system.

Citizens can influence decision-making in the municipal health care system through their votes in municipal elections every four years. The most important channel for the public to participate in and directly influence health care decision-making is through the municipal councils and municipal health committees that represent the municipal population. Hospital districts are also governed by councils and executive boards, both of which are elected by the municipal council members.

Unlike the municipal system, patients reimbursed under the National Health Insurance scheme can choose any private provider in the country. Since care delivered by any private licensed physician is partly reimbursed by the NHI, private provider choice is not constrained by selective reimbursement agreements. In the occupational health care system, patients cannot typically choose their physicians.

User fees

Legislation and government decrees define the maximum fees municipalities can charge for health care services, and they specify the services that must be provided to patients free of charge. Municipalities are permitted to set lower

fees than those defined in the legislation, but they usually charge the maximum allowable rates. On average, user fees account for 7% of municipal health care spending. Usually, user charges are not collected directly at the point of care. Instead, each patient is given a bill that is paid by bank transfer. When an individual or family income is insufficient to cover the cost of care, financial assistance for user fees and outpatient drug costs is available from the municipal social assistance system.

Preventive health care delivered by the municipal system, such as by maternity and child health clinics, is free of charge to patients. Immunizations, examinations, treatment of some communicable diseases as specified by law (e.g. sexually transmitted diseases, tuberculosis, hepatitis and some others), medical aids such as wheelchairs and other mobility aids, prostheses, and transport between health care facilities are also exempt from user fees. Children under 18 do not have to pay for health centre ambulatory services, such as physician checkups or dentist appointments, but they may be charged daily fees for up to 7 days of inpatient treatment at health centres or hospitals.

A health centre may charge a per-visit or single annual payment for physician appointments. A maximum defined single payment is 12.8 euro, which can be charged for a maximum of three appointments. An alternative annual payment is a maximum of 25.6 euro per calendar year. Separate fees of 17.5 euros can be charged for each visit to a health centre emergency clinic outside of business hours, typically weekdays between 8 p.m. and 8 a.m., weekends, and bank holidays. Hospitals may charge outpatient consultation fees up to a per visit maximum of 25.6 euros, whereas the maximum fee for an outpatient surgery is 83.9 euros. The daily charge for health centre inpatient care is 30.3 euros, whereas daily hospital inpatient fees are 30.3 euros in general hospitals and 14 euros for psychiatric hospitals, which covers all examinations, treatment, drugs, and meals.

The total annual user charge for public sector services is capped at 590 euros. After reaching the ceiling, clients receive outpatient services free of charge until the next annual period begins, with the exception of daily inpatient charges capped at 14 euros per day. Exemption from user fees upon reaching the annual user fee cap is not automatic, despite the fact that current information technology could facilitate an automated process. Today, patients themselves must collect all of their receipts for out-of-pocket payments and formally apply for the exemption.

Outpatient drug costs are reimbursed through the NHI. Most outpatient prescription drugs and some over-the-counter medications are assigned to three different reimbursement levels: 42%, 72% and 100%. Patients are reimbursed 42% for most drugs. In addition, patients can receive “special” higher reimbursement for medications that treat specific chronic conditions or other serious diseases (e.g. hypertension drug costs carry 72% reimbursement, and

cancer and diabetes medications are reimbursed in full). In order to get special reimbursement, patients must meet eligibility requirements outlined by the Social Insurance Institution (SII). For example, to qualify for special reimbursement for hypertension drugs, a patient's blood pressure readings must exceed a specified lower limit. The patient's physician must then submit a medical certificate to the SII stating that the patient has hypertension and meets the SII criteria; patients failing to meet the requirements for special reimbursement still receive the basic reimbursement.

There is a maximum annual cap per patient for out-of-pocket drug costs (about 640 euros in 2008), after which point patients pay 1.50 euros per reimbursable prescription for the rest of that year. On average, the NHI covers about 70% of outpatient prescription drug expenses, and about 56% of NHI drug reimbursement spending in 2006 was for special reimbursement medications.

In the private sector, patients initially pay all the costs for their treatment but they may claim partial reimbursement from the NHI and voluntary private insurance coverage. Fees for private outpatient and inpatient services are reimbursed by the NHI at a rate of up to 60% of the tariff guidelines set by the government, although many private providers charge fees exceeding the tariffs. To a lesser extent, voluntary private health insurance coverage is used to supplement the low NHI reimbursement rates. However, even accounting for voluntary insurance coverage, more than half of private health care costs are paid through out-of-pocket spending.

By law, occupational health services must be completely free of charge to patients.

Assessment

The government has cited increasing patient choice among its goals for health reform. According to a MSAH working group proposal, Finns should be able to freely seek care from any health centre within their own hospital districts. Moreover, a patient, together with the referring physician, would have the right to choose any hospital within the same tertiary care region. If the new Health Care Act is accepted by Parliament as proposed, these changes could take place as early as 2010. If used actively, the new dynamics could help to create a push for value-based competition for patients. However, experience from other European countries suggests that even when offered a free choice of providers, few patients seek care from outside their local areas.

In an effort to increase the impact of the new right to choose providers, the government has announced plans to launch an internet service called *Palveluvaaka* ("Service Scale") by January 2011. The online service will serve as

a source of information on provider waiting times, costs, quality and cost-effectiveness of the services.

From the patient's point of view, the three separate channels for funding and care delivery offer diversity in terms of access to care, scope of the actual services and financial burden. Occupational health care provides immediate access to primary care with no out-of-pocket payments at the point of use. Out-of-pocket payments in the municipal health care system are modest, but the waiting times for care can be substantial. Private specialist services are widely available in large cities, but they may not be conveniently located for rural residents. Access to private care is also limited by price because patients are required to cover the majority of the costs of their care, which can be substantial.

From a societal point of view, there seems to be some tension between competing goals. From the economic perspective of the nation and its businesses, it may be more desirable for the actively employed to receive services without undue delay. From the point of view of the basic human rights, as defined in Finnish legislation, services would be distributed according to health needs and the employed would not likely be favoured.

In a value-based model, the system as a whole maximizes health outcomes per euro spent. One of the prerequisites for this is that in addition to emphasizing preventive care and health maintenance, high-quality care must be easily accessible to people with substantial deficits in achievable health status, and not be wasted on duplicative or unnecessary care. Research has shown that employed people, who enjoy better average health than others do, receive more physician visits than other patients do, which is a finding that persists after needs adjustment. This suggests that Finnish health care may not distribute its services in a way that would maximize health impacts.

In the current era of the increasing prevalence of chronic disease, the “co-production” of health by patients and their clinicians will be a key factor in any health care system's ability to create and improve value. Health outcomes will suffer unless patients become full participants in and committed to their care. (The role of Finnish patients is discussed in the last Section of this document.)

Suppliers

In 2006, the sale of pharmaceuticals (including inpatient and outpatient use) amounted to 2.4 billion euros, or about 470 euros per capita. (NAM 2007) In 2005, pharmaceutical sales accounted for 18% of total health care expenditure.

Outpatient pharmaceuticals, including over-the-counter drugs, can only be sold to patients by pharmacies; nicotine replacement products are the sole

exceptions, and they have been sold in grocery stores since 2006. Providers can only deliver drugs that are actually administered within their facilities. Health centres can give outpatient drugs to patients when local pharmacies are closed, but only in the dosage needed to cover the time until the pharmacy reopens.

Pharmacies are heavily regulated. They are privately owned by pharmacists, each of whom can own only one pharmacy, and they cannot be owned by companies. The National Agency of Medicines (NAM) determines pharmacy locations and selects the pharmacists to run them. Retail drug prices must be the same in all pharmacies, and are determined by a combination of the wholesale price, the pharmacy's profit margin (set by the government) and value-added tax. Pharmacies pay a tax-like graded pharmacy fee to the state based on their net sales. This fee minimizes the differences in income across pharmacies, but major differences in profits persist.

The Pharmaceutical Pricing Board (PPB) at the Ministry of Social Affairs and Health sets the maximum wholesale prices for each pharmaceutical included in the NHI drug reimbursement system. Wholesale prices must be the same for all outpatient pharmacies (i.e. uniform pricing). Fixed wholesale prices do not apply to hospital sales because NHI reimbursement applies only to outpatient drugs. Drugs used in hospitals are paid for from hospital budgets, which in turn are funded by member municipalities or federations.

The majority of prescription drugs with marketing licenses are reimbursed by the NHI according to the 42%, 72% and 100% categories (see Section 3). The Pharmaceutical Pricing Board (PPB) at the Finnish Ministry of Social Affairs and Health will decide to include a drug in the NHI reimbursement system if the PPB considers the price proposed by the pharmaceutical company to be reasonable in relation to its benefits as well as the costs and benefits of any therapeutic alternatives. As such, pharmaceutical firms applying to add a new drug to the NHI scheme must submit pharmaco-economic evaluations. The PPB also compares the proposed price to prices in other EU countries.

Price competition among generic products is promoted by compulsory generic substitution, which has been a rather effective means of lowering their prices. Parliament has also decided to introduce a reference pricing system with effect from April 2009. The new pricing system is designed to further promote price competition by basing drug reimbursement on the price of the cheapest generic alternative, regardless of whether the patient actually purchases a branded drug or its generic equivalent.

Assessment

One obstacle inhibiting the rational use of drug therapy is the dual financing system, which creates cost-shifting problems between municipalities and the NHI. For example, health centres and hospitals have financial incentives to prescribe outpatient drugs instead of administering the drugs themselves, even when outpatient medications are neither economically or clinically the best choice. Moreover, the NHI and national administration have their own financial incentives regarding public drug reimbursement policy, which can work against consideration of drug therapies in a value-based context.

These examples highlight some of the dangers inherent in paying separately for drugs and other types of health care. Separate payment systems can introduce the perceived need to cut costs for a particular type of spending rather than to take a longer-term, care cycle view that examines the ability of drugs or services to improve health over the entire course of activities needed to treat a particular condition. Unfortunately, even the payers responsible for drugs and services often do not support value-based reimbursement policies, favouring short-term cost-cutting strategies that invariably fail over time.

Currently, physicians have minimal financial incentives for cost-effective prescription in outpatient care, and the NHI has few ways to influence a physician's patterns of prescription beyond assigning drugs to particular reimbursement categories. The direct promotion of pharmaceuticals to physicians has been shown to promote over-prescription. Limits on public reimbursement for particular drugs have been set in some cases in the hopes of curtailing spending on pharmaceuticals. For example, in 2006 the PPB decided that the most expensive statins would only be reimbursed after less expensive statins had already been tried without success.

However, constraining physician prescribing patterns is not the ideal way to promote the cost-effective use of medication, and other measures should be introduced in Finland. An OECD review of the Finnish health care system proposed that the funding of outpatient drugs should be integrated into primary health care budgets. (OECD 2005) So far, this proposal has been considered too complicated, and thus little action has been taken. If the proposal as it stands is not currently achievable, alternatives should be sought. Limiting physician autonomy to prescribe medications or shifting drugs costs to consumers in an effort to discourage their use are not constructive ways to enhance value.

For inpatient care, physicians tend to assess drug costs more closely because the expenditure is included in the departmental budget. While it is prudent to be mindful of the cost of care, separately monitoring drug costs, rather than considering drug costs along with the costs of other activities involved in

caring for a medical condition, renders value-based decision making almost impossible.

Heavy regulation and universal drug pricing has effectively prevented competition between pharmacies. Wholesale drug prices are perceived as rather moderate compared to other European countries, but retail prices are high.

Clinical guidelines

Several organizations in Finland provide information to clinical and administrative decision-makers regarding medical technologies and methods. Perhaps the most important is Finohta, an independent, state-funded centre for health care technology assessment (HTA) established in 1995 within the National Institute for Health and Welfare (THL). Finohta's main objective is to promote evidence-based medicine and improve the clinical and cost-effectiveness of care (primarily diagnostic or non-drug treatment methods). Finohta coordinates HTA research, disseminates information and provides methodological and financial support to research projects aimed at evaluating the clinical- or cost-effectiveness of a particular health technology.

Since 1995, the Finnish Medical Society Duodecim, in cooperation with various medical specialty associations, has issued the National Current Care Guidelines. The goal is to set procedural standards based on the best possible evidence on health and cost outcomes. The guidelines are devised in working groups comprised of Finnish experts in the relevant field. By June 2007, guidelines had been developed for 76 different diseases and medical conditions. The guidelines are to be updated every two or three years, and they are available online as well as in the Finnish version of the Evidence-Based Medicine Guidelines compiled by Duodecim.

These guidelines are employed rather widely among physicians working in all parts of the health care system, although their use is entirely voluntary. Duodecim and its partners also issue patient versions of the guidelines that are more easily understood by non-clinicians.

The guidelines are primarily intended for clinical practitioners, but they are also used to construct local care programmes and care pathways to integrate care processes across organizational borders. The Current Care Guidelines and care pathways are both constructed around health maintenance or care cycles (e.g. prevention and treatment of type II diabetes), and not around procedures.

The Centre for Pharmacotherapy Development (ROHTO) was established in 2003 to provide the independent assessment of drugs and disseminate treatment guidelines and other evidence-based information to clinicians.

The agency does not compile its own guidelines but uses existing guidelines from both Finland and other countries.

The most recent effort in this field is the Managed Uptake of Medical Methods (MUMM) project, a joint effort of Finnish specialty care providers (represented by the hospital districts) and Finohta. (Kaila 2008) MUMM's main objective is to build a national system of early assessment of emerging technologies as well as joint recommendations for the uptake of these methods based on rapid reviews. Clinicians are involved in producing the reviews, and hospital and municipal leadership issue final decisions based on the recommendations.

Assessment

Finland has been at the forefront of developing decision support tools for clinicians using the latest technologies to aggregate and disseminate syntheses of the best current evidence-based research.

Despite substantial investment over many years, evaluations of the guideline initiatives' impact have been limited. Additional analysis of the effects of the decision support tools and their determinants would help to further develop these activities and enlighten future efforts. It is also possible that additional emphasis should be placed on implementation and marketing the tools. Numerous examples in international research literature have shown that the power of new ways to access valuable information alone may not be enough to reverse longstanding practice.

From a value-based perspective, incentive structure is a critical factor influencing the creation and use of evidence-based guidelines. The guidelines should be developed based on solid evidence of value for patients. Providers then use the guidelines in order to improve their patients' outcomes, thereby refining and improving the guidelines themselves and creating a data feedback loop.

Today, health plans in many countries encourage high-quality care by rewarding clinician adherence to guidelines, irrespective of patient results. Rather than micromanaging care delivery by limiting clinicians' ability to deviate from process guidelines where appropriate, and running the risk of stifling clinical innovation by freezing current clinical practice, health plans should indirectly reward appropriate adherence to guidelines by sending patients to clinicians based on superior patient outcomes.

VI Health information technology

Most Finnish providers currently use electronic patient information systems. However, the development of health information systems has been largely uncoordinated at the national level, partly due to the decentralized health care system. As a result, several non-interoperable information systems are often used even within a single health care organization, which inhibits information exchange within and across provider organizations. This inability to communicate and the lack of information technology standards undermine the ability of information technology to enable value measurement and to restructure care delivery around the integrated care for medical conditions.

The Ministry of Social Affairs and Health has been working to improve this situation for years. A major milestone in the development of information technology was achieved in December 2006, when Parliament passed new legislation concerning electronic prescription systems and patient records. According to the Acts, new national electronic databases for patient records and prescriptions will be formed, and the systems are currently under development. In addition to MSAH, the principal national actors in health information system development include the Social Insurance Institution, the National Institute for Health and Welfare and the Association of Finnish Local and Regional Authorities. All providers are obliged to adopt these systems and to achieve full functionality by 2011, after a four-year transition period. A central task will include setting standards for data definitions and formats for storing and aggregating various types of data.

In the new electronic patient information system, every provider organization will have its own patient record archive maintained by the Social Insurance Institution. However, the structure of the archives will be uniform and they will be stored in a single system. All public providers are obligated to maintain their patient record archives in the new system, but private providers are only required to join the system if they already have electronic archives.

Every provider will be able to access all patient archives in the system through an index service; however, patient consent is needed to access another provider's records. Individuals will have access to their own patient records as well as to information about who has accessed their records and when their records were accessed.

In the new electronic prescription system, prescriptions are sent electronically from a physician's office to the national database to which pharmacies have electronic access. All providers will be obliged in 2011 to write prescriptions electronically, after the four-year transition period is over. Patients are free to refuse an electronic prescription and to receive a conventional paper prescription instead.

There have also been efforts to improve clinicians' and patients' access to health information. In 2000, the Finnish Medical Society Duodecim launched the internet portal Terveystieto from which clinicians can access information on EBM guidelines, the Current Care Guidelines, drug characteristics and prices, the Cochrane Library, several leading international medical journals, ICD-10 codes, a drug interaction database, a comprehensive list of Finnish Medical Terms and two leading Finnish medical journals. Almost all municipalities and hospital districts have purchased this service for their employees. It has become relatively popular, with about 30 million articles accessed in 2007.

In 2006, Duodecim built a second internet portal Terveyskirjasto ("Health Library", www.terveyskirjasto.fi) for patients and the general public. The portal contains thousands of patient-centric articles concerning diseases and treatments, and many municipalities and hospital districts have linked this portal to their own websites. In 2007, about 20 million articles were accessed from the "Health Library", and the portal is becoming increasingly popular.

Assessment

Finland has achieved more widespread use of health information technology (HIT) than many other health systems, which is likely due in part to the historically high uptake of ICT solutions in various other sectors. However, simply automating paper-based processes is not the optimal use of health information technology. Instead, HIT should be used to enable and support key aspects of value-based health care delivery, such as implementing and improving integrated and coordinated care delivery models and collecting and analyzing health outcomes and costs. In these respects, Finland still has much room for improvement.

A well-constructed national EPR system could lead to fundamental breakthroughs in managing and measuring health care in that common information management structures can be the most efficient enablers of functional and

organizational integration. Ideally, the EPR data would automatically produce key indicators on changes in health status as well as the use of resources. In recent years however, the pace of progress has failed to meet expectations. It is clear that the extremely decentralized and fragmented structure of health care delivery in Finland has been a key obstacle to the development and implementation of HIT systems capable of improving value in health care.

In order to harness the potential of ICT for value creation, Finland should invest even more aggressively in health information technology and its implementation. While some national initiatives are underway, no agreement has been reached regarding the appropriate next steps. The lack of consensus suggests the need for more active national coordination and steering of key HIT policies and processes.

VII Results measurement

The National Institute for Health and Welfare (now THL, since the National Research and Development Centre for Welfare and Health (Stakes) and the National Public Health Institute (KTL) were merged on January 1, 2009) has a central role in national data collection and reporting. It monitors and evaluates health and social welfare as well as related services and carries out research and development in those fields. THL also conducts research on diseases and their prevention and collects data on communicable diseases, health behaviour and the effects of health promotion efforts. The Social Insurance Institution (SII) produces statistics mainly relevant to the National Health Insurance system. Statistics Finland also plays an important role in compiling health service statistics.

National information on the health care system and health status can currently be obtained from various statistics compiled from registers, regular population surveys and annual reports from service providers (see p. 87–88 for examples). The data are widely used for research purposes and they provide statistical information for decision-makers, which include statistics on the services delivered, costs, the patterns of disease in the population (national and regional) and health behaviour. A major shortfall is the lack of a comprehensive national register for service delivery in primary care.

Examples of registries, regular surveys and statistics on health and service production

A wide variety of registries is routinely collected in Finland from different sectors of society. Each of the registers includes an individual's personal identification number. For research purposes and under specific data security legislation, these data from various sources can be linked at the level of the individual, which provides an extremely powerful analytical tool. This has been utilized in the PERFECT project, for example (see p. 89–90). Some register examples include:

Register on causes of death. Statistics on causes of death are compiled by Statistics Finland from data obtained from death certificates, which are supplemented with data from the population information system of the Population Register Centre.

Cancer register. The Cancer register is maintained for THL by the Cancer Society of Finland. Notifications on cancer cases are sent to the register by physicians, pathological, cytological and haematological laboratories and Statistics Finland (death certificate data). The register was established in 1952.

Hospital discharge register. The registry, which is maintained by THL, contains client-specific hospital discharge data for institutional care including both social and medical services. Hospitals (both public and private) and health centre inpatient wards report the end of all episodes of care (including ambulatory surgery) to the registry. The registry includes data on age, sex, diagnosis, treatment and treatment period. Censuses are also conducted concerning all clients that have received care by the end of the calendar year.

National health insurance register. The SII collects and reports information concerning National Health Insurance. This information includes data on drug reimbursement (utilization), sickness allowances, disability pension, occupational health services and private health care and rehabilitation reimbursements. Almost all these statistics are based on identifiable individual data.

Statistics are also compiled based on survey and aggregate operational data. Use of these statistics in performance measurement is rather limited. Some examples:

Annual survey on health behaviour and health among the Finnish adult population. Since 1978, the health behaviour and health of the adult population has been annually monitored through postal surveys conducted by THL. Each year a random sample ($n=5,000$) of Finnish citizens aged 15–64 years is taken from the Population Register. The average response rate has been 70% among men and 80% among women. The primary purpose of monitoring is to obtain information on health behaviour such as smoking, dietary habits and changes in ha-

bits. The questionnaire also includes questions about the consumption of alcohol, physical activity, dental health, perceived general health and the use of health services.

Health Care Activity Statistics. These statistics relate to public ambulatory health care and support services. The data are collected as summary data from health centres and hospital districts. The statistics are collected by THL.

Statistics on Private Health Care. The statistics are based on activity reports submitted by private health care providers to the Provincial State Offices. The statistics are maintained by THL and they contain data on ambulatory service provision and employees.

Most health care service data and many non-health statistics are collected annually and stored in the SOTKANet Indicator Bank maintained by THL. The Bank contains information on municipal finances, population, families, housing, social and health care personnel, health status, health behaviour, use of services and expenditure. Comparisons can be made at the national, regional and municipal levels, and the indicators can also be used to construct a time series.

A process for the systematic collection of performance data – such as outcomes, productivity and cost-effectiveness of health services – is currently under development. Productivity metrics (i.e. the quantity of services delivered per unit of cost spent) for specialty care have been developed by the THL Hospital Benchmarking project, which was launched in 1997. Currently, this benchmarking system provides versatile information for inpatient and outpatient care, costs, and hospital productivity. Productivity is calculated based on data from the Hospital Discharge Registry and the data on costs that hospital districts provide at the hospital and specialty levels. Data from the Hospital Discharge Registry is grouped into DRGs (Diagnostic Related Groups). The data is then adjusted for risk by a hospital case-mix index at the DRG level.

The benchmarking data has been integrated into national statistics since 2006, and they allow regional measurement of productivity and costs by indicating, for instance, the extent to which the costs of a hospital district or a municipality deviate from the national average and the extent to which this deviation may reflect the efficiency of care delivery and the per capita use of services. The Hospital Benchmarking data indicate that the productivity of hospitals in the municipal sector has decreased somewhat from 2001 to 2005, with falls from 0% to 13% in university or central hospitals. The data also suggest sig-

nificant differences in productivity between hospitals (Stakes 2007b), with a 20% difference in 2005 in productivity between the most productive and least productive central or university hospitals. Studies have also shown that unit costs for Finnish health care services are the lowest of the four largest Nordic countries. (Häkkinen & Linna 2007)

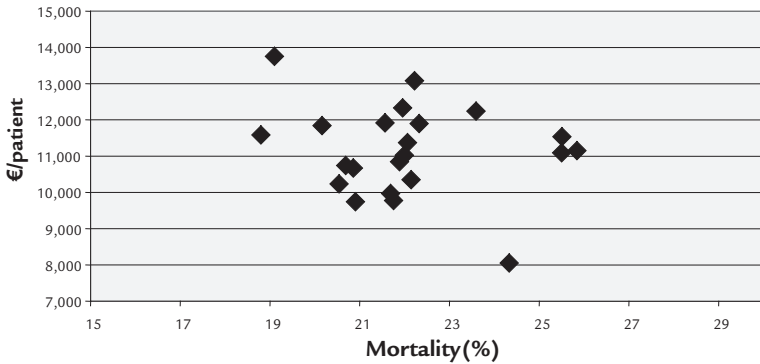
One important example of the development of effectiveness and cost-effectiveness measurement is the PERFECT project (see Box on the PERFECT project). According to PERFECT, significant differences in clinical practices, effectiveness and costs exist between hospital districts, such as in the process and results of care for acute myocardial infarctions.

Another somewhat different approach is a pilot project to collect quality of life information in the Hospital District of Helsinki and Uusimaa. In that project, adults' health related quality of life is measured with the 15-D instrument, which is a generic and comprehensive (15-dimensional) self-administered survey. The survey is conducted before and after a procedure, which enables the analysis of both the effectiveness and cost-effectiveness of the operation. 15-D and other health related quality of life surveys are used to assess changes in health status due to care. These measures are applicable to almost any type of care, and they create a "common currency" to compare health outcomes across units and conditions.

PERFECT Project

THL has made path-breaking progress in outcome-evaluation based cost-effectiveness evaluation (the PERFECT project). The project aims to develop indicators and models from register data that can be used to systematically monitor the effectiveness, quality and cost-effectiveness of care-cycles in specialized medical care across regions, hospitals and population groups. The first stage of the analysis comprises stroke, hip fracture, low birth-weight infants, breast cancer, schizophrenia, acute myocardial infarction, revascular procedures (PTCA, CABG) and hip and knee replacements (which cover approximately 25% of the expenses of specialized health care). For example, in acute myocardial infarctions (AMI), effectiveness is analyzed from data on mortality after admission and readmission to hospital due to MI. Clinical practices and quality are measured by the register data on operative and drug treatment. The project has found significant differences in clinical practices, effectiveness and costs between hospital districts.

Cost of hospital care and one year mortality of AMI by hospital district 2003-2005 (risk adjusted¹)



Source: Häkkinen U. Palveluketjut: Tapa mitata tuotosta ja tehostaa tuotantoa. In: Ilmakunnas S. (ed.) Hyvinvointi-palveluja entistä tehokkaammin - uudistusten mahdollisuuksia ja keinoja. VATT Publications 48, Helsinki 2008.

¹Adjusted for age, sex and co-morbidity

Waiting times (as a quality indicator) are reported by municipalities and hospital districts and collected nationally. Hospital districts are also required to provide information on average waiting times to the public on their web-sites.

For long-term elderly care, some countries have introduced an internationally developed and validated tool called the Resident Assessment Instrument (RAI) as a compulsory national method of measurement. The system has been piloted in Finland for a number of years. Today, the standardized assessment tool is used in the care of one of every three people in institutional care, one of every five elderly in home care, and about the same proportion of those in sheltered housing.

Use of measurement data in health care management

The use of performance measures in health care management in Finland is essentially non-existent. The main measures for steering municipal health systems are historical service volume, costs and productivity. Health outcomes, the most crucial of measures, are not routinely used to guide health system management, nor are they used as incentives to improve the actors within the system.

The measurement of service volume is more common in hospital districts than it is in primary health care, in part because billing in several hospital districts is based on DRG pricing and partly because hospital districts are obliged to gather the data for the Hospital Discharge Register. The most widely used indicators are those produced by the Benchmarking and PERFECT projects. The Hospital Benchmarking data have increasingly been used to appraise and direct hospital activities. Hospitals use this information to compare their performance with other providers, to identify areas of poor performance and to learn from excellent providers' successes. Some hospital districts have defined targets based on benchmarking data, for example to increase productivity by 1–2% annually or to have the hospital district placed in the top third of the benchmark's component districts. In some cases, performance data are also discussed in public, thus further encouraging hospital districts to adhere closely to the data.

Some hospital districts, such as Helsinki and Uusimaa, have also introduced their own performance gauges. However, these measurements are specific to the particular hospital district and therefore cannot be benchmarked against other districts that do not collect the same data.

For primary care, most municipalities prospectively fund their health centre budgets without comprehensive and detailed data on service volume or efficiency. In recent years, however, some municipalities have introduced purchaser-provider splits in their administrative structures that have led to more explicit monitoring of service volume and productivity.

There has been some progress in using quality and outcome indicators for the national steering of municipal activities, although these indicators are rather weak with regard to medical condition. In 2008, the government set specific targets for municipalities to improve their health services and public health from 2008–2011. These targets are to be followed-up regularly at the regional and municipal levels. The quantitative targets include the consumption of alcohol, the proportion of overweight people of working age, the proportion of smokers, the functional capacity of the elderly population, the number of home and recreational accidents, user satisfaction of health and social services, maximum waiting times, physician and dentist shortages in primary health care and geographical differences in the effectiveness of second-

ary care. However, there are no external incentives for municipalities to achieve these goals.

Assessment

Efficiency is a necessary but insufficient precondition for high value service provision. Ultimately, value is the relationship between the health outcomes achieved and the resources expended. Without proper measurement of both health outcomes and costs, value creation can only be estimated. Currently, many outcome measures are reported for a given population. However, the same data, which is based on observations of individuals, can be linked to specific organizational entities or medical conditions.

National registers are promising tools for measuring outcomes in specialized care. So far, the data have mainly been utilized in medical research. However, by using these results to evaluate, improve and ultimately restructure care delivery, Finland could be a forerunner in introducing value-based outcome measurement systems. A key issue will be the ability to link value measurement with incentive structures and providers' actual management decisions.

Development of productivity measurement has progressed well for Finnish hospital care. In primary care, however, the measurement of productivity is in its infancy. For hospital care, productivity comparisons between hospital districts could be improved by developing a uniform national method for defining and pricing services in hospital districts. The national government could play a much stronger role in this process. Currently, hospital districts use different systems to define the pricing of services. The data collection practices used by the Hospital Discharge Registry could also be improved because some information, such as secondary diagnoses and procedures, is incomplete.

Productivity measures, however, are just the beginning. Measurement should be rapidly expanded to the quality, outcomes and cost-effectiveness of whole care cycles. A key source of data for outcome measurement could be the national electronic patient record system targeted for 2011. However, obtaining useful data from this system to measure performance will be difficult without additional consideration and possible modification because the system was not developed for this purpose. Researchers should be involved in the development of data definitions and classifications. An additional measure might include measuring quality of life in relation to health, such as 15-D, more widely and systematically.

The development of activity registers for primary health care is a major challenge. One option is to develop EPR systems in primary health care to serve as the data sources for productivity and results measurement.

Another key challenge is how to collect performance data, link the results to strategic planning and management decisions and use them to align incentives for the actors in the health care system around creating value for patients. One step in this direction would be to establish the “Service Scale”, which is due to become operational in January 2011. The fully open internet data source for information on access, costs, quality and effectiveness of services by providers will undoubtedly have an effect. Together with the simultaneous increase in patients’ freedom of provider choice, the Service Scale will create a positive competitive pressure for providers to improve their outcomes. Even if patients’ provider selection does not change substantially as a result of the information, public availability of the data combined with the high level of ambition among Finnish health professionals is likely to spur providers and individual clinicians to focus on improving patient outcomes.

Performance indicators will have to be further developed before they can be used as financial incentives or tools to help patients choose their providers. Ideally, measures should concentrate on the outcomes of care because pay-for-performance measures tend to concentrate on and reward adherence to particular care processes rather than on patient outcomes and value.

Stronger national steering and funding is needed for the development and uptake of performance measurement in Finland, and there is a possible need for a national programme. Providers should also be given stronger incentives to develop and report these indicators.

In the long run, it is essential that physician and provider incentives be fully aligned with value-based ideals. In Finland, this could be achieved by encouraging municipalities to allow and encourage patients to seek care from excellent providers, which includes organizations outside their own municipalities and hospital districts. Outcome measurement is a critical tool to enable this shift. In the future, performance indicators could also be used to allocate state subsidies for municipal health services.

VIII Overall assessment and recommendations

After World War II and the public health crisis of the 1960s, the Finnish system recreated itself and today it is widely considered one of the leading national health systems. Finland has been able to balance the provision of universal coverage for a broad array of services with effective cost control to a greater extent than many other countries.

Finland's achievements create a promising platform for the next generation of health care reforms. It will no longer be enough for Finland to offer universal coverage while attempting to restrain costs. Moving forward, Finland must refocus its health care system on improving health outcomes and the quality of care across all services and providers, which will not only improve value for individual patients but will also help to ensure the financial sustainability of public universal coverage in the face of an aging population and growing public expectations of the system.

Incremental improvements of the regulation or care delivery processes will not be sufficient: the next generation of governance must build upon Finland's past achievements by making substantial "quantum leaps" toward a high-value system of health care delivery.

In Finland, the geographically organized care delivery system combined with public funding and universal access to care has been a key enabler of past achievements. At the same time, the structure of the Finnish system creates monopolistic dynamics where municipal payers and public providers do not face true competition for patients. This lack of competition, coupled with a lack of results measurement, has likely hindered the speed of innovation and therefore improvement in the models of care delivery.

Many of the recommendations are linked directly or indirectly to the idea of using competition and choice to improve value. However, it must be stressed that competition is not a goal in itself but rather a tool to enable the continued improvement of the system. The application of principles of com-

petition to health care extends to all actors, regardless of ownership structure or funding sources. In other words, competitive principles are equally applicable to public and private organizations and systems. Increasing the controlled competition for patients can jumpstart and sustain major improvements in health outcomes and value. This is perhaps even more relevant to competition between the public payers and providers who have been shielded from competitive forces to date.

Most of the following recommendations deal mainly with curative services in treating individuals who already have one or more medical conditions. However, it is necessary to remember that prevention is often among the highest value forms of care. The population-based orientation toward health promotion and primary prevention, which have long been at the core of health care ideology in Finland, must be strengthened further. Effective treatment and health promotion should not be seen as competing activities. On the contrary, both are prerequisites for the continuous improvement of the health of the Finnish people.

Intensify outcome measurement and link it to incentives and management

Health care delivery, like all public and private industries, requires measurement in order to improve. Therefore, a value-based health care delivery system unequivocally requires measurement of both health outcomes and costs at the level of the patient over the full cycle of care for each medical condition. The health outcome and cost components of the value equation are strongly linked; achieving better health outcomes is the best way to drive down costs over the long term.

Finland has a long tradition of national hospital care registers and other databases that collect essential information related to health care delivery. During the last decade, health services researchers and clinical experts have created methodologically advanced analytical tools to utilize this data. So far, however, these tools have mainly been used in research projects to compare hospital productivity. Now this information must be analyzed and mediated in a way that drives value improvement by highlighting successful care delivery methods and providers as well as areas for improvement.

At least two major steps must be taken to allow results measurement to drive value creation: expanding the scope of medical conditions and the types of providers for which the results are measured, and using the results to guide the strategic management and organization of providers.

For specialized care, data analysis can already combine various inpatient admissions and outpatient visits and include all care delivered to a sin-

gle patient in order to treat a particular medical condition. However, primary care, rehabilitation, outpatient social and mental health services and elderly care are not routinely collected or analyzed at the individual patient level, thereby omitting the important front- and back-end portions of the cycle of care. Instead, the care delivery processes, outcomes and costs of care are often evaluated using aggregate figures from units or even data for entire municipalities.

Development of the next generation of outcome indicators is already underway. As described earlier, (see Section 7 on results measurement), there have been a number of pilot initiatives to test primary and elderly care outcome measurement. The results and lessons learned from these projects should immediately be analyzed and reported.

In the future, the collection and analysis of the results of inpatient care, outpatient care, long-term care and health-related social services should be standardized at the national level to ensure the comparability of information. Investment supporting the universal adoption of these tools would raise the potential for the improvement of care delivery to a radically new level.

Universal, standardized outcome measurement will require a process to determine which outcomes should be used, and it may require the development of new measures for some conditions. For some types of care, however, existing measurement efforts can be expanded across all providers as a first step towards a comprehensive measurement effort. For example, for inpatient and outpatient specialized care, the methods developed by the PERFECT project (see Section 7), and by hospitals using patient level health-related quality of life (HRQoL) surveys to assess changes in patient health status, could be standardized across providers and expanded to cover all specialized and primary care for relevant medical conditions.

There are challenges in expanding and further refining measurement technologies. However, there is an immediate need for comprehensive information at the level of the provider for all types of care, and it should not be postponed. The best way to speed the development of methods and data sources is to make them visible through active use. If the uptake of measurement indicators is not broad enough, all providers must be obliged to report results according to a defined data set.

The existence of measurement efforts alone is not enough. They may not meaningfully improve value unless providers have access to their own results in order to see how their care compares to others. Results should also be available to referring doctors. One effective way to create incentives for providers to take their own results seriously is to publicize key results at the individual provider level. In this respect, Finland has been less proactive than some countries with less developed data collection efforts.

Health care providers and professionals should not only support results measurement initiatives, but they should be leading the call to action. Through information, providers can be credited for excellent performance and improve areas of weakness to better serve patients when appropriate. Without results information, providers will be subject to micromanagement. They will also be under constant pressure to cut costs in ways that may harm patients.

In addition to driving value improvement, public reporting of health outcomes and cost data is in line with the general principles of transparency to taxpayers, who are the ultimate payers of the publicly funded Finnish health services. Finnish taxpayers are also patients. A public call for results measurement and improvement would likely accelerate change because patients would appreciate the opportunity to see how various providers perform when seeking care themselves. While some patients might choose not to use the information to inform their provider selection, municipal payers could begin to base patient flow on actual results and guide patients toward excellent providers.

Municipalities should also measure health outcomes for their local residents. These value metrics should serve as tools for municipalities to gauge the effectiveness and efficiency of all care delivered to their residents.

Outcome data is also of key importance to physicians and integrated practice units in terms of improving practice and enabling performance-based referrals. Today, state subsidies to municipalities are based solely on demographic information and other indicators of service needs. The national government might also consider linking the transfer of health care funding to local governments with improved health outcomes. However, external rewards for provider achievements run the risk of unintended incentives, such as neglecting care for conditions with inherently poorer potential for improvement (e.g. due to the state of medical science or due to already high treatment success rates and the efficiency of care). They may also reinforce the widespread but often misguided belief that high quality care is more expensive. The best way to reward high-value providers is through patient volume, allowing them to expand and improve still further.

Create integrated practice units

To maximize value creation, all of the activities needed to care for a particular medical condition, or set of commonly co-occurring conditions, should comprise a patient-centric, results-driven cycle of care. To best achieve this, the organization and delivery of care must be designed according to the conditions faced by the patients, rather than around clinical specialties or hospital departments and divisions.

Compared with most health care systems, the Finnish model has some strong elements of integration. Health centres have an exceptionally wide range of professionals serving patients in or close to their communities, although co-location is not the same as integration and the extent to which clinicians actually work together as teams is variable. Working as salaried employees has helped them to establish team-based practices not often seen among private practitioners. Hospitals have created condition-specific care units, which in many cases employ multiprofessional and multidisciplinary teams to deliver patient-centric care. Physicians, working as a team, use second and third opinions more as a rule than an exception. Primary as well as specialized care have together designed “care pathways” that outline integrated processes and delineate each organization’s role. These are among the Finnish experiences that can be drawn upon to create disease or condition specific units.

Care cycles involving specialized care are rarely limited to a particular specialty. Even if all acute interventions were performed in the hospital by a single care delivery team, early detection, follow-up and rehabilitation would still be delivered quite separately by health centres under the current system structure. This induces poor coordination of care with associated quality problems, duplication of work and redundant administration.

Maximizing value across a whole care cycle should involve primary, specialized, social service and rehabilitative clinicians working together as a unified entity. Therefore, the next step toward the reorganization of care delivery in Finland should involve moving towards the true integration of primary, specialized and other types of care within integrated practice units for medical conditions.

Some providers may be able to move quickly to IPU models while in other settings, the creation of IPUs may take place as a series of steps. A first step might consist of increasing specialist involvement in primary care. Supported by specialists, health centres could provide many patients with certain common conditions such as diabetes or hypertension with virtually all of their care in primary care settings. All clinicians treating a patient’s condition would work together toward the common goals of primary and secondary disease prevention, with hospital admissions becoming the exception rather than the rule. And hospital visits that did occur would primarily be brief, planned interventions involving mainly ambulatory services. Even in the case of acute, unplanned admissions, the health centre would remain involved in patients’ care and it would work with hospital clinicians to determine which inpatient services best fit their patients’ overall care plans. Planning for future ambulatory care needs would therefore begin at the moment of admission, rather than via a separate “discharge planning” process.

As health centre team members, specialists would enjoy much broader roles than simply providing consultations for individual patients. The special-

ists would also act as “team captains”, consult with and train other team members, serve as quality management experts capable of contributing to innovative care processes, and possibly function as care coordinators across the hospital-ambulatory care division.

In the second step, IPUs, which were formally organized as entities with a single management, budget, and strategy (including IPUs located within general hospitals or other multi-specialty providers), could move beyond the primary care setting. The details of IPU design and organization would vary considerably within and across providers and medical conditions. In larger cities and for common medical conditions, high local patient volumes could allow each IPU to concentrate on a narrower segment of the population with a medical condition. For example, while a rural diabetes IPU might treat all diabetic patients, a larger urban IPU might specialize in type I diabetes or in patients with advanced disease.

Some IPUs, particularly those relating to primary care, might also be organized around a set of common activities needed to care for a patient population rather than a medical condition per se. In primary care for mainly healthy individuals, for example, the core challenges are keeping people healthy through activities at the individual and population levels and preventing diseases, particularly among those with elevated risk factors. The “medical condition” is therefore effectively health maintenance. Most people, especially those up to middle age, only use occasional services to maintain their health or to obtain care for minor medical conditions. Therefore, IPUs with health maintenance orientations offering a range of common primary, preventive, and possibly related social services, would become common.

As the Finnish population ages, increasing the proportion of individuals with several chronic conditions, the treatment of common sets of co-occurring conditions among elderly patients could also be coordinated by an IPU specifically targeted at that population. Conceptually similar to a health maintenance IPU for younger patients, an elderly care IPU would require different types of staff and services in order to maintain the more tenuous health of its patients. An elderly care IPU might employ a team approach to delivering primary care services as well as the non-acute care of chronic conditions for frail elderly individuals. Such an IPU would include or work closely with the social services. Close collaboration would be secured with several medical condition-based IPUs for the treatment of acute or unrelated medical conditions as and when necessary.

To support the reorganization of care within IPUs, funding and billing arrangements will also have to support integrated care. (Value-based reimbursement models are discussed below.)

Strengthen primary health care

Primary care is a cornerstone of a value-based health care system and an efficient vehicle for primary prevention, screening, and early intervention. Organized properly and working together with other community services, primary care can also be a key component of health promotion amongst the population.

Often serving as patients' first point of contact with the health care system, primary care providers can engage in pre-emptive health maintenance strategies rather than react to patients presenting themselves for care only after becoming ill. Primary care providers also play critical roles as major referral sources for specialized care services as well as in coordinating their patients' care across several providers. Through strong linkages with social services, including unified health and social care centres and other partners in local communities, primary care providers can be essential to avoiding the medicalization of non-medical problems.

In many ways, health centres are the crown jewels of the Finnish health care system. The dense network of community-based multi-professional units is an asset that must be strengthened, and not jeopardized. Many experts agree that the crucial functional challenges facing health centres today are a shortage of skilled personnel (especially physicians), the slow development of new and innovative preventive care models as well as rudimentary data tracking quality and outcome measures for primary care.

While progress to date has been slow, some promising initiatives are already underway. New ways of distributing responsibilities, both among physicians and between physicians and other clinical staff, are being actively piloted in health centres, and they should be encouraged. Improving human resource management, outcome measurement, information technology, patient involvement, and innovation uptake are among the Finnish system's current improvement efforts. The present government's public, high political level commitment to strengthening primary care is a promising sign that many current efforts are likely to continue and expand. The "Effective Health Centre" programme, which was launched by MSAH in 2008, will address many of the problems with concerted actions by the state, municipalities, universities and other key actors.

Most experts agree that two main structural obstacles are currently impeding health centre development. First, insufficient coordination between primary and secondary care is a major challenge. New models of true organizational integration, where one organization provides both primary and specialized services, have been implemented in sparsely inhabited parts of the country. The adoption of new organizational models is lagging in the densely inhabited areas where most Finns live.

To maximize value for patients, care delivery has to be seamless - as if all services were delivered by a single actor with a common administrative structure. Indeed, in some cases, much if not all of the care needed to treat a particular medical condition should literally be delivered within a single provider organization that integrates primary, specialized, rehab and social services. Hesitant attitudes among primary care and secondary care providers as well as among policymakers can best be overcome through action. New models of service integration have to be created ambitiously, and results must be measured. The integrated practice unit (IPU) approach described above provides a natural framework for integration. Successful models will benefit all parties, especially physicians who will find themselves more efficient and able to meet the needs of their patients.

Second, the parallel municipal and occupational primary care funding channels create obstacles to moving toward value-based care models. In some ways, the parallel arrangement seems attractive. Employees enjoy quick access to occupational care, employers can tailor the services they offer to drive higher productivity within their individual workforces and municipalities may save money because some of the health care costs are shifted away from them (although physicians in the occupational system still refer patients to municipal hospitals for inpatient care).

From a value-based perspective, however, long-term problems are clear. Municipalities may try to shift costs to the Social Insurance Institution and employers by letting queues delay access to health centres. Moreover, employers have no incentive to limit occupational referrals for municipality funded specialized services. As a consequence, recent years have seen a steady shift in primary care visits by employed people from municipal health centres to occupational care providers. In the long run, this trend may seriously threaten the viability of municipal care. If employed people opt for occupational care, leaving municipal health centres to care for the poorest and sickest patients, it would be questionable whether the municipal system could maintain staff levels and improve quality.

There are no easy solutions. Fully separating the municipal and occupational services so that each patient receives all care within one system is not feasible because most occupational care providers offer a limited scope of ambulatory services. One solution that would eliminate the perverse incentives described above would be to combine the funding channels under the governance of a single “health plan” (i.e. either the municipalities or NHI). Alternately, employers could be required to pay for a small percentage of specialized care resulting from occupational referrals. However, such a move would risk discouraging expanded occupational health services and reduce overall investment in primary care.

Create true health plans

Patients have an important role in a value-based health care system, but they cannot be expected to select their providers and organize their care unassisted. Ideally, patients would be guided not only by their primary care clinicians but also by health advisors whose interests are closely aligned with their own. In most countries, this task is left by default to the payers. However, few public or private payers have embraced this role to a sufficient degree.

In virtually all systems, payers must redefine their roles and move from passive reimbursement vehicles to true “health plans” that assemble all patient information and guide their beneficiaries to the high-value providers best equipped to care for their medical conditions whilst factoring in patients’ individual preferences.

In Finland, the “health plan” mandate is clearly designated to the municipalities. According to Finnish legislation, municipalities are responsible for ensuring sufficient health (and social) services to anyone permanently residing within their borders. The constitution gives municipalities substantial autonomy to carry out this responsibility, which is an independence reinforced by the fact that they are governed by democratically elected bodies and they can levy their own local taxes.

Despite this mandate, certain factors constrain municipalities’ ability to function as true health plans. Many municipalities are quite small and lack the financial and human resources to aggregate the necessary information and to navigate and influence an entrenched and complicated care delivery system. The municipalities are also legally obligated to belong to one hospital district, which in practice limits their ability to direct patients to highest value specialized care. There is limited proactive involvement with patients or municipality residents. Most hospital admissions take place without referrals from municipal health centres (either when patients directly present themselves for care or when they are referred by private practitioners or occupational health care).

Despite an encouraging trend toward the consolidation of municipalities, many newly merged municipalities will remain small. The consolidation of municipalities is a highly political issue, and it is unlikely that attempts to force them into fewer, markedly larger units will occur over the near term. One structural change that could quickly give municipalities more power to guide patients to high-value providers would be to end the requirement that municipalities belong to a single hospital district. (This line of discussion is explored further below.)

Another policy that should be re-examined is the requirement that municipalities pay for hospital care resulting from private practitioner and occupational health physician referrals. However, municipal health centres are often understaffed, and they cannot always guarantee rapid access to primary

care services. Therefore, requiring health centre referrals to ensure public reimbursement for inpatient care would create a public outcry. Many municipalities themselves would likely oppose such a measure, fearing a sudden increase in demand for primary care services and GP physicians. However, these questions should be revisited as primary care clinician shortages are addressed.

Ultimately, the ability of a municipality to act as a true health plan depends upon its financial and human resources. If the municipalities do not consolidate further, they will have to develop new ways to promote closer collaboration and enable greater provider choice. Currently, municipalities have joined together to organize inpatient and other specialized care delivery through hospital districts. In the future, co-operation across municipalities should allow patients to access the best possible care for their medical conditions rather than funnel them all to a single hospital or small group of outpatient providers.

Reimburse full cycles of care

Most providers analyze their activities at the level of individual visits, admissions and procedures but from the patient's point of view, care can consist of a lengthy series of actions over time and across provider settings. Value is created or destroyed by the net effect of all services needed to care for a medical condition.

Most providers are reimbursed via global budgets or fee-for-service arrangements. Providers subject to global budgets are paid a single lump sum intended to fund all care delivered over a period of time (generally one year). Global budgeting, a version of which is used in Finnish municipal health centres, carries the inherent risk of encouraging service rationing. When global budgets are approached or exceeded, potentially high-value, non-acute services such as preventive or consultative care may be restricted or denied in order to cut costs. Global budgets also focus attention on aggregate organization costs rather than on examining the costs to treat the medical condition, the point where value is actually created.

Providers with fee-for-service reimbursement arrangements are paid separately for each individual intervention as it occurs. This system, derivatives of which are used in Finnish hospitals, embodies the risk of the over-provision of care, poor sensitivity to quality problems, and a short-term focus that fails to consider the effects of services delivered earlier or later in the cycle of care on outcomes and costs.

In a value-based system, reimbursement would be bundled for the medical condition to include all of the services required to treat a patient across the full care cycle (or for a particular period of time in the case of many chronic

conditions). Bundled payments for most conditions would include outpatient visits, tests and imaging, drugs, inpatient care and rehabilitation. Even prevention is conceptually part of the care cycle for most conditions, although separate bundled payment for prevention as a distinct set of activities is also desirable in many cases. Bundled reimbursement avoids the misaligned incentives of global budgeting and fee-for-service systems. Instead, it aligns payment with the unit of value creation – the care for an individual patient’s medical condition over the full cycle of care.

Finland has both the technical prerequisites and practical experience to move quickly toward bundled reimbursement for the portion of care cycles involving specialized care. Each individual patient is assigned a personal identification number used by clinical databases, enabling the aggregation and analysis of all specialized care delivered to a particular patient across providers. However, reimbursement methods have remained unchanged even within specialized care.

Moving to bundled reimbursement for full cycles of care within the current care delivery system, which separates primary and specialized care services, could prove difficult. However, reimbursement reform does not have to wait for care delivery to be restructured and could instead be used to encourage and speed the reorganization of care.

An important step that could be undertaken quickly would be to structure all contracts between municipalities and hospital districts (or other service providers) in terms of care cycles for particular medical conditions. Providers would then have the flexibility to deliver the care best suited to each patient without micromanagement or mandatory adherence to detailed process guidelines. Bundled reimbursement would also increase provider incentives to get things right the first time because they would no longer receive additional reimbursement to address medical errors or complications.

A number of other initiatives should also be undertaken to facilitate the use of bundled reimbursement for care cycles. Patient classification systems could define “true diagnosis related groups” that extend beyond the current scope of DRGs (inpatient episodes) to cover entire care cycles. The “true DRG” classification would not depend upon actual services delivered or the volume of procedures performed. Legislation for data security and care process reporting should be reviewed in order to remove any unnecessary obstacles to full care cycle analyses. Similarly, all ICT solutions should be developed in a manner conducive to a full care cycle approach to reimbursement.

Such a methodology must be adjusted properly for patient risk factors and initial conditions that not only affect outcomes but can also lead to very different costs. One of the central goals of the next generation of EPR solutions should be the ability to aggregate all relevant data on care delivered across provider settings to encompass truly complete care cycles.

It is necessary to remember that the care cycle approach only works properly when coupled with health outcome and cost measurement. Without proper measurement and monitoring of health outcomes, reimbursement based on a care cycle could lead to service rationing, not unlike global budgeting systems. The idea is not to use fixed, capped reimbursements to constrain costs but rather to allow providers the flexibility to deliver the best possible care for a patient's medical condition over the entire cycle of care.

Increase value by service consolidation combined with competition

Although the integration of primary and secondary care is of the utmost importance, the geographical rationalization of services is also essential for value improvement. In most countries, hospitals have traditionally aimed at “serving the community” by offering a full set of services, regardless of patient volume. The community service mission made sense decades ago, when the set of available treatments was much less advanced and when travelling even relatively short distances could be complicated. Today, the care for many common conditions can include technically advanced, high skill treatments and involve many types of physicians and other skilled staff. Ample evidence has also shown that sufficient patient volume and the subsequent accumulation of skills and expertise are key drivers of value for patients. Concentrating care for a particular condition within fewer, high-volume centres facilitates faster learning, being incorporated into practice, and improved patient health outcomes.

Finnish studies confirm the massive, yet largely untapped potential for value creation by reducing the fragmentation of care delivery. Even complex, technically demanding surgical procedures are being performed in small numbers by many Finnish hospitals, with highly variable costs and health outcomes. But the data highlighting the variability of costs and outcomes across providers has not yet led to major changes. The lack of competition for patients among Finnish providers is a key enabler of the status quo, allowing hospitals delivering poor outcomes or inefficient care to maintain patient volumes and remain financially viable.

Some steps to reduce this fragmentation are already in the pipeline, including the new national Health Care Act scheduled to take effect in January 2011. According to the draft of the Bill, the country's five tertiary care regions will receive a clear legislative mandate to plan the distribution of responsibility for health care services within their boundaries. These regional actors will then have legitimate grounds to encourage hospital districts to limit the set of conditions treated by each provider. It remains to be seen whether these choices

will be made on the basis of value rather than politically motivated compromise or other considerations.

The new Health Care Act also proposes a significant increase in patients' freedom to choose their providers. According to the draft of the Bill, each patient, together with his or her physician, would be free to seek care from any hospital within the tertiary care region (as opposed to the smaller secondary hospital district). Supported by comprehensive results measurement, this provision would introduce a powerful new incentive for hospitals to demonstrate and improve value for patients.

Municipalities will also benefit from patients' expanded freedom to choose providers because they will have greater freedom to guide patients to the providers likely to achieve better results for the resources spent on care. No longer constrained by tight geographic boundaries, municipalities will be free to guide patients towards the best and most efficient care, and not just the closest. It will also be in the municipalities' interests to ensure that their own hospitals demonstrate excellence in certain services in order to attract patient volume and inter-municipality revenues.

Actions taken in the coming years will determine whether the new Health Care Act will meaningfully improve care delivery by expanding provider competition for patients. It is possible that even after the new legislation takes effect, inertia, loyalty, municipal tax income linked to local hospital activities and municipality ownership of the hospitals will deter some municipalities from guiding patients for care beyond their borders. Transparent municipal health outcomes will be crucial to counter any lingering financial incentive to refer patients locally. As discussed earlier, lifting the requirement for municipalities to join hospital districts might also help mitigate some of the local hospital district orientation. If hospitals were to become either independent organizations or at financial arms length from municipalities, they might adapt more easily to patient needs, and therefore municipality needs, with fewer political constraints.

Encourage innovation in care delivery and its structures

In any product or service industry, innovation is the key driver for value improvement. There is probably no other sphere of activity in which this should be more so than health care. Aging populations, rapid progress in medical science, rising public expectations and other trends are reshaping and generally increasing the need for care. The growth in demand for care seems to be moving at a markedly faster pace than any foreseeable change in the gross domestic product.

There are limits to the benefits achievable by incremental improvements in efficiency within the current health care delivery and organization structures. The only sustainable way forward is to create new ways of organizing and delivering services, which are often called service innovations.

A striking dilemma is taking shape in all advanced economies. Clinical medicine continues to be one of the most innovation-intensive spheres of society, with therapies continuously changing and improving. At the same time, cutting-edge health services are delivered by organizations structured as they were centuries ago. Hospitals and physicians' offices remain the settings for the vast majority of care provision. This model is unsustainable in the current age of chronic disease and aging populations.

In many ways, Finland is among the world's leaders in terms of realizing the need for service innovation. Finnish decision makers are to be commended for their substantial investment in projects aimed at developing new ways to organize and deliver services. Public investment through MSAH, Tekes and other efforts has been substantial in monetary terms.

Despite significant funding aimed at innovative approaches to Finnish health care delivery, it is generally agreed that the uptake of new care processes and organizational structures remains far below a desirable, or even sustainable, level. It seems unlikely that additional government investment in care delivery innovation alone will produce the results needed to meaningfully affect the creation of health care value over the short- or medium-term. New innovation programmes aimed more directly at reorganizing care delivery or otherwise driving value improvement should be developed and funded by (or in conjunction with) groups of municipalities.

The next wave of funding aimed at improving innovation in health care should evaluate potential projects in terms of their ability to raise health outcomes and lower costs. Only projects with feasible long-term effects on value would be funded, and only service delivery models demonstrating evidence of value improvement would be rewarded. Among other things, this would mean that at least part of the programme funding would depend on reliable ex post assessment.

Since the early 1990s, municipalities have had the option to procure health care services not only from not-for-profit "third sector" organizations but also from private for-profit providers. Although the vast majority of health care services continue to be delivered by publicly owned and funded providers, the proportion of care delivery by private providers has steadily increased.

Today, municipalities normally contract for provider services in terms of service volume, although some quality indicators (largely process measures) are increasingly included in public contracts. In most cases, the contracts are renewed annually with little review or consideration, let alone results measurement. In practice, this leads to a situation where private providers mainly rep-

licate the care delivery processes used by public units, which leaves the ability of positive sum competition to drive innovation unexploited. Rather paradoxically, this situation seems to be well accepted by private service providers.

In a value-based health care system, procurement contracts for care delivery should be based on value and reward high-value care or products with additional business (i.e. more patients or larger contracts). Since value is created over the entire cycle of care for a medical condition, provider contracts should cover full cycles of care or as much of the cycle of care as possible. Contracts should not rely upon process standards as proxies for true health outcomes or pay-for-performance arrangements to encourage providers to follow fixed guidelines. Value-based contracts should have sufficiently long timeframes to allow provider investment in care reorganization and improvement and align their financial incentives with longer-term health outcomes. Actual health results, rather than service process content, would be rigorously monitored, thus creating a strong incentive to identify and implement processes leading to better value.

A step towards more innovation might involve the creation of long-term partnerships between municipalities and providers (both public and private). Longer contracts coupled with proper outcome measurement would set the stage for value improvement. Here again, the necessity of effective health outcome and cost measurement cannot be overemphasized.

The uptake and utilization of innovations will be strongest if value-based competition prevails for all providers and municipalities. Therefore, any reforms that increase positive-sum competition will also promote innovation. In practice, controlled steps to loosen provider monopolies encourage new forms of integrated provider monopolies and to expand patient choice of providers are all conducive to innovation.

Invest in health information technology

In many industries, ICT has not only streamlined operations but has also reshaped the market and improved value in fundamental ways. But despite the information and knowledge intensity of health care, standardized ICT use and development lags far behind most other industries in Finland as well as other advanced economies. The health care systems that can best harness the potential of ICT to enable the reorganization of care delivery will be forerunners in moving towards high-value models.

Finland already has a number of demographic and other strengths that will enable health information technology to drive value improvements. Finland has an excellent education system and enjoys an overall public familiarity with and willingness to use new technologies. Other Finnish industries, led by

the successes of Nokia and Linux, have rapidly become global leaders in ICT and further accelerated the rapid adoption of information and mobile technology within the country. Universal personal identity codes already enable the aggregation of all specialized care data pertaining to an individual patient, and they could be expanded to include other provider types.

However, the public administration of health care delivery in Finland is even more fragmented than in many other advanced economies. Many ICT initiatives currently differ across municipalities, and the development of a nationally uniform, standardized infrastructure will require strong national guidance and oversight. If left to individual municipalities, providers and suppliers, convergence will be haphazard and slow. In the past, IT suppliers have created customized solutions for individual provider organizations and municipalities without clear standards to ensure information sharing and interoperability, which has led to counterproductive silos within and across providers.

Some promising steps towards standardization have been made over the past few years. Virtually all health care units now use electronic patient records (EPR). National coordination has made it possible to create a national data archive for EPRs as well as a national system for electronic prescriptions, both of which are long overdue. Concerted efforts are also underway to create a common, national structure for communication between patients and providers over the internet.

Current developments are paving the way for more profound steps. A standardized, universally adopted electronic patient record infrastructure can quickly add value to the current system. Such a system will require detailed standards for data definitions, architecture for combining data and communication protocols, and eventually templates for individual medical conditions to foster clinical effectiveness.

It will be a strategic imperative to organize this ICT infrastructure in a way that supports the efficient management of patient health outcomes and costs. All data collection should be designed to support the care pathway of an individual patient and to automatically extract essential case-mix (including disease severity and co-morbidities) and outcome data to enable value measurement. Furthermore, data architecture should support the analysis of full care cycles, irrespective of the actual units providing care.

In many industries, the introduction and development of ICT has spurred the creation of entirely new products and services. To date, the applications of ICT in health care have mainly involved automating some discrete, existing services or moving them online, e.g. making general medical information accessible to patients, scheduling appointments, transferring self-measured data on blood glucose levels, etc. However, internet applications enabling physicians and patients to improve care together are still lacking. In the realm

of care for chronic conditions alone, ICT provides enormous potential to improve care monitoring, patient coaching, and self-management.

While Finland has begun to take some meaningful steps towards standardizing health care ICT to enable value improvement, current policy measures and levels of investment are inadequate. National political decision makers should commit to an ambitious plan for rapid ICT standardization and development to be used as the basis for the phased-in, universal adoption by providers and municipalities and accompanied by increased public funding. Through major additional, nationally coordinated investment in health care ICT, Finland can quickly reach the global forefront of health care ICT implementation.

Today, national responsibility for the implementation of ICT policies is divided among many actors, each of whom has allocated limited resources toward the work. A common, concerted effort, including financial contributions, will be required of all bodies involved in the future. However, MSAH should further strengthen its own capacity to ensure that national ICT policies and standards are defined in a concrete and sufficiently detailed manner.

Increase the role of patients in health care

One of the vices common to all advanced economy health care systems is the tendency to patronize patients. The uneven power dynamic created by clinicians' medical knowledge coupled with the often vulnerable position of patients can lead to one-sided, provider-controlled treatment and communication. Patients may also believe, sometimes correctly, that providers' decisions are being made in part based on short-term cost considerations rather than on long-term health outcomes. As a result, patients may be sceptical of providers' advice, while poor communication can mean that patients' needs and preferences are often not taken fully into account.

Among the compelling reasons to challenge this dynamic is the belief that patients have a basic human right to control their body and health. It is also legitimate for taxpayers to demand to be considered as subjects rather than as objects within a health care system that is largely publicly funded.

There are also strong links between value and the active participation of patients in their health and health care. As such, patients are truly co-producers of care; patients with especially chronic conditions are often the best "experts" on their disease and its impact on their health and ability to function. Moreover, the outcomes of many primary and secondary prevention efforts largely depend upon individual adherence to certain behaviour or treatment plans.

But, some argue against increasing the role of patients by stating that empowered patients will demand more care. However, there are studies (e.g., Vuorma et al. 2003) that support the opposite conclusion - that well-informed patients tend to favour more conservative, and often less costly, treatment options than the treatment plans recommended by their physicians.

Both patients and professionals should join forces to create a new culture that places value for each individual patient at the centre. The clinician's role is to work with the patient to find a care plan that best corresponds to the patient's medical needs and personal preferences. By recognizing patients as sources of indispensable information about their own health and treatment options, individual providers and care delivery systems can create value while improving patient comfort and satisfaction with their health and health care. For patients with chronic conditions, clinicians must often serve as coaches that provide information and support for patients in their pursuit of the highest achievable health status. But coaches cannot succeed without their teams, and understanding patients' priorities, goals, and potential limitations to adherence are critical to the results of care.

One of the major obstacles for patient involvement is the current fragmented approach to care delivery. Often, there is no team to take responsibility for education and continued support. By encouraging team-based care, integrated practice units will provide structures to promote and maintain patient engagement.

As discussed above, the role of patients must include the freedom to choose the providers best able to meet their needs. Finland remains among the western European countries with the least freedom to select providers, but change may be soon to come with the planned 2011 introduction of the new Health Care Act.

Two caveats must be borne in mind when expanding patients' choice of providers. First, the freedom to choose a provider will only produce better value if decisions are based on relevant and reliable results. Otherwise, patients may end up amid a morass of "image" marketing, as has occurred in the United States and elsewhere. Patients must be supported by their primary care and other referring clinicians, as well as by municipalities, in finding services that correspond to their medical needs and personal preferences. Second, mechanisms must be in place to secure the rights of those who do not have the capacity to actively participate in their own care choices. The elderly, children and those with cognitive limitations must not be left to use second-rate services.

Moving to action

In recent years, Finnish health care has developed rapidly, with many population indicators placing Finland among the world's top health care systems. However, these successes should not be used as excuses to neglect further development. Trends including an aging population, advances in medical science and increasing expectations make improvement an imperative.

This report applies a value-based framework of health care delivery in order to provide a holistic view of the current state of Finnish health care. The aim is not to detail the problems of current health care programmes or care processes but to return to the fundamental principles of health care delivery. The most crucial questions for the future of Finland's health care system are those dealing with achieving optimal health outcomes for the Finnish people in a financially and socially sustainable way. These are also the central themes of value-based health care delivery principles.

One of the crucial issues in Finnish health policy is to achieve equitable access to health care services. We believe that equitable access to services must remain the fundamental principle guiding the development of the health system, and the value-based framework will allow Finland to take equity principles to a new level. By creating dynamics with no incentives for shifting costs, many obstacles to equitable access are removed. By ensuring strong incentives for result-driven care delivery, resources will be used more effectively for all citizens, which is a prerequisite for achieving the capacity to provide the necessary services for all. As providers strive to measure and improve value, equity will also come to encompass not only the right to access care but also the right to better health.

This report is not a detailed prescription for immediate policy decisions, and it leaves much room for further discussion and elaboration. We believe that this is the right time to shift the discourse on health care in Finland toward the long overlooked but core idea of value. The ensuing discourse should be oriented towards action and work to identify concrete policy goals, to define a logical sequence of policy steps and ultimately, to implement those steps in an effort to achieve a truly value-based health care system in Finland.

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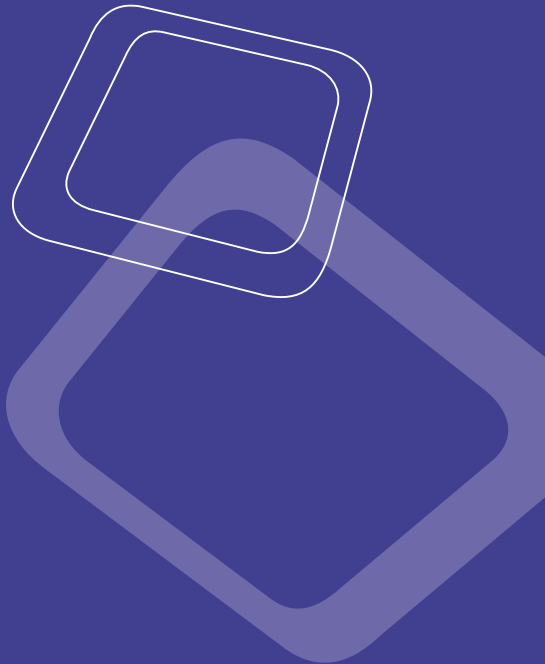
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In 2006, Michael E. Porter and Elizabeth Olmsted Teisberg published *Redefining Health Care* (HBS Press), a groundbreaking strategic framework for health care delivery. The framework aligns the activities of all actors around value for patients, defined as health outcomes achieved per unit of cost expended.

Value-based thinking provides a powerful new lens with which to examine health systems in any country. Following a brief summary of value-based principles, this report analyzes the Finnish health care system using the value-based framework and proposes recommendations for reform. The principal goal is not to provide a comprehensive road map for Finnish health care or lay out individual policy proposals. Rather, the aim is to catalyze discussion in Finland and inform Finnish stakeholders as they work to improve the health of the Finnish people.

Sitra, the Finnish Innovation Fund is an independent public fund that promotes broad innovative changes in society in order to foster the success of Finland and ensure the wellbeing of its citizens.



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