KCE REPORT 196 A

Federaal Kenniscentrum voor de Gezondheidszorg
Centre Fédéral d'Expertise des Soins de Santé
Belgian Health Care Knowledge Centre

DE PERFORMANTIE VAN HET BELGISCHE GEZONDHEIDSSYSTEEM RAPPORT 2012





Het Federaal Kenniscentrum voor de Gezondheidszorg

Het Federaal Kenniscentrum voor de Gezondheidszorg is een parastatale, opgericht door de programmawet (1) van 24 december 2002 (artikelen 259 tot 281) die onder de bevoegdheid valt van de Minister van Volksgezondheid en Sociale Zaken. Het Centrum is belast met het realiseren van beleidsondersteunende studies binnen de sector van de gezondheidszorg en de ziekteverzekering.

Raad van Bestuur

	Effectieve Leden	Plaatsvervangende Leden
Voorzitter	Pierre Gillet	
Leidend ambtenaar RIZIV (vice-voorzitter)	Jo De Cock	Benoît Collin
Voorzitter FOD Volksgezondheid (vice-voorzitter)	Dirk Cuypers	Chris Decoster
Voorzitter FOD Sociale Zekerheid (vice-voorzitter)	Frank Van Massenhove	Jan Bertels
Administrateur-generaal FAGG	Xavier De Cuyper	Greet Musch
Vertegenwoordigers Minister van Volksgezondheid	Bernard Lange	François Perl
	Marco Schetgen	Annick Poncé
Vertegenwoordigers Minister van Sociale Zaken	Olivier de Stexhe	Karel Vermeyen
	Ri De Ridder	Lambert Stamatakis
Vertegenwoordigers Ministerraad	Jean-Noël Godin	Frédéric Lernoux
	Daniel Devos	Bart Ooghe
Intermutualistisch Agentschap	Michiel Callens	Frank De Smet
	Patrick Verertbruggen	Yolande Husden
	Xavier Brenez	Geert Messiaen
Beroepsverenigingen van de artsen	Marc Moens	Roland Lemye
	Jean-Pierre Baeyens	Rita Cuypers
Beroepsverenigingen van de verpleegkundigen	Michel Foulon	Ludo Meyers
	Myriam Hubinon	Olivier Thonon
Ziekenhuisfederaties	Johan Pauwels	Katrien Kesteloot
	Jean-Claude Praet	Pierre Smiets
Sociale partners	Rita Thys	Leo Neels
	Paul Palsterman	Celien Van Moerkerke
Kamer van Volksvertegenwoordigers	Lieve Wierinck	

Controle

Regeringscommissaris — Yves Roger

Directie

Algemeen Directeur — Raf Mertens

Programmadirectie — Christian Léonard
Kristel De Gauquier

Contact

Federaal Kenniscentrum voor de Gezondheidszorg (KCE)

Doorbuilding (10e verdieping)
Kruidtuinlaan 55
B-1000 Brussel
Belgium

T +32 [0]2 287 33 88

F +32 [0]2 287 33 85

info@kce.fgov.be

http://www.kce.fgov.be

KCE REPORT 196 A
HEALTH SERVICES RESEARCH

WETENSCHAPPELIJK INSTITUUT VOLKSGEZONDHEID
INSTITUT SCIENTIFIQUE DE SANTÉ PUBLIQUE

RIZIV

Federaal Kenniscentrum voor de Gezondheidszorg
Centre Fédéral d'Expertise des Soins de Santé
Belgian Health Care Knowledge Centre

DE PERFORMANTIE VAN HET BELGISCHE GEZONDHEIDSSYSTEEM RAPPORT 2012

FRANCE VRIJENS, FRANÇOISE RENARD, PASCALE JONCKHEER, KOEN VAN DEN HEEDE, ANJA DESOMER, CARINE VAN DE VOORDE, DENISE WALCKIERS, CÉCILE DUBOIS, CÉCILE CAMBERLIN, JOAN VLAYEN, HERMAN VAN OYEN, CHRISTIAN LÉONARD, PASCAL MEEUS

COLOFON

Titel:	De performantie van het Belgische gezondheidssysteem. Rapport 2012
Auteurs:	France Vrijens (KCE), Françoise Renard (ISP – WIV), Pascale Jonckheer (KCE), Koen Van den Heede (KCE), Anja Desomer (KCE), Carine Van de Voorde (KCE), Denise Walckiers (ISP – WIV), Cécile Dubois (KCE), Cécile Camberlin (KCE), Joan Vlayen (KCE), Herman Van Oyen (WIV - ISP), Christian Léonard (KCE), Pascal Meeus (INAMI – RIZIV)
Externe experten:	Health Promotion Group : Luc Berghmans (Observatoire de la santé du Hainaut), Lien Braeckevelt (WVG Vlaanderen), Christian De Bock (CM), Léa Maes (UGent), Myriam De Spiegelaere (ULB – Observatoire de la santé Bruxelles), Stephan Van Den Broucke (UCL), Chantal Vandoorne (ULg), Alexander Witpas (WVG Vlaanderen) Mental Healthcare Group: Joël Boydens (CM), Robert Cools (CGG - De Pont), Raf De Rycke (Broeders van Liefde), Pol Gerits (FOD Volksgezondheid – SPF Santé Publique), Jean-Pierre Gorissen (FOD Volksgezondheid – SPF Santé Publique), Bernard Jacob (SPF Santé publique – FOD Volksgezondheid), Gert Peeters (UZ Leuven), Jean-Paul Roussaux (Cliniques Universitaires St-Luc) Continuity of Care and Patient Centeredness Group: Corinne Boüüaert (Maison Médicale Bautista Van Schowen), Xavier de Béthune (CM), Veerle Foulon (KU Leuven), Mirco Petrovic (UZ Gent), Luc Seuntjens (het Artsenhuis), Anne Spinewine (UCL de Mont-Godinne), Johan Van der Heyden (WIV - ISP), Annelies Van Linden (Domus Medica), Johan Wens (UA) Long term care Group: Daniel Crabbe (RIZIV – INAMI), Jan Delepeleire (KU Leuven), Johan Flaming (UZ Leuven), Margareta Lambert (UZ Brussel), Jean Macq (UCL), Alex Peltier (MC), Luc Van Gorp (Katholieke Hogeschool Limburg), Isabelle Vanderbrempt (SPF Santé publique – FOD Volksgezondheid) End of Life Group: Joachim Cohen (VUB), Marianne Desmedt (UCL), Rita Goetschalckx (RIZIV – INAMI), Johan Menten (UZ Leuven), Kathleen Kleemans (VUB), Birgit Gielen (CM)
Acknowledgements:	Greet Haelterman (FOD Volksgezondheid - SPF Santé publique), Willem Alvoet (FOD Volksgezondheid - SPF Santé publique), Marie-Noëlle Verhaegen (FOD Volksgezondheid - SPF Santé publique), Hans Verrept (FOD Volksgezondheid - SPF Santé publique), Isabelle Coune (SPF Santé publique - FOD Volksgezondheid), Luc Nicolas (SPF Santé publique – FOD Volksgezondheid), Dirk Moens (FOD Sociale Zekerheid – SPF Sécurité Sociale), Elke Van Hoof (Kankercentrum – Centre Cancer), Elisabeth Van Eycken (Stichting Kankerregister – Fondation Registre du Cancer), Xavier Ledent (INAMI – RIZIV), Pierre Bonte (INAMI – RIZIV), Olaf Moens (VIGeZ), Sadja Steenhuizen (VIGeZ), Stefaan Demarest (WIV – ISP), Béatrice Jans (ISP – WIV), Natacha Viseur (ISP – WIV), Viviane Van Casteren (WIV – ISP), Nathalie Bossuyt (WIV – ISP), Xavier de Béthune (MC), Johan Hellings (ICURO)
Externe Validatoren:	Ann-Lise Guisset (WHO), Irene Papanicolas (London School of Economics and Political Science), Niek Klazinga (Academisch Medisch Centrum – Universiteit van Amsterdam)

Stakeholders:	De volgende administratieve overheden en organisaties zijn gedurende het project geconsulteerd tijdens interadministratieve vergaderingen: op federaal niveau (FOD Volksgezondheid, FOD Sociale Zaken, RIZIV, WIV) en op niveau van de deelstaten: de Vlaamse Gemeenschap en het Vlaamse Gewest (Vlaams Agentschap Zorg en Gezondheid), de Federatie Wallonië-Brussel (Direction générale de la Santé), de Duitstalige Gemeenschap (DGOV Ministerium der Deutschsprachigen Gemeinschaft), het Waalse Gewest (Direction générale opérationelle des Pouvoirs locaux, de l'Action sociale et de la Santé et observatoire wallon de la santé), het Brussels Hoofdstedelijk Gewest (Observatorium voor de Gezondheid)
Belangenconflict:	Elke andere directe of indirecte relatie met een producent, verdeler of zorginstelling die zou kunnen opgevat worden als een belangenconflict: Gert Peeters (UZ Leuven – UPC) (Administratief manager van het UPC - UZ Leuven), Joël Boydens (MC; Groep Emmaüs vzw – lid bestuurscomité)
Layout:	Ine Verhulst, Sophie Vaes
Disclaimer:	• **De externe experten werden geraadpleegd over een (preliminaire) versie van het wetenschappelijke rapport. Hun opmerkingen werden tijdens vergaderingen besproken. Zij zijn geen coauteur van het wetenschappelijke rapport en gingen niet noodzakelijk akkoord met de inhoud ervan.** • **Vervolgens werd een (finale) versie aan de validatoren voorgelegd. De validatie van het rapport volgt uit een consensus of een meerderheidsstem tussen de validatoren. Zij zijn geen coauteur van het wetenschappelijke rapport en gingen niet noodzakelijk alle drie akkoord met de inhoud ervan.** • **Tot slot werd dit rapport unaniem goedgekeurd door de Raad van Bestuur.** • **Alleen het KCE is verantwoordelijk voor de eventuele resterende vergissingen of onvolledigheden alsook voor de aanbevelingen aan de overheid.**
Publicatiedatum:	25 januari 2013
Domein:	Health Services Research (HSR)
MeSH:	Delivery of Health Care; Health Promotion; Health Services Accessibility; Quality of Health Care; Efficiency, Organizational; Healthcare Disparities; Social Justice; Benchmarking; Belgium
NLM classificatie:	W84
Taal:	Nederlands, Engels
Formaat:	Adobe® PDF™ (A4)
Wettelijk depot:	D/2012/10.273/110
Copyright:	De KCE-rapporten worden gepubliceerd onder de Licentie Creative Commons « by/nc/nd » http://kce.fgov.be/nl/content/de-copyrights-van-de-kce-rapporten 

Hoe refereren naar dit document?

Vrijens F, Renard F, Jonckheer P, Van den Heede K, Desomer A, Van de Voorde C, Walckiers D, Dubois C, Camberlin C, Vlayen J, Van Oyen H, Léonard C, Meeus P. De performantie van het Belgische gezondheidssysteem Rapport 2012. Health Services Research (HSR). Brussel: Federaal Kenniscentrum voor de Gezondheidszorg (KCE). 2012. KCE Report 196A. D/2012/10.273/110.

Dit document is beschikbaar op de website van het Federaal Kenniscentrum voor de Gezondheidszorg.

VOORWOORD

Ons tijdvak wordt vaak enigszins pejoratief geassocieerd met een performantie-cultus. Maar binnen het domein van de gezondheid en de gezondheidszorg staat het onderzoek naar de performantie wel hoog aangeschreven, en biedt het een soort van geruststelling. Wie zou er immers klagen over een kwaliteitsvol, doeltreffend, efficiënt, toegankelijk en billijk zorgsysteem? Wat zou men kunnen verwijten aan gezondheidspromotie die actief de ongelijkheden in gezondheid doeltreffend aanpakt en bijdraagt aan een gestage verbetering van dat gezondheidsniveau?

Voorliggend rapport biedt u een snapshot van deze performantie aan de hand van 74 indicatoren, die op een nauwgezette manier werden samengebracht door de onderzoekers van het KCE, van het Wetenschappelijk Instituut Volksgezondheid en van het RIZIV. Hun werk werd ondersteund en verrijkt door de inbreng van tientallen experten uit de academische wereld en het middenveld. De leden van de administratie en de politieke overheid hebben actief alle productiestappen van dit rapport gevolgd. Wij willen ieder van hen hartelijk danken voor deze betrokkenheid die de geloofwaardigheid van het resultaat ten goede komt en de toe-eigening door alle betrokken partijen zal vergemakkelijken.

We laten u de sterke punten van ons systeem ontdekken, zoals de perceptie van de eigen gezondheidstoestand door onze medeburgers of de vaccinatiegraad bij kinderen. Toch mag men de inspanningen waar men nu tevreden over is niet laten verslappen. Ook mag dit de aandacht niet afleiden van domeinen waarin nog ruimte voor verbetering is, zoals de opsporing van bepaalde kankers of het uitstellen van gezondheidszorgen om financiële redenen. Men moet ook waakzaam blijven voor de vele ongelijkheden tussen socio-economische groepen of regio's.

De rigoureuze manier waarop elke indicator is ontwikkeld, ontslaat de lezer niet van enige voorzichtigheid bij de interpretatie. De meest recent beschikbare data zijn soms meerdere jaren oud, zeker de data op basis van enquêtes. Men moet er ook rekening mee houden dat de effecten van een interventie op het vlak van de volksgezondheid vaak pas na geruime tijd zichtbaar worden in de cijfers. Denken we maar aan de maatregelen van de administratie en politieke overheid op het vlak van het medische zorgaanbod, de gelijkheid en billijkheid van de zorg. Om dus te kunnen besluiten dat we op koers zitten op de weg naar een optimale performantie, zullen we deze evaluatie regelmatig moeten herhalen. Zeer waarschijnlijk zullen in volgende versies nieuwe data geregistreerd moeten worden en zullen bepaalde indicatoren moeten worden aangepast of vervangen. Op vlak van gezondheid en gezondheidszorg, zoals in de andere domeinen van het menselijk streven, is weinig of niets eens en voor altijd verworven. Efficiëntie en billijkheid zullen dus altijd werkpunten blijven.

Raf MERTENS

Algemeen Directeur

SAMENVATTING

INLEIDING

Health system performance assessment (HSPA - Beoordeling van de performantie van het gezondheidssysteem) is een landgebonden proces om het gezondheidssysteem holistisch te beoordelen, een "check-up" te doen van het hele gezondheidssysteem. Deze beoordeling maakt gebruik van statistische indicatoren om het systeem te monitoren en koppelt gezondheidsuitkomstmaten aan de strategieën en functies van het gezondheidssysteem. Elke HSPA wordt ontwikkeld volgens de lijnen van een strategisch kader dat specifiek is voor het land. HSPA wordt ook specifiek genoemd in het Handvest van Tallinn dat werd ondertekend door alle landen uit de Europese regio van de Wereldgezondheidsorganisatie (WGO). De eerste Belgische beoordeling van de performantie van het gezondheidssysteem werd gepubliceerd in juni 2010. Het HSPA-rapport van 2012 tracht de **toegankelijkheid, kwaliteit, efficiëntie, duurzaamheid** en **billijkheid** van het Belgische gezondheidssysteem te monitoren, om zodoende te dienen als een bron van informatie voor beleidsmakers die bevoegd zijn voor de gezondheid en gezondheidspromotie in België.

DOELSTELLINGEN

Strategische doelstellingen van het lopende Performantie beoordelingsproces

1. De gezondheidsautoriteiten informeren over de performantie van het gezondheidssysteem en een draagvlak bieden voor beleidsplanning;
2. Een transparant en controleerbaar beeld schetsen van de performantie van het Belgische gezondheidssysteem, in overeenstemming met het engagement in het Handvest van Tallinn;
3. Op lange termijn de performantie van het gezondheidssysteem in de loop der tijd volgen.

Algemene doelstelling van het rapport van 2012

Een reeks indicatoren voorstellen en meten voor alle domeinen en gekozen dimensies van het Belgische gezondheidssysteem, waarbij het aantal indicatoren beheersbaar blijft (in dit rapport zijn dat er 74).

Operationele doelstellingen van het rapport van 2012

1. De kernset van 55 indicatoren van het vorige rapport herzien, met een speciale focus op de 11 indicatoren waarvoor er geen gegevens waren in 2010;
2. De kernset verrijken met indicatoren uit de volgende domeinen: huisartsgeneeskunde, geestelijke gezondheidszorg, zorg op lange termijn, palliatieve zorg, gezondheidspromotie; indicatoren toevoegen inzake patiëntgerichtheid en zorgcontinuïteit (twee subdimensies inzake kwaliteit); en tot slot indicatoren voorstellen inzake billijkheid in het gezondheidssysteem;
3. De geselecteerde indicatoren waar mogelijk meten, of hiaten in de beschikbaarheid van gegevens identificeren;
4. De resultaten interpreteren met het oog op een globale evaluatie van de performantie van het Belgische gezondheidssysteem door middel van verschillende criteria, waaronder een internationale benchmarking, indien nodig.

METHODES

In de geïndexeerde literatuur en grijze literatuur werd uitgebreid gezocht naar nieuwe indicatoren in de hierboven vermelde domeinen/dimensies. Selectie van de meest relevante indicatoren gebeurde in samenwerking met externe experts van elk domein.

In totaal werden er 74 indicatoren geselecteerd en gemeten. Voor elke indicator werden analyses gemaakt op nationaal niveau, op regionaal niveau (wanneer er gegevens beschikbaar waren), per sociodemografische status (indien van toepassing). De resultaten werden ook gebenchmarkt aan 15 EU-landen, en tot slot werd er een algemene evaluatie gemaakt.

Bron van de gegevens

Er werd zoveel mogelijk gebruik gemaakt van routinematig beschikbare gegevens (bijv. administratieve databanken, nationale registers of herhaalde enquêtes): de administratieve ontslaggegevens van ziekenhuizen (RHM - MZG), de EPS (échantillon permanent - permanente steekproef), databases van het RIZIV - INAMI (doc N, Pharmanet), het Belgische Kankerregister, het register van ziekenhuisinfecties, de Health Interview Survey (HIS) en vaccinatie-enquêtes.

RESULTATEN

Gezondheidstoestand (4 indicatoren)

De vier indicatoren betreffende de **gezondheidstoestand** laten een positieve evolutie in de tijd zien. Het resultaat van de levensverwachting is iets lager in vergelijking met het EU-15 gemiddelde, terwijl de gezonde levensverwachting (dit zijn de resterende geleefde jaren vanaf een bepaalde leeftijd zonder activiteitbeperking op lange termijn) en de zuigelingensterfte op een middelmatige plaats staan. Het percentage van mensen die hun gezondheid als (minstens) goed beschouwen, is hoger dan het EU-15 gemiddelde.

Toegankelijkheid van de zorg (13 indicatoren)

Met betrekking tot de **financiële toegankelijkheid**, ondanks een universele verzekeringsdekking en het bestaan van sociale zorgnetten (maximumfactuur, Omnio, Bijzonder Solidariteitsfonds), is er sprake van enige bezorgdheid (hoge mate van persoonlijke uitgaven van de patiënt, en in zekere mate uitgestelde contacten met de gezondheidsdiensten om financiële redenen).

De **toegankelijkheid van preventieve maatregelen** toont uiteenlopende resultaten. De cijfers voor vaccinatiegraad tegen griep bij ouderen en kankerscreening (met sociale en enkele regionale verschillen) zijn middelmatig, terwijl de vaccinatiegraad bij kinderen goed is.

Een ander aspect van de toegankelijkheid is de beschikbaarheid van het aanbod aan gezondheidszorgpersoneel met betrekking tot de behoeften. Er werden aanzienlijke inspanningen geleverd om gegevens over de aanbodzijde beschikbaar te maken, maar er is nog te weinig informatie over de behoeften aan personeel.

Zorgkwaliteit: Doeltreffendheid (7 indicatoren), Aangepastheid (8), Veiligheid (6), Continuïteit (7), Patiëntgerichtheid (3)

De kwaliteit werd onderverdeeld in 5 subdimensies. De **doeltreffendheid** liet een gemengd beeld zien. Ze scoorde erg goed qua overlevingskansen bij kanker, maar er is wel bezorgdheid op het vlak van de geestelijke gezondheid, want België telt het op een na hoogste aantal zelfdodingen in Europa (met zeer grote regionale verschillen), en kent een toenemend niveau van onvrijwillige ziekenhuisopnames. Er zijn meer indicatoren en gegevens nodig om de doeltreffendheid in de geestelijke gezondheidszorg te beschrijven.

De aangepastheid van de zorg is vrij teleurstellend, met hoge en stijgende cijfers voor borstkankerscreening buiten de doelgroepen, een matige opvolging van de richtlijnen (antibiotica, diabetespatiënten), een stijgend aantal keizersneden met grote variabiliteit tussen de ziekenhuizen.

De veiligheid van de zorg toont bemoedigende resultaten, met afnemende trends wat betreft de blootstelling aan medische straling, de ziekenhuisbacterie MRSA, ziekenhuismortaliteit na een heupfractuur, en stabiele incidentie van postoperatieve sepsis en het voorschrijven van anticholinerge antidepressiva aan bejaarden. De incidentie van doorligwonden neemt echter toe.

De continuïteit en coördinatie van de zorg geeft gemengde resultaten, met een goede relationele continuïteit met dezelfde arts, een gemiddeld en toenemend cijfer voor multidisciplinaire raadpleging voor kankergevallen, maar een lage dekking van het globaal medisch dossier en een hoge heropname in psychiatrische ziekenhuizen.

De patiëntgerichtheid kon slechts deels worden beoordeeld. Er werd een hoge tevredenheidsgraad over de gezondheidszorg vastgesteld, maar ook een toenemende trend om thuis te sterven. Er moeten meer gegevens worden verzameld over dit onderwerp.

Efficiëntie van het gezondheidssysteem (3 indicatoren)

De efficiëntie van het gezondheidssysteem toont gemiddelde tot goede resultaten met een stijging in het voorschrijven van goedkope medicijnen, het gebruik van het daghospitaal voor chirurgische ingrepen en een daling van de verblijfsduur voor een normale bevalling. De positieve boodschap moet echter worden gematigd door de ongeschiktheid en dus verspilling van middelen, zoals blijkt uit een aantal indicatoren, waaronder de bovengenoemde mammogrammen buiten de doelgroep.

Duurzaamheid van het gezondheidssysteem (6 indicatoren)

De duurzaamheid van het gezondheidssysteem laat enkele resultaten zien die vragen doen rijzen met betrekking tot het gebrek aan vervanging van de huidige cohort van huisartsen. Er zijn gegevens nodig over de behoefte aan verpleegkundigen, gekoppeld aan gegevens over de evolutie van het aanbod van verpleegkundigen.

Billijkheid (analyses van alle indicatoren per socio-economische status en 2 contextuele indicatoren)

De **billijkheidsdimensie** werd benaderd op twee complementaire manieren. Ten eerste werden ongelijkheden in gezondheidstoestand, levensstijlfactoren en het gebruik van gezondheidszorg geanalyseerd per socio-economische status. Er werden sterke ongelijkheden waargenomen in de gezondheids- en levensstijlindicatoren. Ook werden er ongelijkheden waargenomen voor kankerscreening en voor de opvolging van chronische patiënten. De meeste ziekenhuisgebaseerde indicatoren konden echter niet worden onderzocht per sociale status in dit werk, en de conclusies zijn nog grotendeels onvolledig qua ongelijkheden in de zorgverlening en kwaliteit.

De billijkheid werd ook benaderd aan de hand van twee indicatoren die dit probleem op macroniveau benadrukken. De progressiviteit van de financiering van de gezondheidszorg neemt af, wat een evolutie is naar minder billijkheid. De Gini-index komt overeen met het niveau van ongelijkheid in de globale verdeling van de inkomens in België, en blijkt samen te hangen met een lagere globale gezondheidsstatus. Hij is relatief laag, maar neemt alsmaar toe, wat wijst op een minder gelijke verdeling van de inkomsten in België.

Gezondheidspromotie (15 indicatoren)

Tot slot werd de **gezondheidspromotie** vooral benaderd aan de hand van conventionele gezondheids- en levensstijlindicatoren, aangevuld met een aantal indicatoren met betrekking tot het gezondheidsbeleid, gezonde leefomgeving en individuele vaardigheden. Door de zeer beperkte beschikbaarheid van geschikte indicatoren en gegevens buiten de conventionele gezondheid/levensstijlindicatoren, kon er slechts een fragmentarisch overzicht worden gegeven.

De meeste gezondheid/levensstijlindicatoren wijzen op een middelmatig nationaal cijfer in vergelijking met de EU-15 landen, maar er werden belangrijke regionale/sociale verschillen waargenomen. We wijzen op het probleem van obesitas/overgewicht dat een vrij hoge en stijgende trend met grote verschillen laat zien. De tabaksconsumptie daalt, maar met grote sociale en regionale verschillen. De consumptie van groenten en fruit is veel lager dan de dagelijkse behoeften, maar gaat erop vooruit. Het gebrek aan sociale steun vertoont ook belangrijke sociale en regionale verschillen, en baart vooral zorgen bij ouderen.

België staat op een middelmatig niveau op de internationale Tobacco Control Scale Policies. Sommige complexe indices hebben tot doel de kracht van het lokale beleid inzake gezondheidspromotie in verschillende settings te meten (scholen, gemeenten, bedrijven), maar ze zijn alleen beschikbaar in Vlaanderen en zijn moeilijk te interpreteren zonder een grondige analyse.

DISCUSSIE EN CONCLUSIE

Aan de hand van 74 indicatoren geeft dit rapport een breed beeld van de performantie van het Belgische gezondheidssysteem. Het wijst in bepaalde richtingen voor beleidsmaatregelen en doet vragen rijzen voor de verdere opvolging of voor verder onderzoek.

Voortbouwend op de eerste HSPA, die de haalbaarheid beoordeelde om een tool op te stellen voor het meten van de performantie van het Belgische gezondheidssysteem, vormt dit rapport een aanzienlijke verbetering van de vorige tool: het is meer omvattend en zorgt voor een update van de voormalige reeks indicatoren met meer relevante indicatoren. Bovendien maakt het in sommige gevallen de meting van de evolutie mogelijk. Voormalige hiaten in de basisgegevens werden ook opgevuld, zoals de zuigelingensterfte of cijfers over patiënten die kanker overleven. Niet alle domeinen van de zorg of specifieke patiëntgroepen kwamen echter in gelijke mate aan bod.

De indicatoren geven waarschuwingssignalen met betrekking tot de status van het gezondheidssysteem op het vlak van toegankelijkheid, kwaliteit, efficiëntie, duurzaamheid en billijkheid. In sommige gevallen zijn de beleidsmakers al op de hoogte van de problemen, en gaven ze opdracht voor aanvullende analyses om te weten welke actie ondernomen moet worden. In andere gevallen zijn deze signalen nieuw voor de beleidsmakers, en moeten ze dus grondiger geanalyseerd worden. In ieder geval moet de uitgebreide en gestructureerde manier waarop indicatoren worden voorgesteld ervoor zorgen dat er gemakkelijker prioriteiten gesteld kunnen worden betreffende de nodige acties en/of verdere studies.

België is niet het eerste land dat deze uitdaging aangaat. Met de ondertekening in 2008 van het Verdrag van Tallinn inzake gezondheidssystemen, hebben de lidstaten zich er formeel toe verbonden om de performantie van het gezondheidssysteem te monitoren en te evalueren. Verschillende buurlanden met jaren ervaring in het meten van de performantie van gezondheidssystemen dienden als voorbeeld voor dit rapport, zoals het Nederlandse Performantierapport. Een van de tekortkomingen die het nut van de performantiemeting belemmert (en die ook werd vastgesteld in eerdere Nederlandse performantierapporten), is de lage beschikbaarheid van up-to-date gegevens. Het regelmatig actualiseren van administratieve gegevens en het dynamisch publiceren van resultaten op een website is één van de pistes die moet worden onderzocht.

Met de Europese Richtlijn betreffende de toepassing van de rechten van patiënten bij grensoverschrijdende zorg wordt dit engagement een gemeenschappelijke bezorgdheid onder de lidstaten[a]. Vanaf de implementatie van de Richtlijn in de nationale wetgeving in oktober 2013 zullen de lidstaten ervoor moeten zorgen dat patiënten uit een andere lidstaat relevante informatie kunnen krijgen over de veiligheids- en kwaliteitsnormen om een weloverwogen beslissing voor grensoverschrijdende gezondheidszorg te maken. In deze context legt dit rapport niet alleen de basis van een toekomstige systematische beoordeling van de performantie, maar kan het ook worden beschouwd als een eerste stap op weg naar de verantwoordelijkheid van België om veilige, kwaliteitsvolle, toegankelijke en efficiënte gezondheidszorg voor zowel Belgische als buitenlandse patiënten te verzekeren.

[a] Richtlijn 2011/24/EU van het Europees Parlement en de Raad van 9 maart 2011 betreffende de toepassing van de rechten van patiënten bij grensoverschrijdende gezondheidszorg, Publicatieblad L 88/45, 4 april 2011

AANBEVELINGEN[b]

Algemene aanbevelingen voor de politieke verantwoordelijken

Het concept performantie hangt impliciet samen met het bereiken van doelstellingen. Terwijl het huidige rapport vooral een 'vaststelling' van de situatie is, moet het grote belang ervan worden gezocht in het uiteindelijke doel, nl. 'een verbetering' van de situatie. De politieke verantwoordelijken zouden derhalve meetbare doelstellingen moeten vooropstellen en termijnen vastleggen om die te realiseren, rekening houdend met de hierna volgende aanbevelingen.

Positieve bevindingen (te behouden) en negatieve bevindingen (aandachtspunten):

Over het algemeen wordt aanbevolen dat de betrokken instellingen en instanties zich baseren op de hierna volgende bevindingen, zodat ze op dezelfde koers kunnen doorgaan in de domeinen met positieve bevindingen, ofwel van koers kunnen veranderen om de situatie te verbeteren in de domeinen waar aandachtspunten werden gesignaleerd.

Positieve bevindingen (te behouden):

- **Gezondheidstoestand: de 'gerapporteerde' of 'waargenomen' gezondheidstoestand, gemeten via de gezondheidsenquêtes (Wetenschappelijk Instituut Volksgezondheid) is beter dan het Europese gemiddelde.**
- **Dekking van de preventieve maatregelen: de vaccinatiegraad bij kinderen is beter dan het Europese gemiddelde.**
- **Zorgkwaliteit:**
  - **Effectiviteit van de curatieve zorg: zeer goede resultaten voor de overleving op 5 jaar na borstkanker of na colorectale kanker in vergelijking met de andere Europese landen.**
  - **De indicatoren tonen aan dat de Belgen een zeer goede en continue relatie met de huisarts onderhouden en dat ze erg tevreden zijn (meer dan 90 %) over hun contacten met de gezondheidszorg.**
- **Efficiëntie: een verbetering van de efficiëntie kan worden afgeleid uit het stijgend percentage opnames in dagziekenhuis en een toenemend gebruik van goedkopere geneesmiddelen.**

[b] Alleen het KCE is verantwoordelijk voor de aanbevelingen aan de overheid.

Aandachtspunten voor het oriënteren van het toekomstige gezondheidszorgbeleid:

- **Gezondheidstoestand:**
  - **De zeer hoge percentages van zelfdoding in vergelijking met het Europese gemiddelde vragen om opheldering.**
  - **In vergelijking met het Europese gemiddelde stelt men vast dat het percentage personen met overgewicht of obesitas stijgt en dat het nemen van lichaamsbeweging eerder laag scoort.**
- **Dekking van de preventieve maatregelen:**

  De dekkingsgraad in de doelgroepen van de opsporing van borstkanker en baarmoederhalskanker is laag in vergelijking met het Europese gemiddelde. De dekking van de georganiseerde opsporing van borstkanker is onvoldoende om efficiënt te zijn. Een ander aandachtspunt is de hoge opsporingsgraad van borstkanker buiten de doelgroepen van de georganiseerde screening en deze neemt toe voor leeftijdscategorieën van 40-49 jaar en 70-79 jaar, hetgeen contraproductief is in termen van volksgezondheid en het gebruik van de collectieve middelen.
- **Sociale billijkheid/ongelijkheid:**

  Vergeleken met personen uit een hogere klasse hebben personen met een socio-economisch lagere status (gemeten op basis van het opleidingsniveau of de toegang tot verhoogde terugbetaling van de gezondheidszorg) een slechtere gezondheidstoestand (levensverwachting, levensverwachting in goede gezondheid, zuigelingensterfte, obesitas), een minder gezonde levensstijl (voeding, roken, lichaamsbeweging), een minder goede dekking van de opsporing van kanker, een minder goede opvolging voor diabetici, minder sociale ondersteuning en ze overlijden vaker in het ziekenhuis dan in hun eigen woning.
- **Zorgkwaliteit:**
  - **(Onaan)gepaste zorg: uit meerdere indicatoren blijkt dat de medische praktijk niet altijd aangepast is. Bijvoorbeeld:**
    - **De eerste keuze van de voorgeschreven antibiotica komt te weinig overeen met de aanbevelingen en er is geen verbetering merkbaar doorheen de tijd (behalve bij kinderen).**
    - **Het percentage diabetische patiënten dat op de juiste manier volgens de aanbevelingen wordt opgevolgd, is onvoldoende.**
    - **Hoewel het niveau enigszins lager ligt dan het gemiddelde van de andere Europese landen is het percentage keizersneden hoog. Men ziet ook bij niet-gecompliceerde zwangerschappen een grote variabiliteit tussen de ziekenhuizen.**

- **Veiligheid van de zorg: blootselling aan straling van medische oorsprong: hoewel lichtjes gedaald in 2011, blijft het niveau erg hoog in vergelijking met het Europese gemiddelde.**
- **Zorgcontinuïteit: sommige indicatoren wijzen erop dat in dit domein zwak gescoord wordt. Bijvoorbeeld:**
  - **Ondanks een constante stijging is het percentage patiënten dat over een globaal medisch dossier (GMD) beschikt nog te laag.**
  - **Het percentage heropnames in de psychiatrische ziekenhuizen is relatief hoog vergeleken met het Europese gemiddelde.**

- **Duurzaamheid van het systeem:**

  Het gezondheidssysteem steunt op een eerstelijnszorg waarin de huisartsgeneeskunde een belangrijke schakel vormt. Verontrustend is dat de gemiddelde leeftijd van de huisartsen blijft stijgen, en dat de quota die werden voorzien door de Planningscommissie sinds enkele jaren niet ingevuld geraken. Wanneer deze tendens zich doorzet, zal dit snel leiden tot problemen voor de werking van de eerstelijnszorg.

<u>Verbetering van de informatiesystemen voor de gezondheidszorg</u>

De kwaliteit van de gegevens en de snelheid waarmee ze beschikbaar worden gesteld zijn essentieel voor de relevantie van de indicatoren die erop gebaseerd zijn.

- **Termijn van de ter beschikking stelling van de gegevens**
  - **Voorzetten van de inspanningen teneinde geactualiseerde gegevens over te maken aan de internationale organisaties (OESO, Eurostat, WGO)**
  - **Ervoor zorgen dat de administratieve databanken (Minimale ZiekenshuisGegevens) sneller ter beschikking worden gesteld.**
- **Gegevens per zorgdomein:**
  - **Geestelijke gezondheidszorg: hervormen van de Minimale Psychiatrische Gegevens teneinde deze aan te passen aan de internationale normen (identificatie van unieke patiënt) en aan de evolutie binnen de sector. Dit vraagt een herziening die toelaat om het ganse zorgtraject van de patiënten, ook buiten het ziekenhuis, te volgen.**
  - **Langdurige zorg: zorgen voor een gedegen beschikbaarheid op nationaal niveau van de gegevens die worden verzameld in het kader van het project BelRai om het meten van de verschillende geselecteerde indicatoren mogelijk te maken.**
  - **Mondhygiëne: oververtegenwoordigen van de groep kinderen van 12 jaar in de enquête over mondhygiëne teneinde de internationale indicatoren correct te kunnen**

berekenen.

- **Zorg bij het levenseinde: verbeteren van het gebruik van bestaande gegevens (Kankerregister en het netwerk van Huisartsen Peilpraktijken)**
- **Volksgezondheid: aanvullen van de databank van geneesmiddelengebruik teneinde over de totaliteit van de informatie te kunnen beschikken, met inbegrip van de middelen die niet worden terugbetaald, maar waarvan de analyse essentieel is voor de volksgezondheid of de veiligheid van de patiënt (benzodiazepines, bepaalde ontstekingsremmers).**

<u>Aanbeveling voor het verzamelen van nieuwe gegevens of voor bijkomend onderzoek</u>

Sommige gegevens die nodig zijn voor het uitwerken van geselecteerde indicatoren moeten nog worden verzameld.

- **Op de vraag over de socio-economische ongelijkheid kunnen de administratieve databanken slechts een gedeeltelijk antwoord geven. Bepaalde gegevens ontbreken volledig (bijvoorbeeld, socio-economische status in de ziekenhuisgegevens, etniciteit), andere zijn weinig nauwkeurig of hebben weinig onderscheidend vermogen (Omnio/Verhoogde terugbetaling).**
- **Financiële toegankelijkheid: verbeteren van de enquête over het budget van de huisgezinnen teneinde alle financiële lasten van de patiënten die samenhangen met hun gezondheidszorg te registreren en een analyse per socio-economisch niveau mogelijk te maken.**
- **Wat "Patiëntervaring" betreft, zullen gegevens beschikbaar zijn dankzij de volgende gezondheidsenquête van het WIV (deze gegevens zullen betrekking hebben op de huisartsen en op alle specialisten zonder onderscheid). Het is echter nuttig gegevens te verzamelen volgens het type specialisme (in alle zorglijnen).**
- **Gezondheidspromotie:**
  - **Er zijn geen gegevens beschikbaar over het "gezondheids-alfabetisatie-graad" ('health literacy') in België. In het bijzonder wordt aanbevolen dat België deelneemt aan de Europese onderzoeken inzake de ontwikkeling van hulpmiddelen voor het meten van health literacy, met het oog op toekomstige gegevensverzameling.**
  - **Gezondheidsbevordering in de leefomgeving: er bestaan talrijke gegevens in Vlaanderen met betrekking tot gezondheidsbevordering in bepaalde leefomgevingen (scholen, gemeenschappen, bedrijven). Deze worden verzameld door middel van de enquêtes van het VIGeZ (Vlaams Instituut voor Gezondheidspromotie en Ziektepreventie). Aanbevolen wordt dat de andere gewesten eveneens gegevens zouden verzamelen over de leefomgevingen, in functie van hun behoefte aan**

beleidsondersteunende informatie.

- **Ten slotte wordt ook aanbevolen om na te gaan of men in het volgende rapport de indicatoren voor gezondheidsbevordering specifiek in het domein van de gezondheidszorg op kan nemen.**

<u>Aanbevelingen voor het volgende performantierapport (voorzien voor december 2015)</u>

- **Ten aanzien van FOD Volksgezondheid, RIZIV en WIV**
  - **Berekenen van de indicatoren waarvoor de gegevens nog niet beschikbaar zijn, maar die het wel zullen zijn tegen het volgende rapport (project over de ambulante zorgtrajecten, project BelRAI, ervaring van de patiënten in de gezondheidsenquête, prevalentie van ziekenhuisinfecties, termijn voor de registratie van nieuwe geneesmiddelen).**
  - **In de toekomst is het voor een goede opvolging aangewezen om de meest recente beschikbare resultaten op te nemen. De indicatoren moeten bij voorkeur routinematig worden gemeten door de instellingen/administraties, respectievelijke beheerders van de administratieve databanken. De resultaten zullen overgemaakt worden aan de teams die belast zijn met de actualisering van het rapport, volgens een termijnplanning en een stramien dat nog moet worden gepreciseerd.**
  - **Opvolgen van de internationale evoluties (OESO, WGO, Eurostat) teneinde de Belgische indicatorenset aan te passen indien nodig.**
- **Ten aanzien van de onderzoeksequipes**
  - **Identificeren van nieuwe indicatoren voor weinig gedocumenteerde thema's (probleem van beschikbaarheid van verpleegkundig personeel, bijvoorbeeld).**
  - **Actualiseren van de evaluatie van de performantie via de meest recente data.**
  - **Analyseren van de globale coherentie (vooral voor het versterken van de dimensies met betrekking tot efficiëntie en duurzaamheid) en het actualiseren van de indicatorenset in het licht van nieuwe evidentie of nieuwe prioritaire thema's.**

TABLE OF CONTENTS

LIST OF FIGURES **5**
LIST OF TABLES **7**
LIST OF ABBREVIATIONS **9**
SYNTHESE **12**
1 ACHTERGROND, CONCEPTUEEL KADER EN DOELSTELLINGEN **12**
1.1 ACHTERGROND 12
1.2 CONCEPTUEEL KADER TER EVALUATIE VAN DE PERFORMANTIE VAN HET BELGISCHE GEZONDHEIDSSYSTEEM 13
1.3 DOELSTELLINGEN VAN DIT RAPPORT 15
1.3.1 Strategische doelstellingen van het proces van Health System Performance Assessment 15
1.3.2 Algemene en operationele doelstellingen van het rapport van 2012 15
2 STERKE EN ZWAKKE PUNTEN VAN HET BELGISCHE GEZONDHEIDSSYSTEEM **16**
2.1 HOE DE SYNOPTISCHE TABELLEN LEZEN? 16
2.2 GEZONDHEIDSTOESTAND 18
2.3 TOEGANKELIJKHEID VAN DE ZORG 19
2.3.1 Beschikbaar personeel: praktiserende artsen en verpleegkundigen 19
2.3.2 Financiële toegankelijkheid 19
2.3.3 Dekkingsgraad van preventieve maatregelen 19
2.4 ZORGKWALITEIT 22
2.4.1 Doeltreffendheid 22
2.4.2 Aangepastheid 24
2.4.3 Veiligheid 25
2.4.4 Continuïteit van zorg 26
2.4.5 Patiëntgerichtheid 28
2.5 EFFICIËNTIE VAN HET GEZONDHEIDSSYSTEEM 29
2.6 DUURZAAMHEID 30
2.7 GEZONDHEIDSPROMOTIE 31

2.8 BILLIJKHEID EN GELIJKHEID 33
2.8.1 Socio-economische ongelijkheden 33
2.8.2 Contextuele indicatoren van billijkheid 35
2.9 CONCLUSIES OVER ZWAKKE EN STERKE PUNTEN 37
3 HET 2012 HSPA-RAPPORT: NUT, TOEGEVOEGDE WAARDE EN BEPERKINGEN 39
3.1 WAT IS HET NUT VAN DIT HSPA-RAPPORT? 39
3.2 WAT IS DE TOEGEVOEGDE WAARDE VAN DIT RAPPORT VERGELEKEN MET HET VORIGE? 40
3.3 WAT ZIJN DE BEPERKINGEN VAN DIT RAPPORT? 41
3.3.1 Performantie tegenover welk streefdoel? Benchmarking met andere Europese landen lost het probleem niet op 41
3.3.2 Beslissingen nemen op basis van verouderde gegevens? 41
3.3.3 Een uitgebreider beeld, maar nog steeds hiaten in het instrument 41
4 ALGEMENE CONCLUSIE 43
■ SCIENTIFIC REPORT 45
1 BACKGROUND AND APPROACH 45
1.1 CONTEXT 45
1.1.1 International context 45
1.1.2 National context 46
1.2 THE BELGIAN PERFORMANCE FRAMEWORK AND DEFINITIONS 46
1.3 OBJECTIVES OF THE PERFORMANCE PROJECT 50
1.3.1 Strategic objectives of the HSPA process 50
1.3.2 Overall and operational objectives of the 2012 report 50
1.4 METHODS TO REACH OPERATIONAL OBJECTIVES 50
1.5 THE 2012 SET OF PERFORMANCE INDICATORS AND STRUCTURE OF THIS REPORT 52
2 OVERALL HEALTH STATUS OF THE POPULATION 53
2.1 HOW DID WE DESCRIBE THE OVERALL HEALTH STATUS OF THE POPULATION? 53
2.2 FACTS AND FIGURES 53
2.3 KEY FINDINGS 57
3 ACCESSIBILITY OF CARE 57

3.1 HOW DID WE EVALUATE THE ACCESSIBILITY OF HEALTHCARE? 57
3.2 FACTS AND FIGURES 58
3.3 KEY FINDINGS 67
4 QUALITY OF HEALTHCARE 68
4.1 EFFECTIVENESS OF CARE 68
4.1.1 How did we evaluate the effectiveness of care? 68
4.1.2 Facts and figures 69
4.1.3 Key findings 74
4.2 APPROPRIATENESS 75
4.2.1 How did we evaluate the appropriateness of care? 75
4.2.2 Facts and figures 75
4.2.3 Key findings 81
4.3 SAFETY OF CARE 81
4.3.1 How did we evaluate the safety of care? 81
4.3.2 Facts and figures 82
4.3.3 Key findings 86
4.4 CONTINUITY OF CARE 86
4.4.1 How did we evaluate the continuity of care? 86
4.4.2 Facts and figures 87
4.4.3 Key findings 90
4.5 PATIENT CENTEREDNESS 90
4.5.1 How did we evaluate patient centeredness? 90
4.5.2 Facts and figures 91
4.5.3 Key findings 92
5 EFFICIENCY IN HEALTHCARE 93
5.1 HOW DID WE EVALUATE THE EFFICIENCY IN HEALTHCARE? 93
5.2 FACTS AND FIGURES 93
5.3 KEY FINDINGS 96
6 SUSTAINABILITY OF THE HEALTH SYSTEM 97

6.1 HOW DID WE EVALUATE THE SUSTAINABILITY OF THE HEALTH SYSTEM? ... 97
6.2 FACTS AND FIGURES ... 97
6.3 KEY FINDINGS ... 104
7 PERFORMANCE OF HEALTH PROMOTION ... 104
7.1 HOW DID WE EVALUATE THE PERFORMANCE OF HEALTH PROMOTION? ... 104
7.2 FACTS AND FIGURES ... 107
7.2.1 Health outcomes ... 107
7.2.2 Intermediate health outcomes ... 112
7.2.3 Health Promotion outcomes ... 116
7.3 KEY FINDINGS ... 119
8 EQUITY AND EQUALITY ... 120
8.1 INTRODUCTION ... 120
8.2 SOCIO-ECONOMIC INEQUALITIES ... 120
8.2.1 How did we evaluate socio-economic inequalities? ... 120
8.2.2 Facts and figures ... 122
8.2.3 Key findings ... 127
8.3 EQUITY OF THE HEALTH SYSTEM AT A GLOBAL LEVEL ... 127
8.3.1 How did we evaluate the equity of the health system at a global level? ... 127
8.3.2 Facts and figures ... 128
8.3.3 Key findings ... 130
9 TOWARDS A MORE COMPREHENSIVE HEALTH SYSTEM PERFORMANCE ASSESSMENT: ADDRESSING CURRENT SHORTCOMINGS ... 130
10 GENERAL CONCLUSION ... 134
■ APPENDICES ... 135
APPENDIX 1. LIST OF INDICATORS MEASURED IN THE 2012 REPORT, CLASSIFIED BY TIER OF THE HEALTH SYSTEM, DOMAIN OF CARE AND DIMENSION ... 135
APPENDIX 2. LIST OF CHANGES TO INDICATORS COMPARED TO THE 2010 REPORT ... 139
APPENDIX 3. LIST OF INDICATORS MEASURABLE IN A NEAR FUTURE ... 144
■ REFERENCES ... 147

LIST OF FIGURES

Figuur 1 – Conceptueel kader ter evaluatie van de performantie van het Belgische gezondheidssysteem 14
Figuur 2 – Indicator van billijkheid: Gini-coëfficiënt na belasting en overdrachten, in België en gewesten..... 37
Figure 3 – The conceptual framework to evaluate the performance of the Belgian health system..... 47
Figure 4 – Life expectancy at birth: international comparison (2000-2010)..... 55
Figure 5 – Infant mortality rate: international comparison..... 56
Figure 6 – Number of practising physicians (per 1000 population): international comparison..... 59
Figure 7 – Out-of-pocket expenditures (as a percentage of total health expenditures): international comparison..... 61
Figure 8 – Percentage of women (aged 50-69) who had a mammogram (within program (a) or overall (b)) within the last two years, by region (2006-2010)..... 63
Figure 9 – Breast cancer and cervical cancer screening: international comparison (2000-2010)..... 64
Figure 10 – Percentage of children covered by main vaccinations (2000-2009): international comparison 65
Figure 11 – 5-year relative survival after breast, cervix and colorectal cancer for females: international comparison (2004) 71
Figure 12 – Suicide rates (number per 100 000 population) per region (1999-2008) and international comparison..... 72
Figure 13 – Percentage of involuntary committals in psychiatric hospitals, by region (2000-2009)..... 73
Figure 14 – Employment rates by health condition, as a ratio of the employment rate of all people with disability: international comparison (2002) 74
Figure 15 – Mammogram coverage of women aged 40-49 years and of women aged 70-79 years, by year and region 76
Figure 16 – C-sections per 1000 live births: international comparison 78
Figure 17 – Defined daily dosage of antidepressants per 1000 population per day: by region (2004-2010) and international comparison (2000-2010) 79
Figure 18 – Chemotherapy near end-of-life for patients with cancer, by place of death 80
Figure 19 – Exposition to medical radiation per inhabitant (most 20 exams, expressed in mSv): international comparison 82
Figure 20 – Mean incidence of Healthcare Acquired MRSA, per 1000 admissions (1994-2010) 84
Figure 21 – Percentage of population with a global medical record (GMD – DMG), by region (2006-2009).... 87
Figure 22 – Percentage of hospitalisations for the elderly (aged 65 and over) followed by a contact with a GP within 1 week after discharge, by region (2003-2009)..... 88

Figure 23 – Degree of satisfaction with healthcare services, by type of service (2008) 91
Figure 24 – Percentage of low-cost medication delivered in ambulatory setting (DDDs) (2000-2010) 94
Figure 25 – Percentage of surgical one-day hospitalisations on all surgical hospitalisations: international comparison 95
Figure 26 – Average length of stay for a normal delivery: international comparison 96
Figure 27 – Age distribution of GPs (2000-2004-2009) 97
Figure 28 – Medical and nursing graduates (per 100 000 pop): international comparison (2010) 99
Figure 29 – Acute care bed days per capita, international comparison 100
Figure 30 – Health expenditures in Belgium by main function in the System of Health Accounts (2010) 102
Figure 31 – Total health expenditures as a % of GDP: international comparison 103
Figure 32 – The Nutbeam's framework and selected indicators to measure performance of health promotion 106
Figure 33 – Percentage of the adult population (aged 18 years or older) with obesity (BMI ⩾30), by region (1997-2008), and international comparison (2000-2008 108
Figure 34 – Diagnostic rate of HIV by region, for all cases (a) and for Belgian cases only (b) (1985-2010) .. 110
Figure 35 – Rate of the new HIV diagnosis per 100 000 inhabitants: International comparison 111
Figure 36 – Percentage of the population (a) smoking daily, (b) with problematic alcohol consumption, (c) consuming at least 2 fruits and 200 vegetables daily, (d) performing at least 30 min of physical activity per day, by region (1997/2001-2008) 113
Figure 37 – International comparisons on the Tobacco Control Scale in Europe (2010) 118
Figure 38 – Gini coefficient before and after taxation and transfers (1998-2010): Belgium and international comparison 129

LIST OF TABLES

Tabel 1 – Indicatoren die de globale gezondheidstoestand beoordelen 18
Tabel 2 – Indicatoren ter beoordeling van de toegankelijkheid van de gezondheidszorg 21
Tabel 3 – Indicatoren ter beoordeling van de doeltreffendheid van de zorg 23
Tabel 4 – Indicatoren ter beoordeling van de aangepastheid van de zorg 24
Tabel 5 – Indicatoren ter beoordeling van de veiligheid van de zorg 25
Tabel 6 – Indicatoren ter beoordeling van de continuïteit en coördinatie van de zorg 27
Tabel 7 – Indicatoren ter beoordeling van de patiëntgerichtheid van de zorg 28
Tabel 8 – Indicatoren ter beoordeling van de efficiëntie van de zorg 29
Tabel 9 – Indicatoren ter beoordeling van de duurzaamheid van het gezondheidssysteem 30
Tabel 10 – Indicatoren van gezondheidspromotie 32
Tabel 11 – Overzichtstabel van socio-economische ongelijkheden 34
Tabel 12 – Indicator van billijkheid: progressiviteitsindicatoren van de publieke financiering van het gezondheidssysteem 36
Table 13 – Life expectancy at birth (2010), and Healthy Life Years at age 25 (2008), by sex and region 54
Table 14 – Number of practising physicians, estimation of Full Time Equivalent, and density (/1000 population) (2010) 58
Table 15 – Out-of-pocket expenditures (2003-2010) 61
Table 16 – Number of accredited beds in homes for the elderly and nursing homes per 100 population 65 years and older, per region, 2010 66
Table 17 – 5-year relative survival by stage, period 2004-2008: Belgium 70
Table 18 – Exposition to medical radiation per inhabitant (expressed in nb mSv): Belgium (2004-2011) 82
Table 19 – Percentage of cancer patients who had a MOC – COM, per region, (2005-2008) 89
Table 20 – Evolution of place of death over time in Flanders and Brussels (1998-2007) 92
Table 21 – Mean age of practising GPs (2000-2009) 98
Table 22 – Progression between 1996 and 2008 of graduates in medicine in the two years following graduation according to type of specialisation 98
Table 23 – Percentage of GPs using recommended software to maintain their patients' medical records 101
Table 24 – Total health expenditures according to the System of Health Accounts (2003-2010) 102
Table 25 – Alcohol consumption habits for the population (aged 15 or older) (1997-2008) 112
Table 26 – Offer of physical activity in secondary schools in Flanders 116

Table 27 – Life expectancy at 25 years by sex and educational level, absolute difference to highest educational level and concentration inequality indices (CII) (Belgium 2001) 122
Table 28 – Health expectancy at 25 years by sex and educational level, absolute difference to highest educational level and concentration inequality indices (Belgium 2004) 123
Table 29 – Inequalities expressed with absolute difference, relative difference, and summary measures..... 125
Table 30 – Progressivity indicators of the financing of the public healthcare system (2005-2011)..... 129

LIST OF ABBREVIATIONS

ABBREVIATION	DEFINITION
ADL	Activities of Daily Living
ADQ	Average Daily Quantity
AIDS	Acquired Immunodeficiency Syndrome
BIM – RVV	Bénéficiaire de l'Intervention Majorée – Rechthebbenden op de Verhoogde (verzekerings)tegemoetkoming
BMI	Body Mass Index
CAP	Community Acquired Pneumonia
CII	Concentration Index of Inequalities
CM – MC	Christelijke Mutualiteiten – Mutualités Chrétiennes – Christian Sickness Funds
DDD	Defined Daily Dose
DGSIE – ADSEI	Direction générale Statistique et Information économique – Algemene Directie Statistiek en Economische informatie
DMFT	Decayed, Missing, Filled Teeth
DTP	Diphteria - Tetanos - Pertussis
EARSS	European Antimicrobial Resistance Surveillance System
ECDC	European Centre for Disease Control and Prevention
ECHIM	European Community Health Indicators Monitoring
EMA	European Medical Agency
EPS	Echantillon Permanent – Permanente Steekproef
ER	Emergency Room
EU	European Union
EU – SILC	European Union Statistics on Income and Living Conditions
FOBT	Faecal Occult Blood Test
FPS	Federal Public Service
FTE	Full Time Equivalent
GDP	Gross Domestic Product
GMD – DMG	Globaal Medisch Dossier – Dossier Médical Global
GMR	Global Medical Record

GP	General Practitioner
HAI	Healthcare Acquired Infections
HBSC	Health Behaviour in School-aged Children
HCQI	HealthCare Quality Indicator
Hib	Haemophilus Influenzae B
HIS	Health Interview Survey
HIV	Human Immunodeficiency Virus
HLY	Healthy Life Years
HSPA	Health System Performance Assessment
IMA – AIM	Intermutualistic Agency - InterMutualistisch Agentschap – Agence InterMutualiste
IMR	Infant Mortality Rate
ISCED	International Standard Classification of Education
LE	Life Expectancy
LOS	Length of Stay
MAB	Maximum Billing System
MMR	Measles - Mumps - Rubella
MOC – COM	Multidisciplinair Oncologish Consult – Consultation Multidisciplinaire d'Oncologie
MRPA – ROB	Maisons de Repos pour Personnes Agées - Rustoorden voor Bejaarden
MRS – RVT	Maison de Repos et de Soins – Rust- en Verzorgingstehuis
MRSA	Methicillin-Resistant Staphylococcus Aureus
NSIH	National Surveillance of Infections in Hospitals
OECD	Organisation for Economic Co-operation and Development (OESO – OCDE)
ONE – KG	Office National de l'Enfance – Kind en Gezin
OOP	Out-of-Pocket
OR	Odds Ratio
PA	Physical Activity
PAF	Population Attributable Fraction
PPP	Purchasing Power Parities
PSI	Patient Safety Indicator

PYLL	Potential Years of Life Lost
RAI	Resident Assessment Instrument
RHM – MZG	Résumé Hospitalier Minimal - Minimale Ziekenhuisgegevens
RIZIV – INAMI	Rijksinstituut voor ziekte- en invaliditeitsverzekering – Institut national d'assurance maladie-invalidité- National Institute for Health and Disability Insurance
RR	Relative Risk
SE	Socio-economic
SHA	System of Health Accounts
SP	Specialist Physician
SPMA	Standardized Procedures for Mortality Analysis
SSF	Special Solidarity Fund
THE	Total Health Expenditures
UK	United Kingdom
UPC	Usual Provider Index
VIGeZ	Vlaams Instituut voor Gezondheidspromotie en Ziektepreventie
WHO	World Health Organisation
WIV – ISP	Wetenschappelijk Instituut Volksgezondheid – Institut de Santé Publique- Institute of Public Health

SYNTHESE

1 ACHTERGROND, CONCEPTUEEL KADER EN DOELSTELLINGEN

1.1 Achtergrond

De eerste Belgische Health System Performance Assessment of beoordeling van de performantie van het gezondheidssysteem (HSPA) werd gepubliceerd in juni 2010.[1] Het rapport bestond uit twee belangrijke delen. Ten eerste werd het Belgische HSPA-kader uitgewerkt op basis van internationale ervaringen die aan de Belgische context werden aangepast. Ten tweede werd een set van 55 indicatoren geselecteerd, waarvan er 40 uiteindelijk gemeten konden worden. De sterke en zwakke punten, de evolutie in de loop van de tijd en voorgestelde acties werden besproken.

Wat is een Health System Performance Assessment (HSPA)?

Een HSPA is een landgebonden proces waarmee het gezondheidssysteem holistisch kan worden beoordeeld, een "check-up" van het volledige gezondheidssysteem. Dit instrument beoogt bij te dragen tot de strategische planning van het gezondheidssysteem door indicatoren te berekenen die een “signaalfunctie” hebben. Elke HSPA wordt ontwikkeld volgens een strategisch kader dat landspecifiek is.[2]

Na de publicatie van dit eerste rapport vroegen de opdrachtgevers van de Belgische HSPA om het project verder te zetten met als doel een systematische evaluatie van het Belgische gezondheidssysteem. De opdrachtgevers vroegen ook om de indicatorenset uit te breiden met indicatoren in specifieke domeinen: gezondheidspromotie, geestelijke gezondheidszorg, huisartsgeneeskunde, zorg op lange termijn en zorg rondom het levenseinde, aangezien deze domeinen onvoldoende werden behandeld in het eerste rapport. Tenslotte werden drie dimensies (nl. zorgcontinuïteit, patiëntgerichtheid en billijkheid) beschouwd als onvoldoende vertegenwoordigd.

Daarom moesten nieuwe indicatoren worden voorgesteld om deze dimensies te beoordelen. Het huidige rapport over de performantie van het Belgische gezondheidssysteem 2012 geeft de resultaten van dit werk weer.

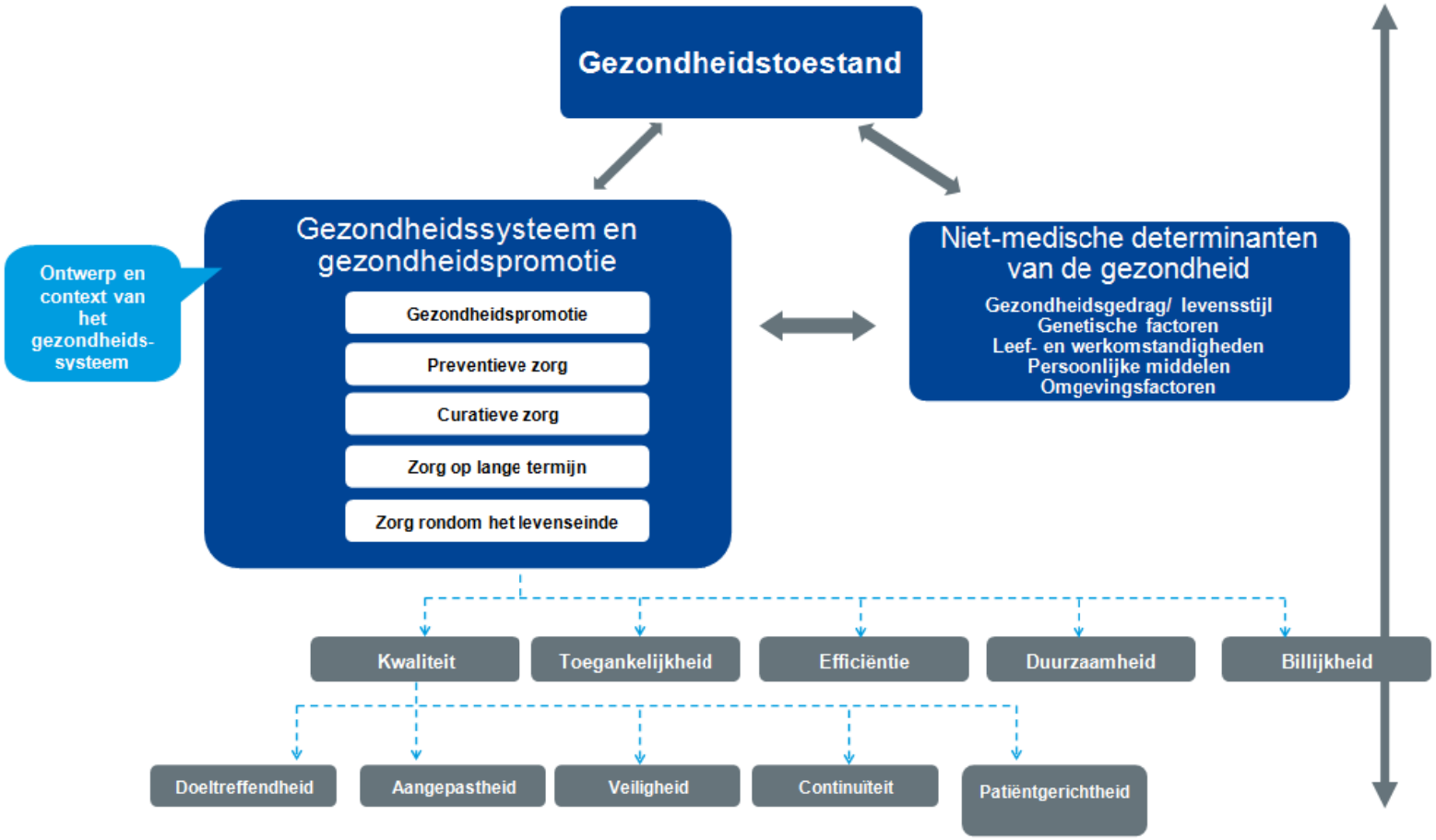
Het Handvest van Tallinn (2008): een internationale verbintenis om de performantie van de Europese gezondheidssystemen te meten.

In juni 2008 ondertekenden de 53 ministers van volksgezondheid van de landen die behoren tot de Europese regio van de Wereldgezondheidsorganisatie (WGO) het Handvest van Tallinn “The Tallinn Charter on Health Systems for Health and Wealth”. Van de zeven ondertekende verbintenissen heeft de derde betrekking op de performantie van het gezondheidssysteem: "de lidstaten verbinden zich tot het bevorderen van transparantie en het afleggen van rekenschap over de performantie van de gezondheidssystemen door de publicatie van meetbare resultaten".[3]

1.2 Conceptueel kader ter evaluatie van de performantie van het Belgische gezondheidssysteem

Het conceptueel kader wordt weergegeven in Figuur 1.

Figuur 1 – Conceptueel kader ter evaluatie van de performantie van het Belgische gezondheidssysteem



Noot: In dit rapport is er geen specifiek hoofdstuk gewijd aan niet-medische determinanten van gezondheidsindicatoren. Indicatoren van levenswijze worden weergegeven en besproken in het hoofdstuk over gezondheidspromotie.

1.3 Doelstellingen van dit rapport

De systematische evaluatie van de performantie van het gezondheidssysteem is een continu proces waarbij de publicatie van HSPA-rapporten belangrijke mijlpalen zijn. Strategische doelstellingen kunnen worden gedefinieerd als de doelstellingen van dit continu proces. Ze moeten onderscheiden worden van de specifieke doelstellingen en operationele subdoelstellingen van het huidige rapport.

1.3.1 Strategische doelstellingen van het proces van Health System Performance Assessment

Het HSPA-proces streeft drie strategische doelstellingen na:

1. De gezondheidsautoriteiten informeren over de performantie van het gezondheidssysteem, en een draagvlak bieden voor beleidsplanning;
2. Een transparant en controleerbaar beleid schetsen van de performantie van het Belgisch gezondheidssysteem, in overeenkomst met het engagement in het Handvest van Tallinn;
3. Op lange termijn de performantie van het gezondheidssysteem in de tijd volgen.

1.3.2 Algemene en operationele doelstellingen van het rapport van 2012

Een reeks van indicatoren voorstellen en meten voor alle domeinen en gekozen dimensies van het Belgisch gezondheidssysteem, waarbij het aantal indicatoren beheersbaar blijft (in dit rapport zijn dat er 74).

Vier operationele doelstellingen werden gedefinieerd:

1. De kernset van 55 indicatoren van het vorige rapport herzien, met een speciale focus op de 11 indicatoren waarvoor er in 2010 geen gegevens beschikbaar waren[a];
2. De kernset uitbreiden met indicatoren uit volgende domeinen: gezondheidspromotie, huisartsgeneeskunde, geestelijke gezondheidszorg, zorg op lange termijn, palliatieve zorg; indicatoren toevoegen inzake patiëntgerichtheid en zorgcontinuïteit (twee sub-dimensies van kwaliteit), en tot slot indicatoren voorstellen inzake billijkheid in het gezondheidssysteem;
3. De geselecteerde indicatoren waar mogelijk meten, of hiaten in de beschikbaarheid van gegevens identificeren;
4. De resultaten interpreteren met het oog op een globale evaluatie van de performantie van het Belgische gezondheidssysteem door middel van verschillende criteria, waaronder een internationale benchmarking indien aangewezen.

Het HSPA-rapport is een rapport waarin het Belgische gezondheidssysteem op nationaal niveau wordt opgevolgd en waarin België ook wordt gepositioneerd in een internationale context. Door middel van 74 indicatoren probeert het HSPA-rapport de toegankelijkheid, kwaliteit, efficiëntie, duurzaamheid en billijkheid van het Belgische gezondheidssysteem te monitoren, om te kunnen dienen als informatiebron voor de verschillende beleidsmakers die bevoegd zijn voor gezondheid en gezondheidspromotie.

[a] Het aantal praktiserende verpleegkundigen; bijkomende ziektegerelateerde kosten voor chronisch zieken; voorschriften in overeenstemming met de richtlijnen; screening voor colorectale kanker; cariës, tandverlies en tandvullingen op de leeftijd van 12 jaar; cardiovasculaire screening bij personen tussen 45-75 jaar; 5-jaars overlevingspercentage (borst, colon, baarmoederhals); vroegtijdig overlijden, incidentie van doorligwonden in residentiële zorg en bij risicopersonen.

2 STERKE EN ZWAKKE PUNTEN VAN HET BELGISCHE GEZONDHEIDSSYSTEEM

2.1 Hoe de synoptische tabellen lezen?

De resultaten van de 74 indicatoren worden hieronder besproken, per domein en/of dimensie. Aan gezondheidspromotie is een specifiek hoofdstuk gewijd.

Deze synoptische tabellen bevatten volgende informatie:

- In de eerste plaats toont een pictogram, waar mogelijk, een globale evaluatie van de resultaten van de indicator, gebaseerd op de integratie van verschillende criteria: waarde op nationaal niveau versus nationale doelstellingen (wanneer die bestaan) of versus internationale benchmarks, tendensen over verloop van tijd, regionale of socio-economische ongelijkheden. Er dient opgemerkt te worden dat deze evaluatie niet volledig mogelijk is voor alle indicatoren.
- In de kolom “België” wordt de waarde van de indicator voor België vergeleken met de resultaten van de landen van de EU-15[b] (internationale benchmarking), en weergegeven met een kleurcode.
- De volgende kolom identificeert het jaar van de meest recente resultaten die beschikbaar zijn voor België. Dit is belangrijke informatie voor beleidsmakers, bijv. om te voorkomen dat beslissingen worden genomen op basis van verouderde gegevens en om de verzameling van meer recente gegevens aan te moedigen indien nodig.
- Vervolgens wordt, indien mogelijk, een ruwe tendens over de tijd weergegeven (stijging, daling, en stabiel), over de laatste vijf beschikbare jaren. Er is geen evaluatie van de omvang of het klinisch belang van de wijzigingen.
- De laatste kolommen geven subgroepanalyses weer (indien van toepassing, en als gegevens beschikbaar zijn) per geslacht, socio-economische status (laag of hoog)[c] en per gewest (Vlaanderen, Wallonië en Brussel). Voor deze subgroepanalyses helpen kleuren de lezer de grootte van de relatieve verschillen naar waarde te schatten. Met betrekking tot de vergelijking tussen de gewesten moet rekening worden gehouden met de specifieke context van het Brussels gewest: het Brussels gewest bestaat immers alleen uit één enkel stedelijk gebied, terwijl de twee andere gewesten bestaan uit een mengvorm van stedelijke, voorstedelijke en landelijke gebieden.
- Tenslotte worden gebieden waar bijkomend onderzoek nodig is aangeduid met een R.

Bron van de gegevens

Er werd zoveel mogelijk gebruik gemaakt van routinematig verzamelde gegevens (bijv. administratieve databanken, nationale registers of enquêtes die regelmatig herhaald worden): de Minimale Ziekenhuisgegevens (MZG), de EPS (permanente steekproef), databanken van het RIZIV (doc N, Pharmanet), het Belgisch Kankerregister, het register van nosocomiale infecties, de gezondheidsenquêtes (HIS – Health Interview Survey), vaccinatie-enquetes en de databank van de Algemene Directie Statistiek en Economische informatie (ADSEI).

[b] De term **EU-15** verwijst naar de 15 lidstaten van de Europese Unie vanaf 31 december 2003, vooraleer de nieuwe lidstaten bij de EU kwamen. Deze 15 lidstaten zijn Oostenrijk, België, Denemarken, Finland, Frankrijk, Duitsland, Griekenland, Ierland, Italië, Luxemburg, Nederland, Portugal, Spanje, Zweden en het Verenigd Koninkrijk.

[c] Afhankelijk van de gegevensbron is de socio-economische status gebaseerd op ofwel het opleidingsniveau, ofwel het recht op verhoogde terugbetaling van gezondheidszorguitgaven.

Legende voor de synoptische tabellen

Globale evaluatie		Internationale vergelijking (EU-15) België is gesitueerd[§] in de groep van landen met:	Relatief risico per geslacht, socio-economische status en gewest
	Zeer slechte resultaten	De slechtste resultaten	Zeer grote verschillen tussen groepen: De resultaten zijn minstens twee keer zo slecht of minstens half zo goed in de groep waarmee vergeleken wordt als in de referentiegroep[£]
	Slechte resultaten	Resultaten slechter dan gemiddeld	Grote verschillen tussen groepen: resultaten zijn minstens 50% slechter of beter
	Gemiddelde resultaten	Gemiddelde resultaten	Matige verschillen tussen groepen: resultaten zijn tussen 20% en 50% slechter of beter
	Goede resultaten	Resultaten beter dan gemiddeld	Kleine of geen verschillen tussen groepen: resultaten zijn maximaal 20% slechter of beter
	Zeer goede resultaten, aan alle criteria werd voldaan	De beste resultaten	Kenmerk niet relevant voor deze indicator
	Meer gegevens/onderzoek nodig		Geen gegevens beschikbaar

§ Kwintielen worden berekend op de resultaten van alle landen.
£ Referentiegroep: de hogere socio-economische status, de geslachtsgroep (mannelijk/vrouwelijk) met de beste resultaten, het gewest (Wallonië, Vlaanderen, Brussel) met de beste resultaten.
Fictieve voorbeelden: Tweemaal zo slecht: 20% rokers in lage socio-economische groep versus 10% rokers in hoge socio-economische groep OF Half zo goed: 13% gezonde voeding in lage socio-economische groep versus 26% in hoge socio-economische groep.

2.2 Gezondheidstoestand

We beschrijven 4 indicatoren over de globale gezondheidstoestand. Deze kunnen worden beschouwd als algemene en ultieme resultaten van de interventies inzake gezondheidssysteem/gezondheidspromotie, naast alle andere determinanten van de gezondheid.

De vier indicatoren laten een positieve evolutie in de tijd zien (Tabel 1). Het resultaat van de levensverwachting is iets lager in vergelijking met het EU-15-gemiddelde (0,7 jaar onder het EU-15-gemiddelde), terwijl de levensverwachting in goede gezondheid (gedefinieerd als de resterende jaren vanaf een bepaalde leeftijd zonder activiteitsbeperking), en zuigelingensterfte op een middelmatige plaats staan. Het percentage van mensen dat hun gezondheid als (minstens) goed beschouwt, ligt hoger dan het EU-15-gemiddelde. Er worden grote verschillen vastgesteld tussen mannen en vrouwen, behalve voor de levensverwachting in goede gezondheid op 25 jaar. Vrouwen leven langer dan mannen maar met meer jaren van beperkingen en zij ervaren hun gezondheid als minder goed. Alle parameters zijn slechter voor de lagere socio-economische groepen. Wat de gewesten betreft, zijn er betere uitkomsten voor Vlaanderen, met uitzondering van de kindersterfte.

Tabel 1 – Indicatoren die de globale gezondheidstoestand beoordelen

Indicator	Globaal	België	Meest recente gegevens	Tendens in de loop van de tijd	M	V	Sociaal laag	Sociaal hoog	Vlaanderen	Wallonië	Brussel
Levensverwachting (jaren)	😐	80,0	2010	Stijging	77,4	82,6	M:47,6[i] V: 54,0	M:55,0 V: 59,9	80,9	78,5	80,0
Levensverwachting (op 25 jaar)	😐	41,0 [ii]	2008	Stijging	41,3	41,2	M:27,7 V: 28,9	M:46,3 V: 47,1	M:43,7 V: 42,3	M:37,4 V:39,1	M:38,5 V:40,6
Zelfevaluatie gezondheid (% in goede of in zeer goede gezondheid)	🙂	76,8	2008	Stijging	79,5	74,3	57,4	85,7	78,6	73,7	74,3
Percentage zuigelingensterfte (aantal overlijdens/1 000 levendgeboortes)	😐	3,5	2010	Daling	4,2	3,4			4,0	3,1	4,6

[i] *Levensverwachting volgens socio-economische status verwijst naar de levensverwachting op de leeftijd van 25 jaar.*
[ii] *Internationale vergelijking is gebaseerd op de levensverwachting in goede gezondheid bij de geboorte.*
[iii] *Kleurcodering voor socio-economische verschillen in levensverwachting en levensverwachting in goede gezondheid is niet gebaseerd op de grootte van het relatieve risico (zoals voor alle andere indicatoren), maar op de grootte van de absolute verschillen: geel (1 tot 2 jaar verschil), oranje (2 tot 6 jaar verschil), rood (meer dan 6 jaar verschil).*

2.3 Toegankelijkheid van de zorg

Toegankelijkheid wordt gedefinieerd als de mate waarin patiënten gemakkelijk toegang hebben tot de gezondheidsdiensten in termen van fysieke toegang (geografische verspreiding), kosten, tijd, en beschikbaarheid van gekwalificeerd personeel.[4] De toegankelijkheid van een gezondheidssysteem is een noodzakelijke voorwaarde voor een kwaliteitsvol en efficiënt gezondheidssysteem.

Dertien van de 74 indicatoren beoordelen de toegankelijkheid van het gezondheidssysteem en zijn gegroepeerd in verschillende thema's: beschikbaar personeel in gezondheidszorg, financiële toegankelijkheid, dekkingsgraad van preventieve maatregelen, toegankelijkheid van residentiële zorg voor ouderen, beschikbaarheid van mantelzorgers voor ouderen en tijdigheid van palliatieve zorg op het einde van het leven.

2.3.1 Beschikbaar personeel: praktiserende artsen en verpleegkundigen

Er werden veel inspanningen geleverd om een betere raming te kunnen geven van het beschikbaar personeel (praktiserende artsen en verpleegkundigen) in België. Dit wordt bevestigd door de toevoeging van deze twee indicatoren waarvoor er in het vorige rapport geen volledige resultaten beschikbaar waren. Met deze indicatoren alleen kan echter niet beoordeeld worden of dit personeelsbestand voldoende is om tegemoet te komen aan de gezondheidsbehoeften van de populatie.

2.3.2 Financiële toegankelijkheid

Ondanks het bestaan van een universele ziekteverzekering en het bestaan van veel sociale vangnetten (maximumfactuur, Omnio, Bijzonder solidariteitsfonds) verklaarde 14% van de huishoudens dat zij sommige gezondheidszorgen (medische zorg, chirurgie, geneesmiddelen, bril of lenzen, geestelijke gezondheidszorg) moesten uitstellen om financiële redenen. Dit percentage is toegenomen sinds het einde van de jaren negentig. Bovendien vertegenwoordigen de persoonlijke uitgaven van de patiënt 19% van de totale uitgaven voor gezondheidszorg, hetgeen aanzienlijk hoger is dan het EU-15-gemiddelde van 15%.

2.3.3 Dekkingsgraad van preventieve maatregelen

Wat de dekkingsgraad van preventieve maatregelen betreft, kan België zeker beter presteren.

De dekkingsgraad van borstkankerscreening (60%) is laag vergeleken met het EU-15-gemiddelde (68,3%). Deze verhouding bleef stabiel ondanks het bestaan van een georganiseerd borstkankerscreeningsprogramma. Dit laatste neemt slechts de helft van de gescreende vrouwen voor zijn rekening. De verschillen tussen de gewesten zijn bovendien erg opvallend. Men kan zich dus vragen stellen bij de efficiëntie van het programma.

Voor de dekkingsgraad van screening van baarmoederhalskanker (62%) zijn er minder afwijkingen tussen de gewesten. De resultaten situeren zich rond het EU-15-gemiddelde, maar blijven middelmatig met betrekking tot de algemeen aanvaarde Europese doelstelling van 80%. De dekkingsgraad blijft ook stabiel in de loop van de tijd.

Er worden geen gegevens gepresenteerd inzake de dekkingsgraad van de screening van colonkanker, aangezien het nog te vroeg is om het nieuwe programma in de Franstalige gemeenschap te evalueren.

Wat de griepvaccinatie van ouderen betreft, wordt het WGO-streefdoel (75%) niet behaald en stijgt de dekkingsgraad maar heel geleidelijk. Wat de vaccinatie van kinderen betreft, doet België het goed.

Toegankelijkheid van zorg op lange termijn

Het aantal bedden in residentiële zorgfaciliteiten is constant gebleven tijdens de laatste tien jaar (nl. 70 bedden per 1 000 personen van 65 jaar en ouder). Over het algemeen is dit aantal veel hoger in Wallonië en Brussel dan in Vlaanderen.

Mantelzorgers, gedefinieerd als personen die hulp bieden bij de basisactiviteiten van het dagelijkse leven (Activities of Daily Living - ADL) gedurende minstens een uur per week, zijn belangrijk onderdeel van de langetermijnszorgverlening.[5] Het percentage van de populatie van 50 jaar en ouder dat fungeert als mantelzorger varieerde van 8% in Zweden tot 16,2% in Italië. Het Belgische cijfer van 12,1% is lichtjes hoger dan het totale gemiddelde van de OESO-landen (11,7%). Dit moet in zijn context worden geplaatst vermits dit cijfer beïnvloed wordt door de manier van leven, maatschappelijke waarden en het al dan niet aanwezig zijn van specifieke stimulerende maatregelen om mantelzorg te ondersteunen.

Aangezien er momenteel geen gegevens zijn over de behoeften van de patiënt zijn deze twee indicatoren nog steeds onvoldoende om de toegankelijkheid van de zorg op lange termijn te beoordelen.

Tijdigheid bij palliatieve zorg

Het starten met palliatieve zorg wordt soms uitgesteld tot de patiënten zich in de terminale fase bevinden. Dit kan wijzen op problemen van toegankelijkheid van palliatieve zorg, of op het feit dat de beslissing om met palliatieve zorg te starten te laat werd genomen. In 20% van de gevallen overleden de patiënten binnen de week van aanvraag voor de palliatieve forfaitaire vergoeding (ingediend bij het ziekenfonds). Dit lijkt eerder op een late start te wijzen. Het zou nuttig zijn om meer gegevens over deze indicator te bekomen (evolutie over de tijd, regionale verschillen).

Tabel 2 – Indicatoren ter beoordeling van de toegankelijkheid van de gezondheidszorg

	Indicator	Globaal	België	Meest recente gegevens	Tendens in de tijd	M	V	Sociaal laag	Sociaal hoog	Vlaanderen	Wallonië	Brussel
Personeelsbestand	Aantal (per 1 000 inwoners): - praktiserende artsen	R	2,9	2010	stabiel							
	- praktiserende verpleegkundigen		9.9[i]	2009								
Financiële toegankelijkheid	Dekking verplichte ziekteverzekering van de bevolking (%)	😐	99,0	2010	stabiel							
	Remgeld en persoonlijke uitgaven (% van totale gezondheidszorguitgaven)		19,4	2010	stabiel							
	Uitgestelde contacten met gezondheidsdiensten om financiële redenen (%)		14	2008	stijging			27,0	4,0	11,0	14,0	26,0
Dekking van preventieve maatregelen	Kankerscreening - Borst (% vrouwen 50-69 jaar oud)	☹	60,1	2010	stabiel			48,6	62,9	64,9	55,3	51,9
	- Baarmoederhals (% vrouwen 25-64 jaar oud)		61,8	2010	stabiel			48,9	64,2	61,0	64,6	63,6
	Vaccinatiedekking kinderen - % DTP-Hib (3)	☺	97,9	2009	stijging					98,3	96,9	98,6
	- % MMR (1)		94,5	2009	stijging					96,8	92,4	91,1
	Griepvaccinatie (% 65+)	😐	65,0 [ii]	2009	stijging			63,5	46,3	65,8	60,9	59,2
Zorg op lange termijn	Aantal bedden in woonzorgcentra en rust- en verzorgingstehuizen (per 1 000 inw. 65+)	R	70,3 [iii]	2011	stabiel					58	83	101
	Mantelzorgers (% bevolking 50+)		12,1	2007								
Tijdigheid van palliatieve zorg: overlijdens binnen een week na de start van de palliatieve zorg (%)		R	(20,0) [iv]	2006								

i OESO-gegevens over het aantal verpleegkundigen onvoldoende vergelijkbaar.
ii nationale waarden gebaseerd op HIS (basis van internationale vergelijking in OESO-Gezondheidsgegevens), socio-economische ongelijkheden gebaseerd op EPS.
[iii] Waarde en internationale vergelijking gebaseerd op gegevens 2010.
[iv] Geen nationale gegevens, waarde gebaseerd op één enkele studie van het Christelijk Ziekenfonds.
DTP-Hib (3) Difterie-Tetanus-Kinkhoest (Pertussis)-Haemophilus Influenzae B (dekking met derde dosis; BMR (1) Bof-Mazelen-Rodehond (eerste dosis).

2.4 Zorgkwaliteit

Kwaliteit wordt gedefinieerd als "de mate waarin gezondheidszorg, zowel voor het individu als voor de bevolking, de kans vergroot op gewenste uitkomsten en waarbij de verleende zorg in overeenstemming is met gangbare medische kennis en inzichten".[6] Dit wordt verder onderverdeeld in 5 subdimensies: doeltreffendheid, aangepastheid, veiligheid, zorgcontinuïteit en patiëntgerichtheid.

2.4.1 Doeltreffendheid

Doeltreffendheid wordt gedefinieerd als "de mate waarin de gewenste uitkomsten worden bekomen, op voorwaarde van een juist aanbod van evidence-based gezondheidsdiensten voor al wie er baat bij heeft, maar niet voor diegenen die er geen baat bij zouden hebben". Alle indicatoren zijn dus uitkomst (resultaats) indicatoren.

Er werden zeven indicatoren gekozen om de doeltreffendheid van de gezondheidzorg te beoordelen: overlevingspercentage na borst-, baarmoederhals- of colorectale kanker, percentage hospitalisaties door astma, en drie nieuwe indicatoren voor geestelijke gezondheidszorg: aantal zelfdodingen per 100 000 inwoners (dit is ook een indicator van de algemene gezondheidstoestand van de bevolking), de verhouding tussen het tewerkstellingspercentage van personen met geestelijke gezondheidsproblemen en het percentage voor personen met andere handicaps (zoals musculoskeletale aandoeningen), de verhouding van gedwongen opnames gerelateerd aan alle psychiatrische hospitalisaties.

De overleving na colon- en borstkanker is goed in vergelijking met andere Europese landen. Er zijn, tot op heden, nog geen cijfers over de evolutie van de overlevingspercentages beschikbaar.

Ziekenhuisopnames omwille van astma – die tekorten in de ambulante diensten weerspiegelen – zijn iets hoger (d.w.z. slechter in termen van doeltreffendheid) dan het EU-15-gemiddelde.

Bij de indicatoren over de doeltreffendheid van de geestelijke gezondheidszorg stellen we een zeer hoog aantal zelfdodingen vast in vergelijking met andere Europese landen. Het aantal zelfdodingen is echter ook afhankelijk van persoonsgebonden en maatschappelijke factoren. Daarom is het alleen maar een indirecte indicator van de doeltreffendheid van de geestelijke gezondheidszorg. Hoe dan ook, de resultaten geven aan dat gezamenlijke actie nodig is om het aantal zelfdodingen in België te verminderen. De tweede indicator, de arbeidsparticipatie van mensen met geestelijke gezondheidsproblemen in vergelijking met de arbeidsparticipatie van mensen met een andere handicap, is moeilijk te interpreteren en toont de noodzaak om meer gegevens te verzamelen. Een laatste indicator geeft aan dat in de afgelopen jaren, het percentage gedwongen psychiatrische opnames (collocaties) toegenomen is. Het hoogste percentage, dat in Brussel werd vastgesteld, moet met de nodige voorzichtigheid worden geïnterpreteerd (Deze verschillen zouden immers kunnen toegeschreven worden aan stedelijke fenomenen eerder dan aan regionale verschillen).

Tabel 3 – Indicatoren ter beoordeling van de doeltreffendheid van de zorg

	Indicator	Globaal	België	Meest recente gegevens	Tendens in de tijd	M	V	Sociaal laag	Sociaal hoog	Vlaanderen	Wallonië	Brussel
Curatieve zorg	Relatief overlevingspercentage na 5 jaar - borstkanker		88,0	2008 [ii]						87,6	88,8	88,0
	- baarmoederhalskanker		69,8	2008 [ii]						70,6	69,1	67,7
	- colonkanker		M:62,3[i] V: 64,6	2008 [ii]		62,3	64,6			M:62,5 V: 64,5	M:62,5 V: 64,9	M:59,9 V: 64,3
	Hospitalisaties voor astma (/100 000 inw. 15+)		48,4[iii]	2009 [ii]	stabiel	28	52					
Geestelijke gezondheid	Zelfdoding (aantal/100 000 inw.)	R	18,6	2008[iv]	stabiel	28	10			17	24	14
	Tewerkstellingspercentage van personen met een geestelijke gezondheidsstoornis[v]		0,7	2002[vi]								
	Onvrijwillige opnames (% van alle psychiatrische hospitalisaties)		8	2009	stijging					8	7	14

[i] *Resultaten voor colorectale kanker in OESO-Gezondheidsgegevens voor België.*
[ii] *Laatste beschikbare gegevens voor België in OESO-Gezondheidsgegevens: 2004 (dit was de basis van de internationale vergelijking).*
[iii] *Dit is het resultaat van de OESO-Gezondheidsgegevens voor België, na aanpassing voor leeftijd. Percentage voor België zonder aanpassing is 40/100 000.*
[iv] *Laatste beschikbare gegevens in OESO-Gezondheidsgegevens voor België: 2005 (dit was de basis van de internationale vergelijking).*
[v] *Verhouding van tewerkstellingspercentage van personen met een geestelijke stoornis met het tewerkingstellingspercentage van alle personen met een handicap.*
[vi] *Resultaten van de laatste EU Labour Force Survey.*

2.4.2 *Aangepastheid*

Aangepastheid van zorg kan worden gedefinieerd als "de mate waarin de verleende gezondheidszorg een antwoord biedt op de medische noden, rekening houdend met de best beschikbare wetenschappelijke bewijskracht ('best-available evidence')". Het verband tussen doeltreffendheid en aangepastheid weerspiegelt het verband tussen zorguitkomsten en zorgprocessen.

Er werden acht indicatoren geselecteerd om de aangepastheid van de zorg te meten. De resultaten zijn in het algemeen niet al te best, vooral voor die indicatoren die verband houden met aangepastheid van borstkankerscreening (niet in doelpopulatie) of het opvolgen van richtlijnen (voor antibiotica of voor opvolging van diabetici).

Het aantal keizersneden neemt toe en vertoont een grote variabiliteit tussen de ziekenhuizen.

Twee indicatoren beschrijven het verbruik van antidepressiva en antipsychotica in de algemene bevolking. Ze tonen dat dit verbruik boven het EU-15-gemiddelde ligt. Bovendien stijgt het verbruik van deze geneesmiddelen nog steeds.

Tenslotte werd één indicator gemeten over de agressiviteit van de behandeling op het einde van het leven (Kankerpatiënten die chemotherapie krijgen tijdens de laatste 14 dagen van hun leven). Deze gegevens zijn echter moeilijk te interpreteren bij gebrek aan norm, benchmarking of tendens over de tijd.

Tabel 4 – Indicatoren ter beoordeling van de aangepastheid van de zorg

Indicator	Globaal	België	Meest recente gegevens	Tendens in de tijd	M	V	Sociaal laag	Sociaal hoog	Vlaanderen	Wallonië	Brussel
Mammogrammen buiten de doelgroep (%)											
- Vrouwen in de leeftijd van 40-49 jaar		35,5	2010	stabiel			28,6	36,6	28,6	46,4	47,7
- Vrouwen in de leeftijd van 71-79 jaar		20,8	2010	stijging			16,2	23,2	16,4	27,7	31,2
Antibiotica (% amoxicilline vergeleken met amoxyclav)		44,9	2008	stabiel	46,4	51,1	44,4	49,4	46,0	42,8	47,1
Correcte opvolging van patiënten met diabetes (%)*		54	2008	stabiel	54	55	48	58	57	52	48
Keizersneden (per 1 000 levendgeboortes)		193	2009	stijging							
Voorschrijven van (gemiddelde dagelijkse hoeveelheid//1 000 inw)	R	68,4	2010	stijging	43,1	92,8			60,6	85,8	57,1
- Antidepressiva											
- Antipsychotica		10,5	2010	stijging	10,8	10,3			9,6	11,9	11,7
Kankerpatiënten die chemotherapie krijgen tijdens de laatste 14 dagen van hun leven (%)	R	(12%/ 23%)[i]	2005								

[i] *Van hen die thuis overleden/of van hen die in het ziekenhuis overleden, geen nationale gegevens, waarden gebaseerd op één enkele studie van het Christelijk Ziekenfonds.*
** Volwassen diabetespatiënten met regelmatige onderzoeken van de retina en bloedonderzoeken (%).*

2.4.3 *Veiligheid*

Veiligheid kan worden gedefinieerd als “de mate waarin het systeem de patiënt geen schade berokkent”.

Zes indicatoren evalueren de veiligheid van de zorg. De resultaten zijn eerder matig. Er is nog steeds een hoge blootstelling aan medische straling, maar er lijkt een daling te zijn in 2011. Er is een daling in het aantal nosocomiale infecties door MRSA (Meticilline-resistente Staphylococcus aureus) en de ziekenhuismortaliteit na een heupfractuur. De incidentie van postoperatieve sepsis en het voorschrijven van antidepressiva met anticholinergische nevenwerkingen bij ouderen is stabiel. Alleen de incidentie van doorligwonden in ziekenhuizen neemt toe.

Tabel 5 – Indicatoren ter beoordeling van de veiligheid van de zorg

Indicator	Globaal	België	Meest recente gegevens	Tendens in de tijd	M	V	Sociaal laag	Sociaal hoog	Vlaanderen	Wallonië	Brussel
Blootstelling aan medische straling van de Belgische bevolking (MSv/capita)	☹	2,2	2011	kleine daling in 2011							
Incidentie van nosocomiale infecties door MRSA (1/1 000 opnames)	😐	1,5	2010	daling					1,2	2,2	1
Incidentie van postoperatieve sepsis (/100 000 ontslagen)	😐	1224	2007	stabiel							
Incidentie van doorligwonden in ziekenhuizen (%)	😐 R	16,8	2007	stijging							
Ziekenhuismortaliteit na een heupfractuur (%)	😐	6,3	2007	daling	1,84[i]						
Ouderen die antidepressiva met anticholinergische nevenwerkingen voorgeschreven kregen (% patiënten van 65 jaar en ouder die antidepressiva nemen)	😐	14	2010	stabiel	13	14			17	11	10

[i] *OR Odds Ratio.*

2.4.4 Continuïteit van zorg

Continuïteit van zorg is een concept dat verschillende dimensies omvat, zoals de continuïteit in informatie tussen de zorgverleners, de planning van contacten met de verschillende zorgverleners, het relationele aspect van de contacten tussen patiënt en huisarts of de coördinatie tussen de zorgverlenende instanties of organisaties. De huidige set van 7 indicatoren laat toe om conclusies te trekken over elk van deze dimensies, hetgeen een duidelijke verbetering is vergeleken met het vorige HSPA-rapport.

In tegenstelling tot de gevestigde indicatoren over de gezondheidstoestand van de bevolking of over doeltreffendheid van zorg, is het erg moeilijk om de resultaten van de zorgcoördinatie in België te vergelijken met die van andere Europese landen. Sommige indicatoren zijn erg specifiek voor ons gezondheidssysteem (globaal medisch dossier, multidisciplinaire teammeeting - “multidisciplinair oncologisch consult” (MOC)). Andere indicatoren worden goed beschreven in de wetenschappelijke literatuur, zoals de Usual Provider of Care index (UPC)[d]. Maar er zijn niet veel landen die beschikken over de juiste nationale databanken met individuele patiëntgegevens die nodig zijn om dit te meten.

Eén resultaat, de UPC-index, kan als positief worden beschouwd en veronderstelt een goede relatie met de vertrouwde behandelende arts. Matige resultaten worden gevonden voor contact met de huisarts binnen de 7 dagen na hospitalisatie en bespreking op het MOC. De negatieve resultaten hebben betrekking op het gebruik van het globaal medisch dossier en de heropnames in psychiatrische ziekenhuizen. Dit laatste is het enige dat momenteel wordt verzameld door de OESO en dit richt zich specifiek op geestelijke gezondheidszorg.

[d] De UPC, de Usual Provider of Care index, is de proportie van de contacten die een patiënt heeft met zijn eigen huisarts; 1 wijst erop dat de patiënt altijd dezelfde huisarts bezoekt; de indicator geeft het percentage patiënten weer die een UPC van minstens 0,75 hadden, d.w.z. die minstens 3 contacten op 4 met hun gebruikelijke huisarts hadden.

Tabel 6 – Indicatoren ter beoordeling van de continuïteit en coördinatie van de zorg

Indicator	Globaal	België	Meest recente gegevens	Tendens in de tijd	M	V	Sociaal laag	Sociaal hoog	Vlaanderen	Wallonië	Brussel
Patiënten met een globaal medisch dossier (%)	☹	47	2010	stijging	42	50	54	44	58	32	29
Patiënten met kanker besproken tijdens de multidisciplinaire teammeeting (%)	😐	68,8	2008	stijging					73,8	62,7	55,7
Ontmoeting met huisarts binnen de week na ontslag uit het ziekenhuis (% patiënt van 65 jaar en ouder)	😐	58,4	2009	stabiel	55,4	60,8	64,2	54,6	60,6	57,8	42,5
Proportie van contacten met de vaste huisarts (%), UPC index (%) [iii]	☺	71,4	2010	stabiel	72,1	71,2	76,7	70,5	70,8	74,4	65,9
Heropname binnen de 30 dagen in hetzelfde psychiatrische ziekenhuis (%) - diagnose van schizofrenie	☹	20,2	2009[i]	stijging					25,2	17,2	10,2
- diagnose van bipolaire stoornis		15,6	2009 [i]	stabiel					19,7	13,4	7,1
Patiënten die contact hadden met hun huisarts tijdens de laatste week van hun leven (%)	R	(72%) [ii]	2005								

[i]: Dit zijn de laatste nationale gegevens, terwijl de laatste OESO-gegevens voor België dateren uit 2007.
[ii] 72% van de personen die thuis overlijden hebben een huisarts gezien tijdens de laatste levensweek (geen nationale gegevens, waarden gebaseerd op één enkele studie van het Christelijk Ziekenfonds).
[iii] UPC, de Usual Provider of Care index, is het percentage contacten met de eigen huisarts van een patiënt; 1 wijst erop dat de patiënt altijd dezelfde huisarts zag; de indicator vertegenwoordigt het percentage patiënten met een UPC van minstens 0,75; d.w.z. die minstens 3 contacten op 4 hadden met hun eigen huisarts.

2.4.5 *Patiëntgerichtheid*

Patiëntgerichtheid wordt gedefinieerd als "zorgverlening die respect toont en ontvankelijk is voor de voorkeuren, noden en waarden van de individuele patiënt, en ervoor zorgt dat alle klinische beslissingen worden geleid door de waarden van de patiënt". Het vorige HSPA-rapport bevatte geen indicator die patiëntgerichtheid beoordeelde. Na een diepgaand onderzoek naar indicatoren en gegevens kunnen slechts drie indicatoren worden voorgelegd. Dit weerspiegelt het feit dat er momenteel een echt gebrek aan gegevens is, en de weinige meetbare indicatoren geven slechts versnipperde informatie over een complex onderwerp.

Uit de resultaten komt tot uiting dat patiënten over het algemeen tevreden zijn over de verschillende gezondheidsdiensten. Slechts één studie kon gegevens geven over het centrale onderwerp van pijncontrole. België doet het relatief slecht in vergelijking met andere landen. Tenslotte toont één indicator over de plaats van overlijden een positieve tendens in de loop van de tijd (minder patiënten overlijden in het ziekenhuis) maar met grote verschillen afhankelijk van de socio-economische status.

Tabel 7 – Indicatoren ter beoordeling van de patiëntgerichtheid van de zorg

Indicator	Globaal	België	Meest recente gegevens	Tendens in de tijd	M V	Sociaal laag	Sociaal hoog	Vlaanderen	Wallonië	Brussel
Tevredenheid met gezondheidsdiensten (% goed of zeer goed)		>90% [ii]	2008		Geen verschil	Geen verschil		Hoger	Lager	Laagste
Pijn altijd gecontroleerd tijdens hospitalisatie (% patiënten)		(41,0) [iii]	2009							
Patiënten die overlijden in hun gebruikelijke woonplaats (%)		(45,1)[i]	2007	Stijging		[iv]		45,1[i]		45,1 [i]

[i] Nationale gegevens zijn nog niet beschikbaar. Resultaten voor Vlaanderen en Brussel worden gezamenlijk gerapporteerd.
[ii] Het niveau van tevredenheid ligt boven 90% voor contacten met huisarts, tandartsen, specialisten en diensten voor thuiszorg. Alleen voor ziekenhuizen is het niveau van tevredenheid iets lager (87%).
[iii] Resultaten van één enkele studie alleen in RN4cast project.
[iv] Gebaseerd op een studie van het Christelijk Ziekenfonds en andere publicaties.

2.5 Efficiëntie van het gezondheidssysteem

Efficiëntie wordt gedefinieerd als "de mate waarin de juiste hoeveelheid middelen (d.w.z. geld, tijd en personeel, input genoemd) ingezet wordt voor het systeem (macroniveau) en ervoor gezorgd wordt dat deze middelen worden gebruikt om een zo groot mogelijke winst of een zo goed mogelijk resultaat te behalen (output genoemd)".[4, 7]

Drie indicatoren werden geselecteerd om de efficiëntie van het gezondheidssysteem te evalueren. Net zoals in andere Europese landen is er in België een tendens naar een meer efficiënt gebruik van zorgdiensten. De drie indicatoren evolueren immers positief in de loop van de tijd: stijging van voorschriften voor goedkope geneesmiddelen, toename van chirurgische daghospitalisatie, en daling van de verblijfsduur voor een normale bevalling (hetgeen een meer vergelijkbare indicator is tussen landen dan de gemiddelde verblijfsduur voor de totale ziekenhuispopulatie die in het eerste HSPA-rapport werd gebruikt), maar nog steeds hoger dan het EU-15-gemiddelde.

Andere indicatoren die in dit rapport worden geanalyseerd geven ook een indicatie van de efficiëntie van het systeem. De stijging van het aantal patiënten met een globaal medisch dossier kan bijvoorbeeld leiden tot een vermindering van het aantal dubbele onderzoeken. De tendens van andere indicatoren is minder positief. Bijvoorbeeld, aangezien de helft van de borstkankerscreening gebeurt buiten het nationale programma kan men zich vragen stellen over de efficiëntie hiervan. Onverklaarbare variabiliteit in gezondheidszorginterventies kan ook een proxy zijn voor niet aangepaste zorg ('non appropriate'), hetgeen rechtstreeks samenhangt met efficiëntie. Dit werd, bijvoorbeeld, aangetoond voor keizersnedes.

Tabel 8 – Indicatoren ter beoordeling van de efficiëntie van de zorg

Indicator	Globaal	België	Meest recente gegevens	Tendens in de tijd	M	V	Sociaal laag	Sociaal hoog	Vlaanderen	Wallonië	Brussel
Chirurgische daghospitalisatie (%)		46,2	2008	Stijging							
Gemiddelde verblijfsduur voor een normale bevalling (dagen)		4,3	2008	Daling							
Voorschrijven van ambulante goedkope geneesmiddelen (% DDD op totaal)		46,0	2010	Stijging					46,2	45,9	45,3
Andere indicatoren besproken in de sectie over aangepastheid											

DDD = Standaard dagdosering (defined daily dose).

2.6 Duurzaamheid

Duurzaamheid wordt gedefinieerd als het vermogen van het systeem om:

- een infrastructuur, zoals een personeelsbestand, ter beschikking te stellen en te behouden (bijv. door opleiding en training, voorzieningen en uitrusting);
- innoverend te zijn;
- te reageren op nieuw ontstane noden;
- duurzaam gefinancierd te blijven door collectieve ontvangsten.

Voor de vier elementen uit de definitie werden specifieke indicatoren geselecteerd. De laatste indicator, totale gezondheidszorguitgaven, is een generische indicator voor financiële duurzaamheid.

De resultaten tonen een mix van negatieve resultaten (slecht vermogen van het systeem om de groep huisartsen te vervangen die ouder wordt en bijna op pensioen gaat); matige resultaten (aantal ligdagen in acute zorg per inwoner; onvoldoende gebruik van elektronisch medisch dossier door huisartsen), en indicatoren die niet kunnen worden geïnterpreteerd zonder gegevens over noden (afgestudeerden verpleegkunde).

Het percentage van het Bruto Binnenlands Product (BBP) dat gespendeerd wordt aan gezondheidsuitgaven bedroeg 10,5% in 2010. Het bedrag in absolute cijfers bedroeg €27,6 miljard in 2003 en €37,3 miljard in 2010.

Tabel 9 – Indicatoren ter beoordeling van de duurzaamheid van het gezondheidssysteem

Indicator	Globaal	België	Meest recente gegevens	Tendens in de tijd	Nederlandstalig	Frans talig[i]
% afgestudeerden in geneeskunde die huisarts worden	☹	30,1	2009	daling	29,2	31,0
Gemiddelde leeftijd huisarts		51,4	2009	stijging	51	52
Afgestudeerden verpleegkunde (per 1 000 inwoners)[ii]	R	41,7	2010	stabiel		
% huisartsen dat een elektronisch medisch dossier gebruikt	😐 R	74,0	2010	stijging	83,7	62,5
Beddagen acute zorg (aantal beddagen per capita)[iii]	😐	1,2	2009	stabiel		
Totale gezondheidszorguitgaven (% BBP)		10,5	2010	stijging		

i Voor deze reeks indicatoren zijn geen gegevens beschikbaar per gewest, maar per taal (Frans- of Nederlandstalig).
ii Deze indicator moet worden geïnterpreteerd samen met de indicator van de dichtheid van praktiserende verpleegkundigen (in sectie over toegankelijkheid).
iii Deze indicator moet worden geïnterpreteerd samen met de indicator van het percentage chirurgische dagopnames (in sectie over efficiëntie).
BBP Bruto Binnenlands Product.

2.7 Gezondheidspromotie

Om verschillende redenen was het niet mogelijk om binnen het bereik van dit rapport een volledig overzicht te geven van de performantie op het vlak van gezondheidspromotie.

1. Gezondheidspromotie, het "proces dat mensen toelaat meer controle uit te oefenen over hun gezondheid en die te verbeteren", is een erg ruim begrip. De strategische lijnen (zoals gedefinieerd in het Handvest van Ottawa) omvatten verantwoordelijkheden die zich grotendeels buiten het gezondheidszorgsysteem bevinden en zelfs buiten het gezondheidssysteem[e]. Een groot aantal indicatoren, gestructureerd binnen een specifiek conceptueel kader, zouden noodzakelijk zijn.
2. De meeste indicatoren die nodig zouden zijn om de gezondheidspromotie te evalueren zijn niet klaar voor gebruik. Sommige worden nog ontwikkeld, terwijl andere nog moeten worden aangepast aan de Belgische/regionale context.
3. Er zijn weinig gegevens beschikbaar.
4. De conventionele, gemakkelijk te meten (hoewel met een beperkte kijk) uitkomstindicatoren op het vlak van gezondheid/gezondheidsgedrag zijn distale uitkomsten beïnvloed door gezondheidspromotie evenals door andere factoren. Er zijn veel meer indicatoren, met hun waarden en enige vorm van benchmarking, nodig om de koers te bepalen van het beleid.

Bijgevolg wordt hier slechts een partieel beeld gegeven van de performantie van gezondheidspromotie door middel van 15 indicatoren, zoals getoond in Tabel 10.

Voor veel van de klassieke indicatoren van de categorieën gezondheidsuitkomsten en gezonde levensstijl zijn de nationale percentages middelmatig. Er worden echter belangrijke regionale/sociale ongelijkheden vastgesteld, met een gunstiger levensstijl in Vlaanderen en in de beter opgeleide klassen (met uitzondering van alcoholconsumptie).

Internationale benchmarking was slechts mogelijk voor enkele indicatoren. We wijzen op het probleem van obesitas/overgewicht dat erg veel voorkomt, nog steeds toeneemt en dat ernstige ongelijkheden vertoont. De tabaksconsumptie daalt, hoewel ze met 20% dagelijkse rokers nog steeds te hoog is, maar ook hier treffen we grote sociale ongelijkheden en vrij grote regionale ongelijkheden aan. De consumptie van fruit en groenten is veel lager dan de dagelijkse behoeften, maar er wordt een verbetering opgemerkt. De wekelijkse alcoholconsumptie is niet erg hoog, maar het lijkt dat de verslaving in stijgende lijn gaat. Het percentage alcoholconsumptie moet echter met de nodige omzichtigheid worden geïnterpreteerd aangezien het bijzonder gevoelig is voor vertekening door sociaal wenselijk antwoordgedrag. Er worden geen regionale/sociale ongelijkheden vastgesteld voor deze indicator (tenzij een hoger percentage "problematisch drinken", d.w.z. een tendens tot verslaving, in Brussel).

Het percentage HIV-diagnoses bij Belgische burgers steeg langzaam in de laatste jaren. Daarenboven wordt er een grote toename vastgesteld bij de mannelijke homoseksuele bevolking. Er worden hier geen internationale vergelijkingen getoond, aangezien het diagnosepercentage bij niet-Belgische personen zou kunnen bestaan uit een grote fractie van geïmporteerde gevallen die niet zo relevant zijn voor het gezondheidspromotiebeleid in België.

Het percentage van de bevolking dat een gebrek aan sociale ondersteuning ervaart ligt, gemiddeld genomen, niet zo hoog. Nochtans zijn er grote sociale en regionale verschillen. Bovendien is dit percentage veel hoger bij ouderen.

---

[e] De vijf lijnen van het Handvest van Ottawa zijn:

- het uitwerken van een gezond overheidsbeleid (de verantwoordelijkheid van de zorginstanties is om gezondheid op het agenda van elk beleid te plaatsen)
- het creëren van ondersteunende omgevingen (life settings)
- het ontwikkelen van individuele vaardigheden
- het versterken van de acties van de gemeenschap
- het heroriënteren van de gezondheidsdiensten

De belangrijkste waarden en dimensies van gezondheidspromotie zijn: participatie, empowerment, billijkheid, duurzaamheid, multistrategie, multisectorialiteit.

De Tobacco Control Scale Policies maakt een internationale vergelijking over het overheidsbeleid om de tabaksconsumptie te verminderen. België staat hier op een middelmatige plaats.

De andere indicatoren zijn indexen die tot doel hebben de kracht van het lokale beleid inzake gezondheidspromotie in verschillende settings te meten. Ze zijn alleen beschikbaar in Vlaanderen (door de VIGeZ-enquêtes). Ze zijn moeilijk te interpreteren zonder een grondige analyse. Tendensen gemeten door opeenvolgende enquêtes lijken er op te wijzen dat de cultuur van gezondheidspromotie in de scholen aan het verbeteren is (de cultuur om deel te nemen is vrij goed), het aanbod van lichaamsbeweging verbetert. In veel gemeenten wordt het gezondheidspromotiebeleid echter niet goed geïmplementeerd.

Tabel 10 – Indicatoren van gezondheidspromotie

Indicator	Globaal	België	Meest recente gegevens	Tendens in de tijd	M	V	Sociaal laag	Sociaal hoog	Vlaanderen	Wallonië	Brussel
Volwassenen met overgewicht of obesitas (%)	☹	46,9	2008	stijging	53,7	40,4	57,8	40	47,1	48,9	39,8
Obese volwassenen (%)		13,8	2008	stijging	13,1	14,4	19,1	9,1	13,6	14,6	11,9
Tandbederf, ontbrekende tanden , tanden met vullingen in de leeftijdsgroep 12-14 (gemiddelde score)	😐 R	1.3 [iv]	2010								
Percentage HIV-diagnose in Belgische bevolking (/100 000 inw)	😐	3,9	2010	stijging	6,9	0,7			3,8	2,40	8,9
Dagelijkse rokers (% 15+)	😐	20,5	2008	daling	23,6	17,7	22,1	13,1	18,6	24	22,3
Alcoholconsumptie (% 15+)	😐										
-Problematisch[i]		10,2	2008	stijging	13,1	7,3	11,5	11	9,5	10,7	14,4
-Overconsumptie[ii]		7,9	2008	stabiel	10,1	5,9	5,9	8,4	7,9	8,4	6,7
-Comazuipen[iii]		8,1	2008		12,8	3,7	8,3	7,6	8,9	7	6,2
Minstens 200g groenten en 2 stukken fruit per dag (%)	😐	26,0	2008	stijging	23,4	28,5	21,7	29,4	30,0	19,2	25,3
Minstens 30 minuten lichaamsbeweging per dag (%)	☹	38,1	2008	stabiel	48,7	28,3	24,0	42,8	45,1	28,4	24,7
Slechte sociale ondersteuning (%)	☹	15,5	2008		15,1	16	24,4	10,1	12,4	20,0	22,9
Tobacco Control Scale	😐	50/100	2010								
Score van aanbod van lichaamsbeweging op school	R		2009	stijging					5,5/10		
Gezondheidspromotiebeleid in de gemeenten[vii]	R		2009						37/36/50[vi]		
% scholen met een gezondheidsteam[vii]	R		2009	Stijging					42/64/54 [vi]	40%[v]	40% [v]

[i]: *Berekend op de populatie personen die alcohol drinken (niet-geheelonthouder) en gebaseerd op CAGE, 2+ cut off.*
[ii] *15+ bij vrouwen; 22+ bij mannen.*
[iii] *Risicovol drinken tijdens één gelegenheid (≥6 drinks) minstens een keer per week.*
[iv] *Enkele gegevens maar te weinig landen.*
[v] *Voor Wallonië en Brussel samen.*
[vi] *Indicatoren van VIGeZ; respectievelijk bij tabakspreventie, gezonde voeding en lichaamsbeweging (scores van VIGeZ).*

2.8 Billijkheid en gelijkheid

Billijkheid is een kernelement bij de evaluatie van de performantie van een gezondheidssysteem.[1] Het is ook een controversieel en normatief onderwerp, dat verwijst naar oordeel en politieke standpunten. In de literatuur werd een ruim aanbod aan perspectieven en definities voorgesteld. Wij geven deze weer in Supplement S2 van dit rapport: "De plaats van billijkheid bij de beoordeling van de performantie van gezondheidssystemen" (beschikbaar op de website).

Aangezien we ons bewust waren van dit kenmerk, hebben we de dimensie van billijkheid op twee complementaire manieren benaderd. In de eerste plaats hebben we de ongelijkheden in gezondheid, gezondheidsdeterminanten en gebruik van gezondheidszorg in België gedocumenteerd per socio-economische status (resultaten in Tabel 11). Ten tweede hebben we contextuele indicatoren voorgesteld die problemen van billijkheid in de gezondheidszorg op een globaal niveau kunnen markeren (resultaten in Tabel 12 en Afbeelding 2).

Billijkheid in gezondheid wordt soms gedefinieerd als "de afwezigheid van systematische ongelijkheden in gezondheid/gezondheidsdeterminanten tussen sociale groepen die verschillende posities innemen in een sociale hiërarchie". Om die reden concentreert dit hoofdstuk zich alleen op de socio-economische ongelijkheden. Andere ongelijkheden (bijv. op het vlak van geslacht of gewest) worden weergegeven in de synoptische tabellen voor elke dimensie, en worden besproken in de gedetailleerde per indicator (zie Supplement S1). We hebben de socio-economische positie ook beperkt tot slechts één kenmerk: het opleidingsniveau (voor de indicatoren van de HIS) of de status van preferentiële terugbetaling voor de administratieve databanken. Andere dimensies van sociale ongelijkheid, zoals tewerkstellingsstatus, inkomen of etniciteit, werden hier niet onderzocht.

2.8.1 Socio-economische ongelijkheden

Er werden grote socio-economische ongelijkheden gemeten op het vlak van algemene gezondheidsuitkomsten (levens- en overlijdensverwachtingen, zelfrapportage gezondheid); dit zijn eindpuntmetingen die wijzen op billijkheidsproblemen in de keten van gezondheidsdeterminanten. Ongelijkheden werden ook vastgesteld bij talrijke indicatoren op het vlak van gezondheidspromotie (roken, overgewicht/obesitas, te weinig fruit en groenten eten, aan lichaamsbeweging doen en sociale steun). Er werden ongelijkheden vastgesteld voor de dimensie van toegankelijkheid. Jammer genoeg waren voor de meeste indicatoren van de andere dimensies geen socio-economische gegevens beschikbaar, en konden de ongelijkheden niet worden gemeten.

Tabel 11 – Overzichtstabel van socio-economische ongelijkheden

	Totale waarde (f)	Waarde in laagste sociale groep (f)	Waarde in hogere sociale groep (f)	Absoluut verschil (laagste vs hoogste)	Relatief risico (laagste vs hoogste)	Overzicht meting (CIl of PAF)
Algemene gezondheidstoestand						
Levensverwachting op 25 jaar bij mannen, 2001 [i; ii]	51,38	47,56	55,03	-7,47	n.v.t.	3,73%
Levensverwachting op 25 jaar bij vrouwen, 2001 [i; ii]	57,09	53,98	59,9	-5,92	n.v.t.	1,43%
Levensverwachting in goede gezondheid op 25 jaar bij mannen, 2001 [i; ii]	40,47	27,75	46,33	-18,58	n.v.t.	15,30%
Levensverwachting in goede gezondheid op 25 jaar bij vrouwen, 2001 [i; ii]	40,42	28,92	47,1	-18,18	n.v.t.	16,56%
% van de bevolking (leeftijd 15 jaar en ouder) die hun gezondheid als goed of zeer goed beoordelen [iii]	76,8%	57,4%	85,7%	-28,3%	0,67	11,6%
Toegankelijkheid van zorg						
Uitgestelde contacten met gezondheidszorgdiensten om financiële redenen (% huishoudens) [iv]	14,0%	27,0%	4,0%	23,0%	6,75	-71,4%
Borstkankerscreening (% vrouwen in de leeftijd van 50-69 jaar) [v]	60,1%	48,6%	62,9%	-14,3%	0,77	4,7%
Borstkankerscreening (% vrouwen in de leeftijd van 25-64 jaar) [v]	61,8%	48,9%	64,2%	-15,3%	0,76	3,9%
Aangepastheid						
% volwassen diabetici die aangepaste zorg krijgen, in termen van regelmatige onderzoeken van de retina en bloedonderzoeken [v]	54,0%	48,0%	58,0%	-10,0%	0,83	7,4%
Gezondheidspromotie						
% van de populatie (leeftijd 15 jaar en ouder) dat vermeldt dat hij/zij dagelijks rookt [iii]	20,5%	22,0%	13,1%	8,9%	1,68	-36,1%
% van de populatie (leeftijd 15 jaar en ouder) dat een slechte sociale steun meldt[iii]	15,5%	24,4%	10,1%	14,3%	2,42	-34,8%
% van de volwassen populatie dat wordt beschouwd als obees (BMI ≥ 30) [iii]	13,8%	19,2%	9,1%	10,1%	2,11	-34,1%
% van de volwassen populatie dat wordt beschouwd als zwaarlijvig of obees (BMI ≥ 25) [iii]	46,9%	57,8%	40,0%	17,8%	1,45	-14,7%
% van de populatie dat meldt dat ze minstens 200g groenten en 2 stukken fruit per dag eten [iii]	26,0%	21,7%	29,4%	-7,7%	0,74	13,1%
% van de populatie dat meldt dat ze minstens 30 minuten lichaamsbeweging per dag heeft [iii]	38,1%	24,0%	42,8%	-18,8%	0,56	12,3%

[i] in jaren; [ii] 5 opleidingsniveaus; [iii] 4 opleidingsniveaus; [iv] 5 inkomensniveaus; [v] 2 terugbetalingscategorieën.
percentages zijn niet aangepast aan leeftijd; samenvattende metingen= CII (Concentration Index of inequalities) van toepassing op levensverwachting en levensverwachting in goede gezondheid, PAF (Population Attributable Fraction) voor alle andere indicatoren.
Bron: Gezondheidsenquêtes (HIS) en EPS (WIV – ISP en KCE-berekeningen).
PA lichaamsbeweging.

2.8.2 Contextuele indicatoren van billijkheid

We hebben twee contextuele billijkheidsindicatoren geselecteerd: een indicator van progressiviteit van overheidsfinanciering en een indicator van de verdeling van het nationaal inkomen. Ten eerste tonen de berekende ratio's in Tabel 12 dat het aandeel van regressieve financieringsbronnen (indirecte belastingen) gestegen is. Over het algemeen zijn indirecte belastingen regressief omdat de rijken en de armen hetzelfde percentage indirecte belastingen betalen op consumptiegoederen en diensten en rijkere personen een hoger deel van hun inkomen sparen. Vandaar dat het gemiddelde percentage indirecte belastingen (indirecte belastingen gedeeld door het inkomen) daalt met het inkomen. We moeten echter voorzichtig zijn met de interpretatie van de tendens omdat het bij de laatste twee jaren slechts om gebudgetteerde bedragen gaat.

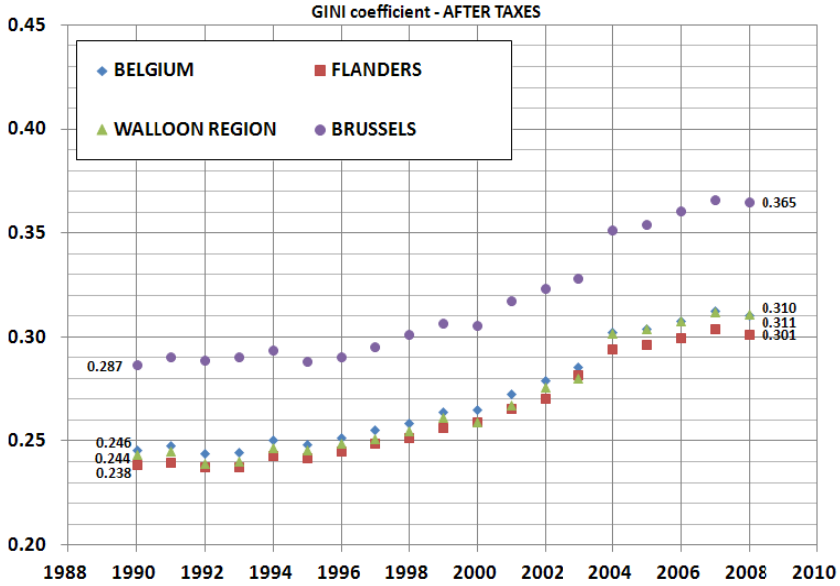
Ten tweede, omdat de gezondheidstoestand kan worden beïnvloed door het niveau van inkomensongelijkheid in een land, tonen we de evolutie van de Gini-coëfficiënt sinds 1988 in België. Aangezien de waarde van de Gini-coëfficiënt stijgt met de inkomensongelijkheid, stellen we vast dat in België de ongelijkheid toeneemt en hoger is in Brussel dan in de andere twee gewesten.

Tabel 12 – Indicator van billijkheid: progressiviteitsindicatoren van de publieke financiering van het gezondheidssysteem

Indicatoren van progressiviteit	2005 (definitieve rekeningen)	2006 (definitieve rekeningen)	2007 (definitieve rekeningen)	2008 (voorlopige rekeningen)	2009 (voorlopige rekeningen)	2010 (budget)	2011 (budget)
Ratio proportionele ontvangsten/totale ontvangsten	71,1%	71,0%	72,0%	70,6%	69,4%	64,8%	61,4%
Ratio progressieve ontvangsten/totale ontvangsten	18,9%	19,0%	18,0%	17,3%	17,2%	19,4%	18,4%
Ratio regressieve ontvangsten/totale ontvangsten	10,0%	10,0%	10,0%	12,1%	13,4%	15,8%	20,2%
Totaal	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

Bron: Vademecum van de sociale zekerheid, RIZIV – INAMI, KCE-berekeningen.

Figuur 2 – Indicator van billijkheid: Gini-coëfficiënt na belasting en overdrachten, in België en gewesten



Bron: ADSEI (België)
Noot: de Gini-coëfficiënt is een coëfficiënt voor ongelijkheid van inkomen in een bevolking. Wanneer er perfecte gelijkheid is (iedereen heeft hetzelfde inkomen) is de coëfficiënt 0. Wanneer er perfecte ongelijkheid is (één persoon heeft al het inkomen), is de coëfficiënt 1. Een lagere coëfficiënt wijst op een meer gelijke verdeling van de inkomens.

2.9 Conclusies over zwakke en sterke punten

Gezondheidstoestand

De vier indicatoren laten een positieve evolutie in de tijd zien. Het resultaat van de levensverwachting is iets lager in vergelijking met het EU-15 gemiddelde, terwijl de gezonde levensverwachting (dit zijn de resterende geleefde jaren vanaf een bepaalde leeftijd zonder activiteitbeperking op lange termijn) en de zuigelingensterfte op een middelmatige plaats staan. Het percentage van mensen die hun gezondheid als (minstens) goed beschouwen, is hoger dan het EU-15 gemiddelde.

Toegankelijkheid

Met betrekking tot de financiële toegankelijkheid, is er sprake van enige bezorgdheid (hoge mate van persoonlijke uitgaven van de patiënt en in zekere mate uitgestelde contacten met de gezondheidsdiensten om financiële redenen), ondanks een universele ziekteverzekering en het bestaan van sociale vangnetten (maximumfactuur, Omnio, Bijzonder Solidariteitsfonds). De toegankelijkheid van preventieve maatregelen toont uiteenlopende resultaten. De cijfers voor kankerscreening (met sociale en enkele regionale verschillen) zijn relatief laag, terwijl de cijfers over vaccinatiegraad tegen griep bij ouderen middelmatig zijn. De vaccinatiegraad bij kinderen is goed. Een ander aspect van toegankelijkheid is een beschikbaar aanbod aan gezondheidspersoneel met betrekking tot de behoeften. Er werden aanzienlijke inspanningen geleverd om gegevens over de aanbodzijde te verkrijgen, maar er is nog te weinig informatie over de behoeften.

Zorgkwaliteit

De kwaliteit werd onderzocht door middel van 5 dimensies. De doeltreffendheid liet een gemengd beeld zien waarbij goed werd gescoord op het vlak van overlevingskansen bij kanker. Er is echter wel bezorgdheid op het vlak van de geestelijke gezondheidszorg, aangezien België het tweede hoogste aantal zelfdodingen in Europa heeft (met zeer grote regionale verschillen), en een hoog en toenemend percentage gedwongen opnames in psychiatrische ziekenhuizen. Meer indicatoren en gegevens zijn nodig om de doeltreffendheid in geestelijke gezondheid te beschrijven.

Wat de aangepastheid van zorg betreft zijn de resultaten eerder teleurstellend te noemen, met hoge en nog stijgende percentages van borstkankerscreening buiten de doelgroepen, matige opvolging van richtlijnen (antibiotica, diabetespatiënten), stijgende percentages keizersneden met een grote variabiliteit tussen de ziekenhuizen. Voor de veiligheid van zorg zijn de resultaten bemoedigend, met dalende trends wat betreft de blootstelling aan medische straling, de ziekenhuisbacterie MRSA en ziekenhuismortaliteit na heupfractuur, en een stabiele incidentie van postoperatieve sepsis en het voorschrijven van antidepressiva met anticholinergische nevenwerkingen aan ouderen. De incidentie van doorligwonden neemt echter toe. Voor de continuïteit en coördinatie van de zorg zijn de resultaten gemengd, met een goede relationele continuïteit bij dezelfde arts, gemiddelde en stijgende percentages voor multidisciplinaire consultaties voor kankergevallen, maar een lage dekking van het globaal medisch dossier en een hoog percentage heropnames in psychiatrische ziekenhuizen. Patiëntgerichtheid kon slechts deels worden beoordeeld. Er werd een hoge tevredenheidsgraad over de gezondheidszorg vastgesteld, evenals een toenemende trend om te sterven in de eigen woonplaats. Er moeten meer gegevens worden verzameld over dit onderwerp.

Efficiëntie

De efficiëntie van het gezondheidssysteem toont gemiddelde tot goede resultaten met een stijging in het voorschrijven van goedkope geneesmiddelen, het gebruik van het dagziekenhuis voor chirurgische ingrepen en een daling van de verblijfsduur voor een normale bevalling. De positieve boodschap moet echter worden getemperd door de slechte resultaten van sommige indicatoren die wijzen op een zekere mate van ongeschiktheid, en dus verspilling van middelen, zoals de bovengenoemde mammogrammen buiten de doelgroep.

Duurzaamheid

De duurzaamheid van het Belgische gezondheidssysteem vertoont enkele opmerkelijke resultaten met betrekking tot de vervanging van de huidige groep van ouder wordende huisartsen. Zoals hierboven vermeld is er dringend nood aan gegevens over de behoefte aan verpleegkundigen, gekoppeld aan gegevens over de evolutie van het aanbod.

Billijkheid

De dimensie van billijkheid werd benaderd op twee complementaire manieren. Ten eerste werden ongelijkheden in gezondheid, gezondheidsdeterminanten en gebruik van gezondheidszorg geanalyseerd per socio-economische status. Voor de indicatoren van gezondheid en levensstijl werden sterke ongelijkheden vastgesteld, die hierboven werden besproken. Ook voor kankerscreening en voor de opvolging van chronische patiënten werden ongelijkheden waargenomen. In dit rapport konden de meeste ziekenhuisgebaseerde indicatoren echter niet worden onderzocht per sociale status, en de conclusie is nog grotendeels onvolledig wat betreft ongelijkheden in zorgverlening en kwaliteit. Billijkheid werd ook benaderd via twee contextuele indicatoren die dit probleem op een globaal niveau onder de aandacht brengen. De progressiviteit van de financiering van de gezondheidszorg daalt, hetgeen een evolutie is naar minder billijkheid. De Gini- coëfficiënt stemt overeen met het niveau van ongelijkheid in de globale verdeling van inkomens in België. Er is aangetoond dat de coëfficiënt samenhangt met de globale gezondheidstoestand. In België ligt de coëfficiënt relatief laag (dus geen grote ongelijkheid), maar hij stijgt in de loop van de tijd, hetgeen kan worden geïnterpreteerd als een minder gelijke verdeling van de inkomsten.

Gezondheidspromotie

Tenslotte werd gezondheidspromotie vooral benaderd aan de hand van conventionele gezondheids- en levensstijlindicatoren, aangevuld met een aantal indicatoren met betrekking tot het gezondheidsbeleid, gezonde leefomgeving en individuele vaardigheden. Gezien de erg beperkte beschikbaarheid van geschikte indicatoren en gegevens kon alleen een versnipperd beeld worden getoond. De meeste gezondheids/levensstijlindicatoren wijzen op een middelmatig nationaal cijfer, maar er worden wel grote regionale/sociale ongelijkheden vastgesteld. We wijzen op het probleem van obesitas/overgewicht dat een vrij hoge, en stijgende trend met grote verschillen laat zien. De tabaksconsumptie daalt, maar met grote sociale en regionale verschillen. De consumptie van fruit en groenten is veel lager dan de dagelijkse behoeften, maar gaat erop vooruit. Het gebrek aan sociale steun vertoont ook belangrijke sociale en regionale verschillen, en baart vooral zorgen bij ouderen. België bevindt zich op een middelmatig niveau op de internationale Tobacco Control Scale Policies. Sommige complexe indexen hebben tot doel de kracht van het lokale beleid inzake gezondheidspromotie in verschillende settings (scholen, gemeenten, ondernemingen) te meten, maar zijn alleen beschikbaar in Vlaanderen en zijn moeilijk te interpreteren zonder een grondige analyse.

Meer gegevens op onze website!

Voor elk van de hierboven beschreven indicatoren is een technische fiche beschikbaar op de KCE-website in het document met als titel Supplement S1. Het vat de rationale samen voor het kiezen van de indicator, technische informatie over de gegevensbronnen en berekening, alle resultaten, waaronder subgroepanalyses en benchmarking, beperkingen in interpretatie, en alle bibliografische referenties.

3 HET 2012 HSPA-RAPPORT: NUT, TOEGEVOEGDE WAARDE EN BEPERKINGEN

3.1 Wat is het nut van dit HSPA-rapport?

Het uiteindelijke doel van het gezondheidssysteem is om in België een hoog performant systeem aan te bieden dat een bijdrage levert tot het verbeteren van de gezondheid van de inwoners op zijn grondgebied. Dit betekent dat de informatie die in dit rapport wordt weergegeven moet dienen om, indien nodig, de performantie van het gezondheidssysteem te verbeteren. Het moet de beleidsmakers ook helpen bij het formuleren van nieuwe gezondheidsgerelateerde doelstellingen op federaal of regionaal niveau. De formulering van gezondheids(gerelateerde) doelstellingen is een belangrijke stap in het proces van de beoordeling van performantie. Dit zou immers toelaten om in de volgende evaluaties een vergelijking te maken tussen de vooropgestelde en de bereikte resultaten.

Aan de hand van 74 indicatoren geeft dit rapport een breed beeld van de performantie van het Belgische gezondheidssysteem. De indicatoren fungeren als alarmsignalen wat betreft de toestand van het gezondheidssysteem in termen van toegankelijkheid, kwaliteit, efficiëntie, duurzaamheid en billijkheid. In sommige gevallen zijn beleidsmakers zich al bewust van de problemen en hebben ze al opdracht gegeven tot bijkomende analyses om te weten welke acties moeten worden ondernomen. In andere gevallen zijn deze signalen nieuw voor de beleidsmakers, en zal dus een verdere diepgaande analyse nodig zijn. In ieder geval moet de uitgebreide en gestructureerde manier waarop de indicatoren worden voorgesteld ervoor zorgen dat er gemakkelijker prioriteiten gesteld kunnen worden betreffende de nodige acties en/of verdere studies.

3.2 Wat is de toegevoegde waarde van dit rapport vergeleken met het vorige?

Het eerste rapport, met als ondertitel "eerste stappen naar het meten van de performantie" was voornamelijk een pilootstudie. De voornaamste conclusie ervan was dat het in België haalbaar was om dergelijke evaluatie uit te voeren, niet in het minst dankzij de goede samenwerking tussen de administraties. Dit tweede rapport biedt de eerste volledige evaluatie van de performantie van het Belgische gezondheidssysteem. Volgende sterke punten kunnen worden geïdentificeerd.

Verbeterde beschikbaarheid van gegevens

Er was een aanzienlijke verbetering in de beschikbaarheid van de gegevens: gegevens zijn nu beschikbaar voor het overlevingspercentage bij kanker, voor kindersterfte, en de vertraging met betrekking tot de beschikbaarheid van nationale overlijdensgegevens werd grotendeels weggewerkt.

Een uitgebreidere set indicatoren voor een globaler beeld van het systeem

Zoals uiteengezet in de operationele doelstellingen werd de indicatorenset uitgebreid voor die domeinen of dimensies die minder of helemaal niet werden behandeld in het vorige rapport. Indicatoren werden toegevoegd op het vlak van geestelijke gezondheidszorg, zorg voor ouderen, zorgcontinuïteit, en in mindere mate, palliatieve zorg, zorg op lange termijn, patiëntgerichtheid en gezondheidspromotie. Twee contextuele indicatoren van billijkheid werden toegevoegd, en de indicatoren werden systematisch geanalyseerd volgens socio-economische status (wanneer de gegevens beschikbaar waren).

Vereenvoudiging van de structuur van de indicatorenset voor een makkelijker begrip

De structuur van de indicatorenset werd op verschillende manieren verduidelijkt. Alleen gemeten indicatoren werden behouden in de huidige set. Indicatoren waarvoor we geen gegevens konden vinden, werden besproken in de sectie "gegevens zijn binnenkort beschikbaar" of "indicatoren in ontwikkeling" (beschreven in Supplement S1). Dit vergemakkelijkt het begrip van de indicatorenset, vestigt de aandacht op wijzigingen in de beschikbaarheid van gegevens en wijst op lacunes in gegevens. Het eerdere onderscheid tussen primaire en secundaire indicatoren werd verwijderd aangezien dit geen rol bleek te spelen bij de interpretatie ervan.

Systematisatie in gegevensanalyse

De analyse van gegevens werd gesystematiseerd, en de indicatoren werden altijd voorgesteld door middel van dezelfde structuur: evolutie in de loop van de tijd, per gewest, subgroepanalyses volgens socio-economische kenmerken en internationale benchmarking.

Gebruik van al beschikbare informatie

Er werd maximaal gebruik gemaakt van routinematig verzamelde gegevens (bijv. in administratieve databanken of in nationale registers): de gezondheidsenquêtes (Health Interview Survey – HIS), de Minimale Ziekenhuisgegevens (MZG), de EPS (permanente steekproef), de databanken van het RIZIV (doc N, Pharmanet), het register van nosocomiale infecties, vaccinatie-enquêtes, het Belgisch Kankerregister. Het gebruik van routineus beschikbare gegevens die geen bijkomende kosten met zich meebrengen voor gegevensverzameling, vergemakkelijkt de analyse van tendensen in de tijd.

Verbetering van de communicatie van resultaten

Tenslotte werden synoptische tabellen met kleurcodes ontwikkeld om snel en gemakkelijk een overzicht te kunnen krijgen van de resultaten en van de interpretatie ervan; dit laat ook vergelijking van indicatoren toe.

3.3 Wat zijn de beperkingen van dit rapport?

3.3.1 *Performantie tegenover welk streefdoel? Benchmarking met andere Europese landen lost het probleem niet op*

Jammer genoeg werden zeer weinig specifieke en meetbare doelstellingen gedefinieerd in België. Waar dergelijke streefdoelen bestaan, werd de waarde van de indicator beoordeeld door vergelijking met de waarde van de doelstelling. Anderzijds was het oordeel gebaseerd op externe (bijv. WGO-gedefinieerde) streefdoelen, of door vergelijking met de resultaten van andere landen. Waar mogelijk werden de indicatoren vergeleken met het gemiddelde van de EU-15-landen. Hierdoor kan België worden gepositioneerd in vergelijking tot de naaste buurlanden, maar dit biedt geen antwoord op de vraag "Zijn onze resultaten nu goed of slecht?". Sommige resultaten kunnen inderdaad goed zijn wanneer ze worden vergeleken met andere landen, terwijl ze dat niet zijn wanneer ze worden geconfronteerd met de landdoelstellingen. Bovendien staat het interpreteren van de resultaten van internationale vergelijking van performantie nog ter discussie[8], en zijn er veel valkuilen, zoals methodologische en contextuele variaties, waardoor het moeilijk is om zinvolle vergelijkingen te maken.

Verschillende internationale organisaties vergelijken België al met andere Europese landen voor indicatoren van gezondheidstoestand en van gezondheidszorg: de WGO met het “World Health Report 2000”[9], het tweejaarlijks rapport “Health at a glance Europe”[10,11] dat voortvloeit uit een samenwerking van de OESO en de Europese Unie, de website van de ECHI-indicatoren, ondersteund door de Europese Unie[12] en de Euro Health Consumer Index[13] van de private Zweedse organisatie Health Consumer Powerhouse.

3.3.2 *Beslissingen nemen op basis van verouderde gegevens?*

Sommige gegevens zijn duidelijk verouderd, en zelfs de meest recente dateren al van 2 jaar geleden. Dit is inherent aan het gebruik van administratieve gegevens of registers. Voor de internationale vergelijking moesten we vaak steunen op gegevens uit 2005! In verschillende gevallen zou het voor beleidsmakers moeilijk zijn om beslissingen te nemen op basis van dergelijke verouderde informatie. Wat betreft de indicatoren geleverd door het HIS worden zeer recente gegevens verwacht in het volgende HSPA-rapport aangezien een nieuwe HIS zal worden uitgevoerd in 2013.

3.3.3 *Een uitgebreider beeld, maar nog steeds hiaten in het instrument*

De meeste problemen hebben te maken met een gebrek aan geschikte indicatoren, het gebrek aan (recente) gegevens, de nood om uit te kijken naar een betere indicator of naar meer details.

1. **Globale gezondheidstoestand: een indicator toevoegen met een hoog actievermogen: vermijdbare mortaliteit**

   Het vorige rapport omvatte vroegtijdig overlijden als een indicator voor gezondheidstoestand, uitgedrukt als mogelijk verloren levensjaren (PYLL – Potential years of life lost) vóór de leeftijd van 70 jaar. De studie van vroegtijdige sterfte per categorie van oorzaak en mogelijk ook de vermijdbare sterfte, zou een interessante kijk op de gezondheidszorgdiensten kunnen toevoegen.

2. **Financiële toegankelijkheid: nood aan een uitgebreider beeld**

   Een noodzakelijke voorwaarde om het beleid aan te sturen binnen het domein van financiële toegankelijkheid is een verbeterde transparantie in ambulante supplementen evenals in private hospitalisatieverzekeringen (het percentage personen met een private hospitalisatieverzekering, en wat specifiek wordt gedekt door deze private verzekeringen, en aan welke kost).

3. **Financiële toegankelijkheid en billijkheid**

   Een meer volledige manier om de billijkheid van het systeem te meten is rekening te houden met de verdeling van persoonlijke uitgaven (officiële remgelden, supplementen, netto terugbetalingen door privé verzekeringen en tussenkomst van de maximumfactuur) in functie van de socio-economische status. Individuele patiëntengegevens over inkomen en alle uitgaven zijn nodig om een dergelijke verdeling te berekenen.

4. **Personeelstellingen**

   Er zijn nu betere gegevens beschikbaar over het aanbod, maar de gegevens over de behoeften ontbreken nog steeds. Een doeltreffende planning van de personeelsbezetting in gezondheidszorg moet worden overwogen binnen een globaal beleid rekening houdend met het aanbod en met de behoeften van de patiënt. Gegevens over het aanbod zijn de laatste jaren ongetwijfeld veel verbeterd. Maar er werden nog geen indicatoren voor de behoeften in dit rapport gedefinieerd. Anderzijds is het benodigde personeel niet alleen afhankelijk van de medische behoeften, maar ook van de manier waarop het gezondheidssysteem georganiseerd is, bijvoorbeeld eerstelijns- versus ziekenhuiszorg.

5. **Geestelijke gezondheidszorg**

   De huidige indicatoren weerspiegelen de recente veranderingen in de sector niet. De meest recente hervormingsinspanningen om een evenwichtig geïntegreerd zorgmodel te bekomen, richten zich op de ontwikkeling van "zorgnetwerken" (het zogenoemde “Art. 107 project”). Het hoofddoel is dat, waar mogelijk, gemeenschapsdiensten moeten worden aangeboden, waarbij ziekenhuisdiensten beschikbaar moeten zijn wanneer ambulante zorg geen goed antwoord kan bieden op de noden van de patiënt. Enkele nieuwe indicatoren werden voorgesteld om deze evoluties te monitoren (bijv. het percentage patiënten met case management; het percentage uitgaven voor ambulante zorg en zorg in de thuisomgeving vergeleken met de totale uitgaven voor geestelijke gezondheidszorg). Maar ze konden nog niet worden gemeten omwille van de beperkingen in de huidige gegevens.

6. **Zorgcontinuïteit en -coördinatie**

   Met de nieuwe trajecten in ambulante zorg zullen nieuwe gegevens binnenkort beschikbaar zijn, maar er blijven toch nog veel lacunes. De resultaten van de nieuwe trajecten in ambulante zorg (zorgtrajecten) voor type 2-diabetes of chronische nierinsufficiëntie worden momenteel geëvalueerd. Die elementen zullen worden opgenomen in de volgende editie van dit rapport. Er ontbreken gegevens over andere relevante indicatoren, zoals de ervaring van patiënten met zorgcoördinatie, of de beschikbaarheid van informatie over gezondheid van patiënten op eender welk ogenblik.

7. **Patiëntgerichtheid**: veel initiatieven maar weinig gegevens. Patiëntgerichtheid is intrinsiek moeilijk te meten met kwantitatieve gegevens, omdat het samenhangt met het vermogen van het gezondheidssysteem om een succesvol antwoord te bieden op de bijzondere noden van de patiënt of om de betrokkenheid van de patiënt te stimuleren. Om ons begrip in dat domein te verbeteren, zal de volgende golf van de Health Interview Survey een set vragen bevatten over de ervaring van de patiënt met ambulante zorgdiensten (huisartsen of specialisten), gebaseerd op de OESO-vragenlijst om internationale vergelijking te vergemakkelijken.[14] De ervaring van patiënten met ambulante zorg zal dus worden opgenomen in de volgende update van dit rapport.

8. **Zorg op lange termijn**: er werden verschillende indicatoren gekozen om de kwaliteit van de zorg op lange termijn voor ouderen te beoordelen, zoals de prevalentie van ondervoeding, het percentage oudere patiënten die fysiek gefixeerd worden, de prevalentie van vallen, de incidentie van doorligwonden en het probleem van polymedicatie. Die indicatoren konden nog niet worden gemeten en dit markeert het huidige gebrek aan gegevens in dit domein. De BelRAI zal echter spoedig gegevens verstrekken over enkele geselecteerde indicatoren. De BelRAI is een instrument dat werd ontwikkeld om de noden te beoordelen van ouderen in residentiële voorzieningen of die een beroep doen op thuiszorg.

9. **Palliatieve zorg**: veel lokale onderzoeken in België, maar weinig nationale gegevens. De enkele indicatoren in dit rapport zijn gebaseerd op de populatie van terminale kankerpatiënten, of op de populatie patiënten die thuis palliatieve zorg krijgen. Hierdoor wordt niet de hele populatie van patiënten die in aanmerking komen voor palliatieve zorg omvat, hetgeen wijst op een duidelijke lacune in de beschikbaarheid van gegevens. Bovendien werden tot dusver geen gegevens op nationaal niveau gepubliceerd over toegankelijkheid, noch over de kwaliteit van de palliatieve zorg. In vergelijking met de andere zorgdomeinen is palliatieve zorg weinig of helemaal niet vertegenwoordigd in databanken van internationale organisaties.
10. **Gezondheidspromotie**: gegevens over gezondheidsalfabetisme (health literacy) ontbreken, terwijl ze wel al beschikbaar zijn in andere Europese landen. Gezondheidsalfabetisme is een relatief nieuw begrip dat als een essentieel hulpmiddel wordt beschouwd in gezondheidsmanagement. Het kan worden gedefinieerd als de individuele vaardigheden die noodzakelijk zijn om factoren die interageren met de gezondheid van het individu te begrijpen en te beheersen. Dit geeft individuen de gelegenheid om gezondere keuzes te maken. Het werd gedefinieerd als een actieprioriteit voor de 2008-2013 strategie van de Europese Unie, en voor sommige landen zijn de resultaten uit de EU Health Literacy Survey nu beschikbaar.
11. **Efficiëntie moet meer aandacht krijgen in het toekomstige rapport.** Het is duidelijk dat efficiëntie in gezondheidszorg niet voldoende kan worden beoordeeld met de enkele indicatoren die in dit rapport werden geselecteerd. In de internationale literatuur worden vaak metingen voor efficiëntie voorgesteld die uitdrukkelijk inputs en outputs identificeren.[7,15] Dit kan zeker een interessant onderzoeksgebied vormen.
12. **Ongelijkheden** konden niet worden onderzocht voor alle indicatoren, omdat in sommige gegevensbronnen (RHM – MZG) geen socio-economische gegevens beschikbaar waren. In de gegevens van de ziekteverzekering is de informatie over de socio-economische status eerder onnauwkeurig en benaderend.

4 ALGEMENE CONCLUSIE

Dit rapport geeft de resultaten weer van een eerste globale evaluatie van de performantie van het Belgisch gezondheidssysteem, voortbouwend op een eerdere haalbaarheidsstudie. Aan de hand van vierenzeventig indicatoren met numerieke waarden tracht dit rapport een totaalbeeld te geven van de performantie van het gezondheidssysteem, waarbij wordt gewezen op enkele richtingen voor beleidsacties en waarbij vragen worden gegenereerd voor verdere opvolging of onderzoek.

Dit rapport is een aanzienlijke verbetering vergeleken met het vorige rapport, doordat het uitgebreider is en doordat de vorige set werd geactualiseerd met meer relevante indicatoren. Bovendien laat het in enkele gevallen het meten van evolutie toe. Ook werden belangrijke lacunes in basisgegevens ingevuld sinds de vorige editie, bijvoorbeeld de oorzaakspecifieke mortaliteitspercentages of kankeroverleving.

België is niet het eerste land dat deze uitdaging aangaat. Met het ondertekenen in 2008 van het Verdrag van Tallinn inzake gezondheidssystemen hebben de lidstaten zich er formeel toe verbonden om de performantie van het gezondheidssysteem te monitoren en te evalueren. Verschillende buurlanden met jaren ervaring in het meten van de performantie van het gezondheidssysteem, fungeerden als voorbeeld voor dit rapport, vooral het Nederlandse Performantierapport. Een van de tekortkomingen die het succesvol meten van performantie in de weg staat (ook vastgesteld in de eerdere Nederlandse performantierapporten) is de lage beschikbaarheid van geactualiseerde gegevens. Het regelmatig actualiseren van administratieve gegevens en het dynamisch publiceren van resultaten op een website is één van de pistes die moet worden onderzocht.

Samen met de Europese Richtlijn betreffende de toepassing van de rechten van de patiënt bij grensoverschrijdende gezondheidszorg, wordt deze verbintenis een gemeenschappelijke bezorgdheid onder de lidstaten[f].

[f] Richtlijn 2011/24/EU van het Europese Parlement en van de Raad van 9 maart 2011 betreffende de toepassing van de rechten van patiënten bij grensoverschrijdende gezondheidszorg, Official Journal L 88/45, 4 april 2011

Zodra de Richtlijn wordt geïmplementeerd als nationale wetgeving in oktober 2013, zullen de lidstaten ervoor moeten zorgen dat patiënten uit een andere lidstaat relevante informatie kunnen krijgen over de veiligheids- en kwaliteitsnormen om een weloverwogen beslissing voor grensoverschrijdende gezondheidszorg te maken. In deze context legt dit rapport niet alleen de basis van een toekomstige systematische beoordeling van de performantie, maar kan het ook worden beschouwd als een eerste stap naar de verantwoordelijkheid van België om veilige, kwaliteitsvolle, toegankelijke en efficiënte gezondheidszorg voor zowel Belgische als buitenlandse patiënten te garanderen.

SCIENTIFIC REPORT

1 BACKGROUND AND APPROACH

1.1 Context

1.1.1 International context

The Tallinn Charter in 2008

In June 2008, the 53 Ministers of Health from the countries belonging to the European region of the World Health Organisation (WHO) signed "The Tallinn Charter on Health Systems for Health and Wealth". The primary objective of the Tallinn Charter is to commit member states to improve people's health by strengthening their respective health systems. Of the seven commitments signed, the third is related to health system performance: "(the member states commit) to promote transparency and be accountable for health systems performance to achieve measurable results". The rationale of that commitment is given earlier in the text: "well functioning health systems are essential to improving health, and therefore health systems need to demonstrate good performance". The Charter also acknowledged that health systems are more than healthcare and include disease prevention, health promotion and efforts to influence other sectors to address health concerns in their policies, an approach that was already extensively developed by the WHO in its "Health in All Policies".[17] Other commitments in the Tallinn Charter include promoting shared values of solidarity, equity and participating, investing in health systems and fostering investment across sectors that influence health, making health systems more responsive to people's needs, preferences and expectations and ensure that health systems are prepared and able to respond to crisis. The last commitment proved afterwards to be visionary, as no long after the Tallinn Conference the world was struck by a global economic and financial crisis.

From values to actions, from Tallinn to Health 2020

By signing the Tallinn Charter, all member states of the WHO in the European region reinforced that they share the common value of the highest attainable standard of health as a fundamental human right. From this common value a set of goals were listed: improve health on an equitable basis, contribute to social well-being and cohesiveness by

distributing the burden of funding fairly according to people's ability to pay and aim at efficiency by making the best use of available resources.[3] An interim report on the implementation of the Tallinn Charter details how member states have made operational these various commitments.[18] In parallel, the WHO European region has launched in 2010 a new health policy, Health 2020.[19] It aims to provide a coherent evidence-based health policy framework in light of the trends that have become salient over the past decades in Europe: changes in demography (increasing ageing, decreasing fertility), globalisation and migration (including health workers), accelerating technological innovation (including genetics), rapidly increasing access to information for patients and the general public. The four policy priorities focus on:

(1) Investing in health through a life-course approach and empowering people, demonstrating the importance for the WHO of the expected benefits of health promotion,

(2) Tackling Europe's major health challenges (among which recognising the burden of non-communicable diseases, tobacco, diet and physical activity, HIV/AIDS, antibiotic resistance),

(3) Strengthening people-centred health systems, public health capacity and preparedness for emergencies and

(4) Creating a healthy and supportive environment.[19]

1.1.2 National context

2010, publication of the report on Belgian Health System Performance Assessment

Two years after the signature of the Tallinn Charter, the first Belgian report on Health System Performance Assessment (HSPA) was published in June 2010.[1] The title of this report "A first step towards measuring of the performance of the Belgian healthcare system" is illustrative of the prudence of the authors: healthcare system is mentioned instead of health system (a much broader scope), and it is the first step only… The reasons of this prudence lie in the amount of work needed for this first evaluation: new collaborations between administrations of the federal and regional levels had to be initiated, and stakeholders were consulted extensively. The report was articulated around two main sections. First, the Belgian HSPA framework was constructed based upon international experiences tailored to the Belgian context. Second, a core set of 55 indicators was selected, and 40 of them could be measured. Based on these indicators, results, strengths, weaknesses, evolution over time and proposed actions were discussed.

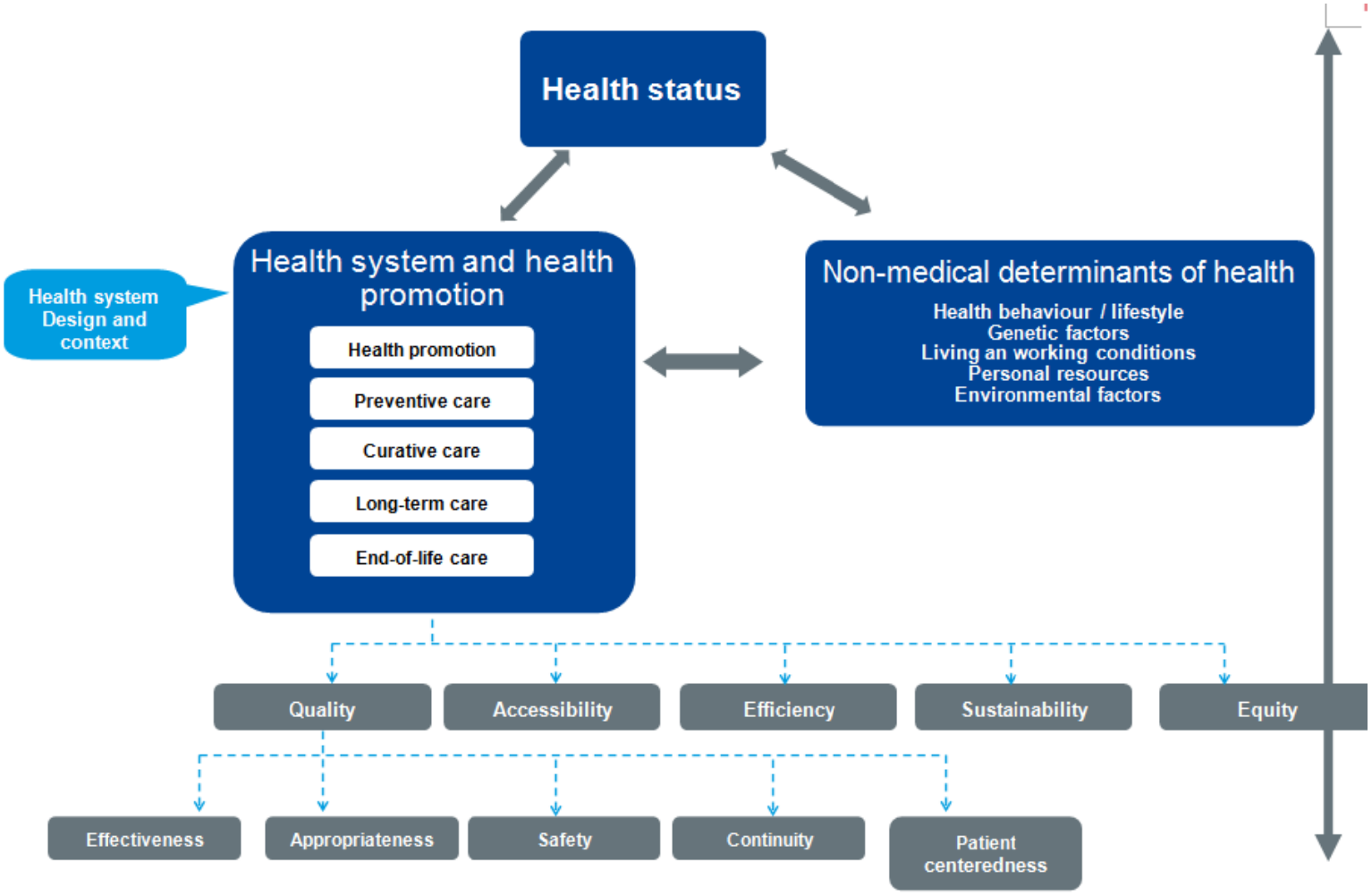
After the publication of the first report, the commissioners of the Belgian HSPA requested the project to be continued, aiming at a systematic evaluation of the Belgian Health System. The commissioners also requested to enrich the set of indicators with indicators in specific domains such as mental healthcare, long-term care and end-of-life care, as those were insufficiently covered in this first report. In addition, the regions and communities requested new indicators to assess the performance of health promotion by enlarging the set from the evaluation of the healthcare system to a full evaluation of the health system. Lastly, three dimensions (i.e. continuity of care, patient centeredness and equity) were considered to be insufficiently represented, and new indicators had to be proposed to assess these dimensions.

1.2 The Belgian performance framework and definitions

The Belgian performance report makes use of a conceptual framework (see Figure 3) inspired by the Dutch and Canadian frameworks,[20, 21] tailored to the Belgian health system.

The conceptual framework is composed of three interconnected tiers, which do not represent a hierarchy. The three tiers include health status, non-medical determinants of health and the health system itself, consisting of 5 domains: health promotion, preventive care, curative care, long-term care and end-of-life care. Each of these domains can be evaluated on different dimensions: their quality, accessibility, efficiency or sustainability. Equity has been defined as an overarching dimension.

Figure 3 – The conceptual framework to evaluate the performance of the Belgian health system



Definitions used in the conceptual framework

These definitions are based on the following sources: WHO (2008)[3], Arah (2006)[4], Vlayen (2006)[6], Australian National Health Performance Committee (2001)[22] and the Ottawa Charter[23].

Health status

This tier addresses the question "How healthy is the population residing in Belgium?", covering several dimensions, such as health (prevalence of disease, disorder, injury, trauma or other health-related states), human functions (alterations to body, structure or function [impairment], activities [activity limitation] and participation [restrictions in participation]), well-being (physical, mental, and social well-being), and death.

Non-medical determinants of health

This tier encompasses the determinants that have an effect on health and on if, when and how we use care. These determinants include health behaviour/lifestyle (e.g. smoking, physical activity), genetic factors, living and working conditions, personal resources, and environmental factors (e.g. air, water, food and soil quality resulting from chemical pollution and waste disposal).

Health system

Within the political and institutional framework of each country, a health system is the ensemble of all public and private organizations, institutions and resources mandated to improve, maintain or restore health. Health system encompasses both personal and population services as well as activities to influence the policies and actions of other sectors to address the social, environmental and economic determinants of health.

Domains of the health system and health promotion

The health system has been grouped into 4 domains: preventive care, curative care, long-term care and end-of-life care. The health promotion goes far beyond the boundaries of the health system.

- Preventive care: healthcare aiming to prevent the occurrence of a disease (primary prevention, i.e. vaccination; secondary prevention, i.e. taking medication to prevent myocardial infarction after a first episode) or to detect health problems before they occur (regular testing, screening for diseases, and other services that detect health problems early before they manifest symptoms).
- Curative care: healthcare that tends to overcome disease, and promote recovery.
- Long-term care: The term "long-term care services" refers to the organisation and delivery of services and assistance to people who are limited in their ability to function independently on a daily basis over an extended period of time. There are two complementary components of this definition: first, the care continues over a long time period, and second, the care is usually provided as an integrated program across service components.[24] This report focuses on two main populations: first, long-term care for older persons, and second, long-term care for persons with mental disorder.
  Long-term care for older persons include the following major services: home nursing care, homes for the elderly and nursing homes.[g]
- End-of-life care: the care of a person from the moment it has become clear that the person is in a progressive state of decline. End-of-life care includes palliative care but also broader social, legal and spiritual elements of care relevant to the end of the life.
- Health promotion has been defined by the WHO as "the process of enabling people to increase control over their health and its determinants, and thereby improve their health". The health promotion

[g] **Home nursing care** is available for persons with low to severe activities of daily living (ADL) and/or cognitive limitations, irrespective of their age. Care provided by home nurses includes technical nursing interventions (for example wound dressing and administering medication) and basic nursing care (mainly hygienic care in patients with ADL dysfunction).

In the **residential sector**, **homes for the elderly** ("maison de repos pour personnes âgées", MRPA /"woonzorgcentra", previously called "rustoorden voor bejaarden" ROB) provide nursing and personal care as well as living facilities to older persons with mainly low to moderate limitations. Older persons who are strongly dependent on care but who do not need permanent hospital treatment are admitted to **nursing homes (**"maison de repos et de soins" MRS/**"**rust- en verzorgingstehuis" RVT**)**. While medical costs and costs of care in residential care facilities are covered by public health insurance, board and lodging costs are to be paid by the resident.

goes far beyond the boundaries of the health sector: indeed one of the means of health promotion occur through developing healthy public policy that addresses the prerequisites of health such as income, housing, food security, employment, and quality working conditions. The other axes defined in the Ottawa Charter are: create healthy settings, increase the role of the community, increase the skills of the individuals, reorientation of the health services.[23]

Health system performance

This is a much broader conceptual approach to measuring performance than healthcare system performance by explicitly using non-medical determinants, healthcare and contextual information to give a clearer picture of population health.

Dimensions of Health System Performance

Health system performance, which is presented and analysed for each health system domain, is grouped into four main dimensions: accessibility, quality, efficiency and sustainability, and the overarching dimension of equity.

Accessibility is defined as "the ease with which health services are reached". It recovers physical (geographical distribution), organizational, financial, cultural, psychological dimensions of access. Access requires that health services are a priori available.

Quality is defined as "the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge". It is further subdivided into five sub-dimensions, including effectiveness, appropriateness, safety, patient-centeredness and continuity.

- Effectiveness is defined as "the degree of achieving desirable outcomes, given the correct provision of evidence-based healthcare services to all who could benefit but not those who would not benefit".
- It is therefore closely related to appropriateness, which can be defined as "the degree to which provided healthcare is relevant to the clinical needs, given the current best evidence and the provider's experience". The link between effectiveness and appropriateness reflects the link between outcomes and processes.
- Safety can be defined as "the degree to which the system has the right structures, renders services, and attains results in ways that prevent harm to the user, provider, or environment". Including the provider and environment in this definition extends the dimension beyond quality.
- Patient-centeredness is defined as "providing care that is respectful of and responsive to individual patient preferences, needs, and values, and ensuring that patient values guide all clinical decisions".
- Finally, continuity addresses "the extent to which healthcare for specified users, over time, is smoothly organised within and across providers, institutions and regions", and to which the entire disease trajectory is covered. This also means that 'coordination' (i.e. smooth organisation across providers, institutions and regions) is considered to be part of continuity.

Efficiency is defined as "the degree to which the right level of resources (i.e. money, time and personnel) is found for the system (macro-level) and ensuring that these resources are used to yield maximum benefits or results (i.e. allocative efficiency)".

Sustainability is the system's capacity to provide and maintain infrastructure such as workforce (e.g. through education and training), facilities and equipment, and be innovative and responsive to emerging needs. Important factors for the maintenance of the workforce also include the health personnel's satisfaction and working conditions.

Equity is *a transversal dimension*, being considered and presented across all three tiers of the framework. Equity is concerned with the fairness of the distribution of healthcare across populations and with the fairness of payment for healthcare. Above this, "equity" can be estimated for non-medical determinants of health and for health status. There are many overlaps with the dimension of accessibility.

Assessment of the Health promotion

Only a partial assessment of the health promotion performance could be made into the scope of this work. More details are given in Chapter 7 Performance of health promotion.

- Outcomes of the health promotion can be categorized (see further, Nutbeam's framework in Chapter 7 Performance of health promotion)

into outcomes very distal to action (like health outcomes), intermediate health outcomes (like adopting healthy lifestyle), and more direct outcomes, called "health promotion outcomes" (like health literacy).

- The main values and principles of the health promotion are: participation, empowerment, equity, multistrategic/multisectorial interventions, sustainability.

Health system design and context

This includes the important design and contextual information that may be specific to the Belgian health system, and which are necessary for interpreting the health system performance. Context should be interpreted in a broad way, encompassing both the local (national) factors that influence the health system (e.g. federal vs. regional context, legal framework, financing) and the international context factors (e.g. Europe). This also means that the articulation between the different authorities (federal, regional, local) is considered to be a characteristic of the health system influencing its performance, rather than a dimension of performance itself. An additional contextual factor is the local culture, which has an important influence on ethical questions.

Health in all policies

This is a dimension linking non-medical determinants of health to the health system. It can be defined as a horizontal, complementary policy-related strategy contributing to improved population health (http://www.euro.who.int/document/E89260.pdf). The core of "health in all policies" is to examine determinants of health that can be altered to improve health, but which are mainly controlled by the policies of sectors other than health.

1.3 Objectives of the performance project

Systematic evaluation of health system performance is an on-going process, with publication of HSPA reports as important milestones. Strategic objectives, defined as the objective of the on-going process, have to be differentiated from the specific objective of the present report, and its operational sub-objectives.

1.3.1 Strategic objectives of the HSPA process

The HSPA process pursues three strategic objectives:

1. To inform the health authorities of the performance of the health system and to be a support for policy planning;
2. To provide a transparent and accountable view of the Belgian health system performance, in accordance with the commitment made in the Tallinn Charter;
3. On the long-term, to monitor the health system performance over time.

1.3.2 Overall and operational objectives of the 2012 report

Overall objective:

To propose and measure a set of indicators covering all domains and chosen dimensions of our health system, while keeping a reasonable number of indicators. With a too small set, important dimensions or domains would be missed. But a too large set is difficult to manage and the profusion of results would dilute main messages. For the 2012 report, we aimed at a set of about 80 indicators.

Four operational objectives have been defined:

1. To review the core set of 55 indicators of the previous report, with a special focus on the 11 indicators for which there were no data in 2010;
2. To enrich the core set with indicators from the following domains: health promotion, general medicine, mental health, long-term care, end-of-life care; to add indicators on patient centeredness and continuity of care (two sub-dimensions of quality); and finally to propose indicators on equity in the health system;
3. To measure the selected indicators, when possible, or to identify gaps in the availability of data;
4. To interpret the results in order to provide a global evaluation of the performance of the Belgian health system by mean of several criteria, including an international benchmarking when appropriate.

1.4 Methods to reach operational objectives

Operational objective 1: To review the core set of 55 indicators, with a special focus on the 11 indicators for which there were no data in 2010.

The update of the former 55 indicators was made in a consensus meeting between the research team and a specialist in health indicators of the Federal Public Service (FPS) Public Health.

Operational objective 2: To enrich the core set with indicators illustrating the following domains: health promotion, general medicine, mental health, long-term care, end-of-life care; to add indicators on patient centeredness and continuity of care (two sub-dimensions of the quality); and finally to introduce indicators on equity-inequality in health/health system.

The strategy for the selection of new indicators in a variety of domains and dimensions consisted of the following:

The indexed literature was searched using usual standards of literature search for Health Services Studies.[25] Many indicators were also found in the grey literature, mainly reports of national (e.g. Dutch performance report) or international organizations (e.g. OECD Health Data, WHO Health for All Database, Eurostat, and reports specific to the domain or dimension studied). This resulted in long lists of indicators. The selection process occurred on an iterative way, involving both the research team and panels of expert specific for each topics. In some cases, a two step scoring allowed to select the more appropriate indicators, with regards to many criteria (relevance, content validity, reliability, interpretability and potential for action). In the other cases, the selection was based on a consensus among experts.

Indicators on the performance of general medicine were selected from a recent RIZIV – INAMI project using the same methodology.[26]

Indicators on the equity of the system were derived from international literature. A specific working paper "The place of equity in assessments of the performance of health systems can be found in Supplement S2 of this report.

The whole set of indicators was then reviewed by the research team to avoid redundancies in indicators and enhance the consistency of the set.

Operational objective 3: To measure the indicators selected in operational objective 2, and to identify gaps in the available data.

After the setting up of an updated set of indicators, the research team gathered the data to measure them. Indicators without (yet) available data were classified into two categories: those for which data will be available within the next two years, and those for which it is not clear how and by whom these indicators should be collected. Nevertheless, in spite of the lack of relevant data, these indicators were selected by the experts as being relevant, and were kept under a section "indicators under development".

For each measurable indicator, a complete documentation sheet was written with detailed results, including international comparisons.

Operational objective 4: To interpret the results in order to provide a global evaluation of the performance of the Belgian health system.

When the data were available, the following analyses were performed: analysis at national and regional level (with trends over time), analysis by demographic and socioeconomic factors, and finally benchmarking of most recent results compared to European Union (EU)-15 countries. These results were discussed with the expert groups to facilitate interpretation and identify shortcoming and areas for further development.

The documentation sheets and the detailed results of the indicators are gathered in Supplement 1. A synoptic table summarises the main results for all indicators using colour-coded cells.

1.5 The 2012 set of performance indicators and structure of this report

The selected 74 indicators which could be measured are classified by domain and by performance dimension in Appendix A of this report. The results (values) of the indicators are summarized and discussed in the following chapters of this report.

Chapters 2 to 6 have the same structure. Each chapter discusses the indicators illustrating one dimension (e.g. quality, sustainability) and consists of three parts:

1. First, we explain how the dimension was evaluated which boils down to a motivation of the selection of the indicators.
2. The "facts and figures" section is the core of each chapter. For each indicator we present the main results of the data analysis for Belgium, for the three regions '(where possible) and put these results in perspective with international results and trends. Detailed results are also available in each documentation sheet in the Supplement S1 (available on the website).
3. At the end of each section, we summarize the results of the data analysis in key findings – mostly one key finding per indicator.

The following chapters illustrate some specific issues: health promotion is discussed in Chapter 7 and Chapter 8 discusses the aspects of health inequalities and equity. The conclusion and discussion are in the synthesis at the beginning of this document.

Indicators for which there are currently no data have been discussed to identify gaps in availability of data in Belgium, and to provide recommendations to policy makers in Chapter 9.

The result of reviewing the 2010 set of indicators (operational objective 1) can be found in Appendix 2. From the 11 indicators with data missing in 2010, 5 indicators could be measured in this report. The others have been either removed from the set, either moved to the indicators to be measured soon. Another 12 indicators have been removed from the 2010 set, because they were deemed as not being relevant anymore, or because data were outdated.

In addition to these 74 indicators, 11 indicators for which data are expected within a two-year timeframe have been selected. Probably, they will be included in the next edition of the performance report. These indicators are listed in Appendix 3.

More documents are available on the KCE website:

- In Supplement S1: one documentation sheet per indicator has been presented, summarising the rationale for choosing the indicator, technical information on data sources and computation, limitations in interpretation, and the bibliographical references.
  A list of indicators that were deemed pertinent by the expert groups, but for which no initiatives are currently taken to collect data, is also presented in this Supplement S1. These indicators have been discussed to identify gaps in availability of data in Belgium, and to provide recommendations to policy makers which are discussed in details in Chapter 9.
- In Supplement S2: "The place of equity in assessments of the performance of health systems" (author: Christian Léonard): a specific paper on equity, indicators for equity and review of available work performed in Belgium.
- In Supplement S3: All technical details of literature searches and selection of indicators (MESH terms, databases searched, list of indicators initially selected, scoring of experts) for the following domains: Health promotion / Mental health / Continuity of care / Patient centeredness / Long-term care and care of the elderly / End-of-life care.

2 OVERALL HEALTH STATUS OF THE POPULATION

2.1 How did we describe the overall health status of the population?

The objective of this performance report was not to perform an assessment of the health status of the Belgian population. We describe anyway 4 global health status indicators. Those can be seen as very distal general outcomes of the health system/health promotion interventions, as well as a reflection of the global developmental level of a society. Those 4 indicators are:

1. Life expectancy
2. Health expectancy
3. Percentage of population perceiving their health as good or very good
4. Infant mortality rate

Four other health status indicators were described in other sections. As a matter of fact, while those four particular indicators can be influenced by individuals and societal actors, they make part of the evaluation of some specific domain or dimensions. Those four indicators are:

- Suicide rate (described in section 4.1.1, effectiveness of mental health care)
- Overweight and obesity rates (described in section 7.2.1, health and social outcomes)
- Rate of new HIV diagnosis (described in section 7.2.1, health and social outcomes)
- Mean number of decayed, missing, filled teethes in children (described in the section 7.2.1, health and social outcomes)

2.2 Facts and figures

This section is a short summary of the detailed results which are presented for each indicator in the Supplement S1 of this report (available on the website).

Life expectancy and Health expectancy

Life expectancy (LE) at birth in Belgium was 80 years as of 2010.[27] Life expectancy has remarkably increased since decades, reflecting sharp reductions in mortality rates at all ages. These gains in longevity can be attributed to a number of factors, including rising living standards, improved lifestyle, better education and greater access to quality health services.[5]

LE was 5.3 years higher in women (82.6 years) than in men (77.4 years) in 2010 and is higher in Flanders than in Wallonia (difference of 3 years in men and 1.8 years in women) (Table 13). Life expectancy in Belgium is slightly lower than the average of the EU-15, 80.7 years in 2010 (Figure 4).

Health expectancy represents the remaining years lived from a particular age without long-term activity limitation. This is the structural European indicator named 'Healthy Life Years' (HLY).[28] It extends the concept of life expectancy to morbidity and disability in order to assess the quality of years lived. HLY can be computed for several ages. In order to be consistent with previous published work, we present the HLY at 25 years, but data for many other reference ages can be found.

HLY at 25 in Belgium was 41 years in men and women in 2008[h]. Women live thus about 5 years longer than men, but those additional years are lived in activity limitation. HLY increases slowly in men but remains stable in women. The HLY at 25 is higher in Flanders than in the other regions, for both sexes (Table 13).

[h] SPMA: https://stats.wiv-isp.be/SASStoredProcess/guest?_program=%2FEhleis%2FStored+Process%2FHealth+Expectancy+Statistics&_action=properties

For international comparisons, Eurostat computes the HLY at birth.[29] Belgium is situated close to the average of EU-15 countries: for women 62.6 years versus 63.0 years in EU-15, and for men 64.0 versus 63.1 in EU-15.

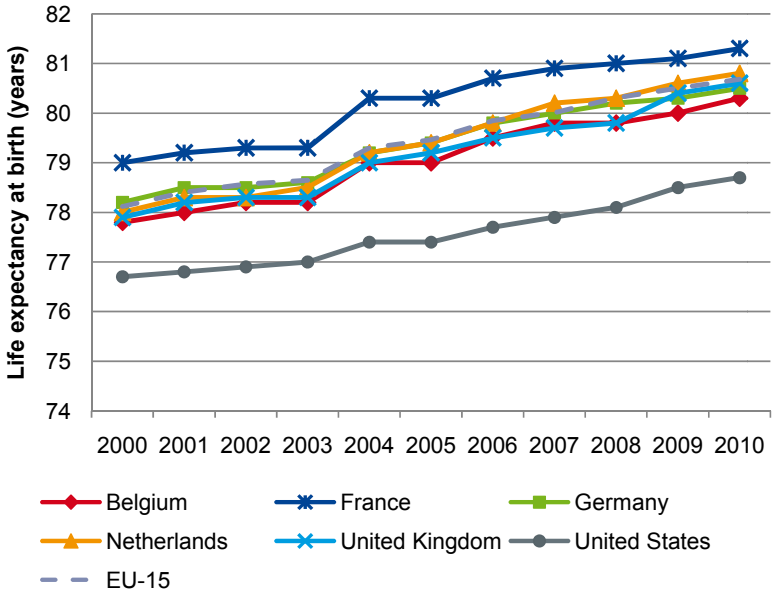
Table 13 – Life expectancy at birth (2010), and Healthy Life Years at age 25 (2008), by sex and region

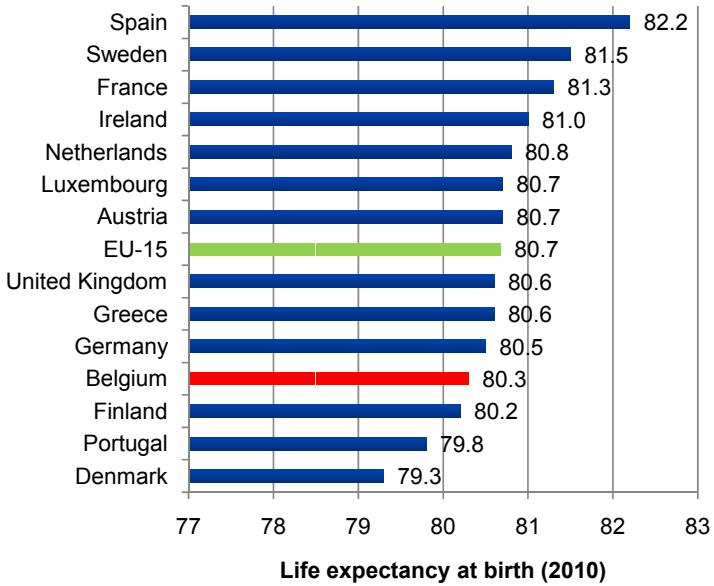
	Belgium	Brussels	Flanders	Wallonia
Male				
Life Expectancy at birth*	77.4	76.9	78.5	75.5
Healthy life years at 25**	41.3	38.5	43.7	37.4
Female				
Life Expectancy at birth*	82.6	82.8	83.3	81.5
Healthy life years at 25**	41.2	40.6	42.3	39.1

*Source: * DGSIE, data 2010; ** SPMA [i], data 2008*

[i] https://stats.wiv-isp.be/SASStoredProcess/guest?_program=%2FEhleis%2FStored+Process%2FHealth+Expectancy+Statistics&_action=properties

Figure 4 – Life expectancy at birth: international comparison (2000-2010)





Source: OECD Health Data 2012

Self-perceived health

Self-perceived health has been proven as a reliable reflection of morbidity, and as highly predictive of mortality.

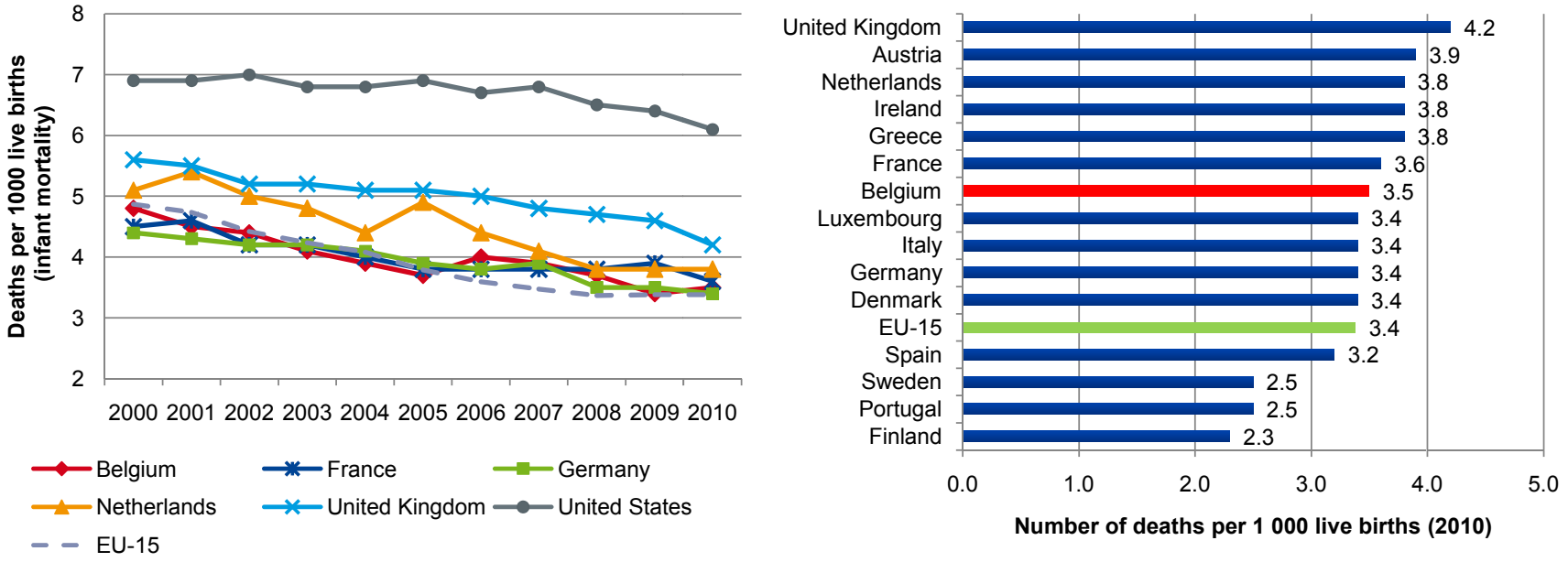
In 2008, 77% of the people aged 15 years or older rated their health as good or very good. This rate has slightly increased over time. The subjective appraisal of health status was slightly less favourable in women, even after adjusting for age. It was higher in Flanders than in the other regions.

Two databases provide information for the international comparison: the OECD Health Data (in which data from Belgium come from the HIS) and the European Union Statistics on Income and Living Conditions (EU-SILC) survey. The former database was chosen for its comparability with results above. Belgium compares very well with other EU-15 countries (average of 71.7%).

Infant mortality rate

The infant mortality rate (IMR) is a basic indicator for population health and quality of health care services, and is highly correlated to a country's level of development. The IMR has regularly decreased over the last decades in EU countries, such as in Belgium (around 5 deaths/1000 live births in 2000 to 3.5/1000 live births in 2010, which is within the EU-15 average of 3.4/1000 live births (Figure 5). Data per region (from 2008) show similar rates in the three regions. Rates are also higher for male infants (4.2/1000) than for female infants (3.4/1000).

Figure 5 – Infant mortality rate: international comparison



Source: OECD Health Data 2012

2.3 Key findings

- **Life expectancy at birth in Belgium was 80 years as of 2010. It is increasing over time, and is higher for women. It is higher in Flanders. Life expectancy in Belgium is slightly lower than the average of the EU-15 (80.7 years in 2010).**
- **Although women live longer than men, they do not live much longer in good health since the number of years with (self-reported) activity limitation is higher in women. Belgium is ranking within the average as compared with the EU-15.**
- **77% of the population reported their health to be good to very good in 2008. This proportion is higher for men as compared to women, and drops with age. Belgium compares very good with other EU-15 countries (average of 71.7%).**
- **Infant mortality has decreased regularly over the last decades. The figures are similar in the three regions and are close to 4 for 1000 live births in 2010. Infant mortality rates in Belgium are close to the average EU-15 rates, and better than in the neighbouring countries.**

3 ACCESSIBILITY OF CARE

3.1 How did we evaluate the accessibility of healthcare?

Accessibility is defined as the ease with which health services are reached in terms of physical access (geographical distribution), costs, time, and availability of qualified personnel.[3,4] Accessibility of a health system is a prerequisite of a qualitative and efficient health system.

In this report, we have defined twelve indicators to evaluate the accessibility of the healthcare system. Some indicators are related to the workforce, addressing the availability of healthcare personnel, others are used to determine financial access, focusing on insurance status, out-of-pocket payments and delaying contacts with healthcare due to financial reasons. Another group of indicators measures the coverage rates for preventive policies such as cancer screenings and vaccinations. Finally, one indicator relates to the timing (or timeliness) of access to palliative services.

Workforce

1. Number of practising physicians per 100 000 population
2. Number of practising nurses per 100 000 population

Financial accessibility

3. Coverage of the population in terms of health insurance
4. Amount of co-payments and out-of-pocket payments
5. Percentage of consumers who delay contact with health services because of financial reasons

Coverage of preventive measures

6. Breast cancer screening (women aged 50-69 years)
7. Cervix cancer screening (women aged 25-64 years)
8. Coverage of vaccination for young children
9. Coverage of influenza vaccination for the elderly (65 years and older)

Accessibility of long-term care (residential care for elderly and informal carers)

10. Number of beds in residential care facilities per population 65 years and older

11. Percentage of population over 50 years old reporting to be an informal carer

Accessibility of end-of life-care: timeliness of start of palliative care

12. Start of palliative care very close to death

3.2 Facts and figures

This section is a short summary of the detailed results which are presented for each indicator in the Supplement S1 of this report (available on the website).

Workforce

The number of care providers gives information on the medical workforce currently active in the healthcare sector, and thus indirectly on the accessibility of the healthcare system.

The number of practising physicians[j] increased from 28 999 in 2000 to 31 815 in 2010, corresponding to a density of 2.91/1000 population. Of these, 38.4% were GPs and 6.07% psychiatrists and 56% where non-psychiatrist specialists. Expressed in full-time equivalents (as calculated by the RIZIV – INAMI since 2009), this density reduces to 1.99/1000 population (Table 14).

Few EU-15 European countries report the number of practising physicians to the OECD. Before 2009, Belgian data on practising physicians included all registered physicians at the RIZIV – INAMI (potentially practising). This way of counting resulted in a physician density of 4.03/1000 population which was one of the highest in Europe.[1] Since 2009 (and retrospectively on data older than 2009) the density is based on the number of practising physicians, giving a better picture of the 'useful' medical density in Belgium. Compared to other OECD countries which also report the density of practising physicians, the density in Belgium is lower than in Germany, but is slightly higher than in the UK (in 2009) (Figure 6).

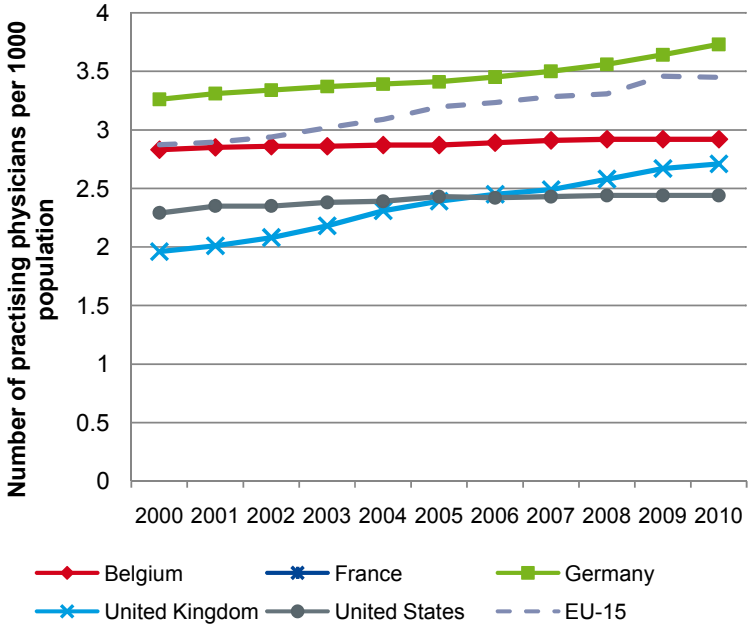
Table 14 – Number of practising physicians, estimation of Full Time Equivalent, and density (/1000 population) (2010)

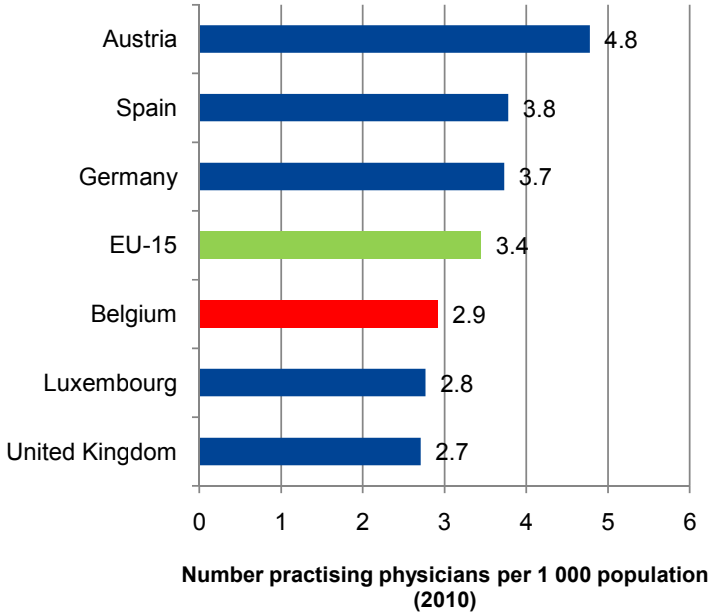
Profession	Total practising	Density	Total FTE	Density
Medical doctors	31 815	2.92	21 691	1.99
GPs	12 228	1.12	8 646	0.79
Psychiatrists	1 932	0.18	1 260	0.12

Source: RIZIV – INAMI
Note: Practising physicians are defined as those who provided more than one reimbursed clinical service during a year.

[j] For international comparisons, the practising physicians are defined by RIZIV – INAMI as those who provided more than one reimbursed clinical service during a year.

Figure 6 – Number of practising physicians (per 1000 population): international comparison





Source: OECD Health Data 2012

Nurses are generally the most numerous health professionals, greatly outnumbering physicians in almost all OECD countries.[5] Estimating the number of practising nurses is even more challenging than evaluating the number of practising medical doctors; indeed, many nurses are on the payroll of hospitals or nursing homes, and there is no centralized counting of them. Only nurses outside the hospitals are registered in the RIZIV – INAMI databases. For that reason, the FPS Public Health organized a large survey to measure the number of practising nurses in 2009. Results showed that on the 152 376 nurses included in the study, 70% were active in the healthcare sector (39% in hospitals, and the rest in residential care for older persons or in nursing home care). This corresponds to a density of practising nurses of 9.9/1000 population.[30] However, we still do not know the number of corresponding FTE.

International comparison based on OECD Health Data is currently meaningless, as Belgian data still represent all nurses (on the basis of their diploma, and not on their working status in healthcare).

Financial accessibility

A prerequisite for financial accessibility is coverage with health insurance. A compulsory health insurance, in principle, covers the whole population of citizens living in Belgium. In practice, some categories of citizens (e.g. asylum seekers) may not fulfil administrative and/or financial requirements, and hence are not affiliated to a sickness fund. This does not mean that they have no right to necessary medical care, but their healthcare expenses are covered by the public municipal welfare centres (OCMW – CPAS), and not by the sickness funds. The data for Belgium in OECD Health Data report a constant percentage of 99% insured persons, up to 99.5% in 2009. Other European countries report similarly high coverage (with many countries reporting 100%). Nevertheless, total health insurance coverage, both public and private, is an imperfect indicator to compare the level of accessibility across the countries, since the range of services covered and the degree of cost-sharing applied to those services can vary across countries. Another indicator of financial accessibility is the coverage of complementary health insurance (usually private), but no data are currently available in Belgium.

Low out-of-pocket (OOP) payments are another condition for good accessibility to the healthcare system. Out-of-pocket payments are expenditures borne directly by a patient where health insurance does not cover the (full) cost of the health good or service. They include co-payments (ticket modérateur / remgeld), costs of over-the-counter medications and other expenditures paid directly by private households. Between 2003 and 2010, the OOP expenditures rose from €5.33 to €7.25 billion, but compared to the total health expenditures, their share remained constant during the same time period (20.0% in 2003, 19.4% in 2010). Co-payments represented 26.7% of all out-of-pocket expenditures in 2010. Expressed per inhabitant, out-of-pocket payments represent a total of €665 in 2010.

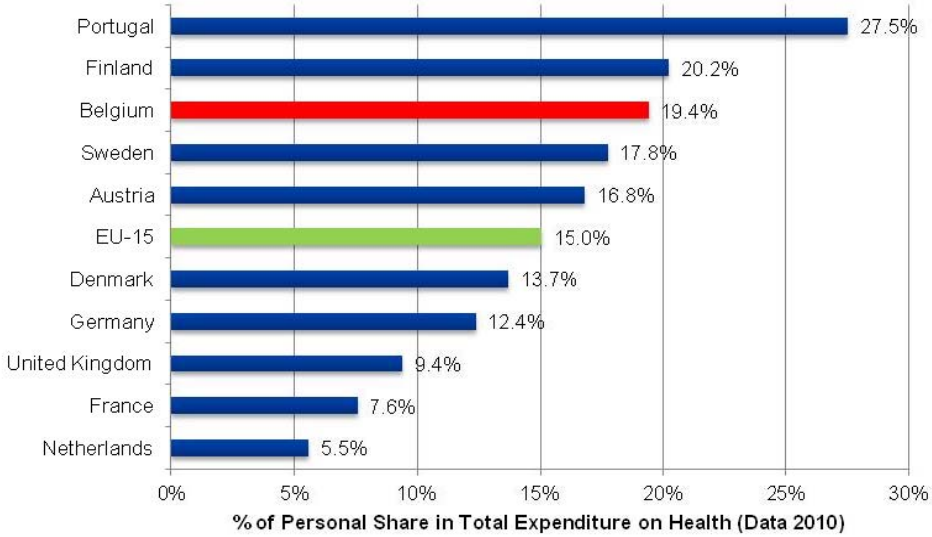
Comparison of health expenditures across European countries are based on the System of Health Accounts (SHA). The SHA, developed jointly by Eurostat, WHO and OECD, is a common way to report and classify health expenditures at a national level. The comparison shows that OOP expenditures in Belgium (expressed as a % of total health expenditures) are at the higher end, with countries such as France, the Netherlands and UK lying below 10% (Figure 7). Again, this statement should require a very detailed scrutiny of all expenses included or not by countries in the calculation of their System of Health Accounts.

Table 15 – Out-of-pocket expenditures (2003-2010)

Year	2003	2004	2005	2006	2007	2008	2009	2010
All out-of-pocket expenditures								
Billion €	5.53374	5.53049	5.68334	6.27044	6.73778	7.02868	6.85982	7.25518
% expenditure on health	20.0	18.8	18.6	20.5	20.9	20.3	18.9	19.4
€/capita	533.31	530.70	542.37	594.47	634.10	656.27	635.38	665.88
Co-payments only								
Billion €						1.85261	1.96620	1.93881
% of all out-of-pocket expenditures						26.4	28.7	26.7

Source:
- Out-of-pocket expenditures: System of Health Accounts (SHA), OECD Health Data 2012
- Co-payments (tickets modérateurs/remgeld):RIZIV – INAMI

Figure 7 – Out-of-pocket expenditures (as a percentage of total health expenditures): international comparison



Source: OECD Health Data 2012

To guarantee financial accessibility of healthcare in Belgium, legislators have introduced several "social care nets", which aim is to protect households with low financial means or with very high healthcare expenses against catastrophic healthcare expenses[k]. However, despite these social care nets, 14% of the households declared that they had to postpone healthcare (medical care, surgery, drugs, glasses or lenses, mental healthcare) for financial reasons. In Brussels, this percentage reaches 26% of the households (14% in Wallonia and 11% in Flanders). In 1997, this percentage was below 10%.

It is difficult to benchmark these data: indeed, data on global unmet clinical needs are available in OECD Health Data, but those also include problems due to waiting times or distances.

The five following indicators measure in which way specific preventive measures are effectively accessible and used by the population.

Coverage of screening for breast and cervical cancer

These two interventions currently run with different organizational modalities: organized national program for the breast cancer and opportunistic screening for the cervix cancer. It is still too early to evaluate the colorectal cancer screening program.[l]

- For breast cancer, a national screening program exists (since 2001 in Flanders and 2002 in Wallonia and Brussels) for women aged 50-69 years. The latter co-exists with opportunistic screening (mammograms performed outside of the program). Mammograms within this program are called hereafter "mammotests", to be distinguished from all other mammograms (opportunistic screening or diagnostic test)[m].

  Result: In 2010, the total coverage of breast cancer screening was 60%, far below the EU-15 average of 68%, and even further of the 75% target set by the EU.[5] (Figure 9) Moreover, only half of this coverage occurred within the program (30% screening coverage with the "mammotests" in 2010). Differences between regions are striking with regard to the coverage within the program: 46% in Flanders, while only 11% in Brussels and 7% in Wallonia. (Figure 8) This is probably partially due to the persistence of pre-existing higher levels of opportunistic screening in Wallonia and Brussels before the start of the program.[34]

- Cervical cancer, a cancer with a low incidence and a medium to poor prognosis, can be largely detected in a curable stage by the smear test (or Pap test).[35] This test is recommended every three years for women aged 25-64 years. Currently, the screening for cervix cancer is essentially opportunistic.

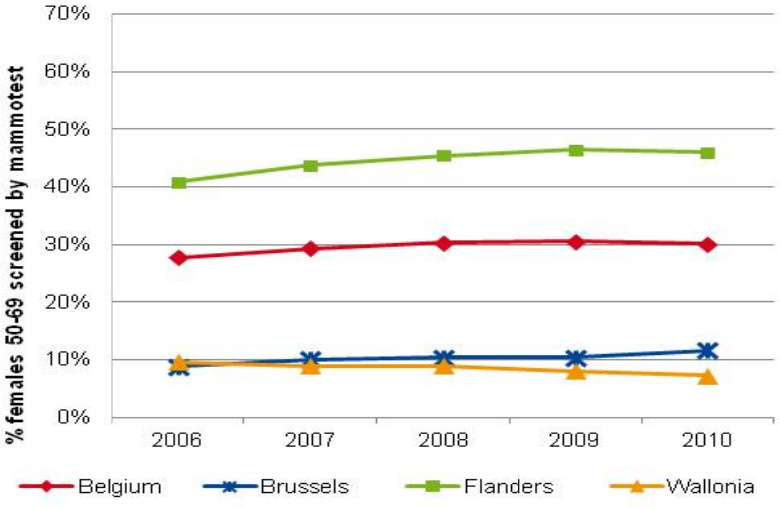
  Result: The cervical cancer screening coverage has remained stable around 62% between 2007 and 2010. In a previous study from 1998-2000, the coverage rate was already 59%.[36] Compared to other European countries, Belgium caught up with the EU-15 average of 61% in 2008, but is still far from some countries such as UK (80%) or Finland (70%) (Figure 9).

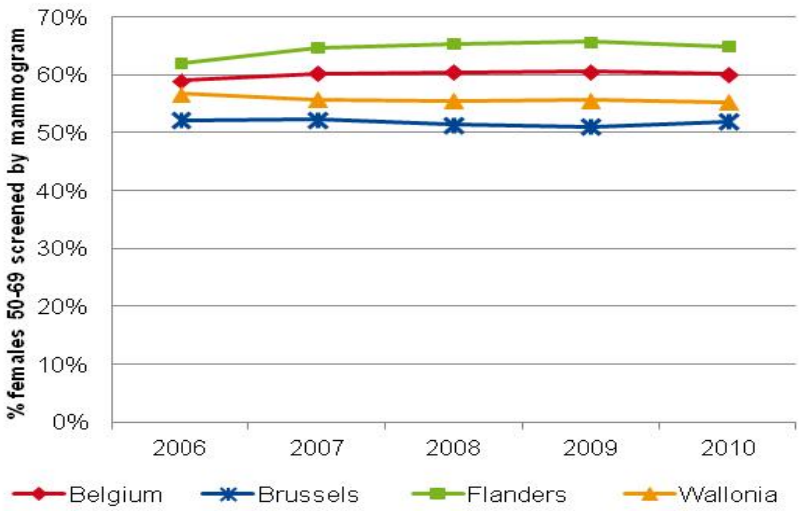
k Only to cite some of them: the entitlement to increased reimbursement of co-payments (introduced in 1963), the Maximum Billing System (MAB, implemented in 2002) and the OMNIO status (introduced in 2007).

l For colorectal cancer, there is no national program in place, but different regional approaches co-exist: in the French Community (Wallonia and Brussels), a screening programme was started in March 2009. Every two years, persons aged 50-74 years old are invited to perform a FOBT (fecal occult blood test), or directly a colonoscopy for individuals at high or very high risk.[31] There has been a preliminary evaluation of the start of the program, but it is still too early to evaluate the global coverage.[32] In Flanders, pilot projects were also started.[33]

m It is not possible to distinguish in the nomenclature between mammograms done for opportunistic screening from mammograms done for a diagnostic.

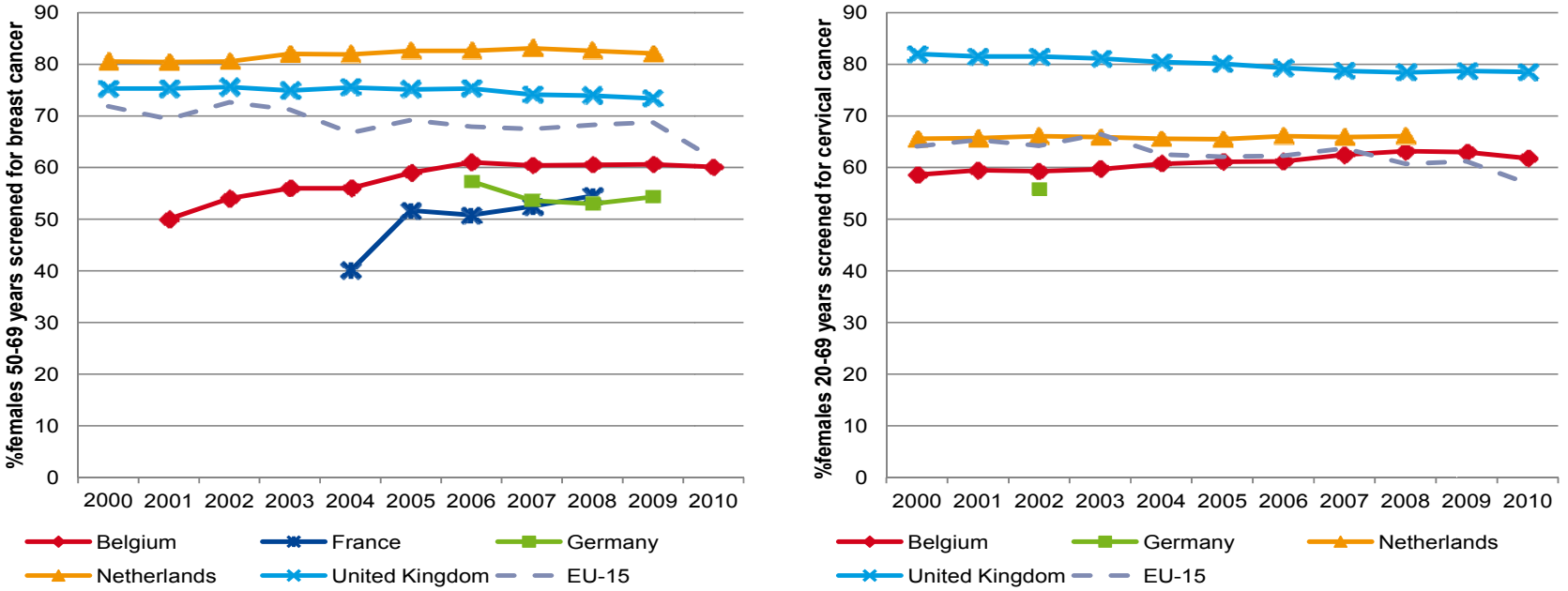
Figure 8 – Percentage of women (aged 50-69) who had a mammogram (within program (a) or overall (b)) within the last two years, by region (2006-2010)





Note: mammotest = organised screening program, mammogram = organized + opportunistic screening + diagnostic test; Source: IMA-EPS, KCE calculation

Figure 9 – Breast cancer and cervical cancer screening: international comparison (2000-2010)



Source: OECD Health Data 2012, except IMA-EPS for Belgium 2008-2010 (KCE calculation)

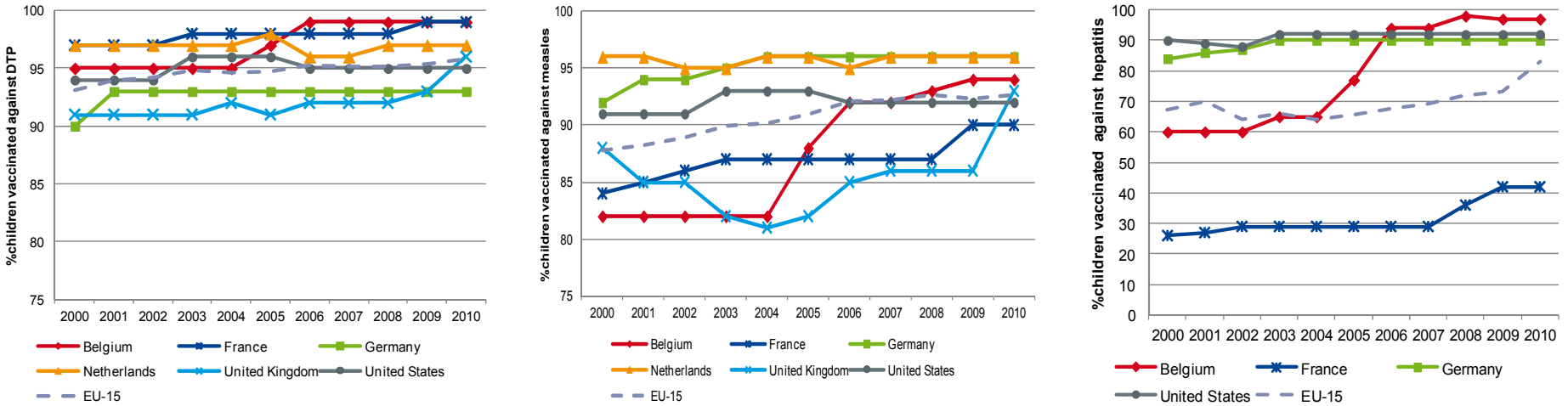
Coverage of vaccination

Immunisation is one of the most powerful and cost-effective forms of primary prevention. The choice of the vaccinations included in our set is based on the international indicators from European Community Health Indicators Monitoring (ECHIM) and OECD. In Belgium, as vaccination is a regional health competence, the vaccination rates are measured at regional level, and a national rate is computed as a weighted average of the three regional rates.

The WHO-recommended target rate for a collective immunisation is 90% for Diphteria-Tetanos-Pertussis (DTP) and 95 % for measles. In general, the recommended coverage rates are reached in Belgium. The 3rd dose-coverage of Diphteria-Tetanos-Pertussis (DTP3), Haemophilus Influenzae B (Hib), poliomyelitis (Polio3), hepatitis B (Hep3) has increased and exceeds 95%. Only for Measles-Mumps-Rubella (MMR) the coverage was still just below 95% in 2009. It must be noticed that some small epidemic outbreaks of measles have occurred in recent years, in all regions and a large outbreak of measles occurred in 2011.[37]

Compared with other European countries, Belgium ranks very good for DTP3 coverage, particularly since 2003. For measles (1st dose), the global coverage ranks good, has much improved and reaches almost the recommended level.

Figure 10 – Percentage of children covered by main vaccinations (2000-2009): international comparison



Source: OECD Health data 2012

In Belgium, seasonal influenza vaccination is currently recommended in 5 groups of persons defined as being of influenza complications (like persons aged >65 years and all persons living in institutions; healthcare professionals; pregnant women; persons aged 50-64 years with health risks like obesity; chicken and pig farmers).[38] The WHO recommends a target vaccination rate of 75% for the elderly.[39] The last Intermutualistic Agency (IMA) report which covers the winters 07-08 and 08-09, shows that the vaccination coverage of elderly does not reach the WHO target (63% in 2008-2009)[40], except for elderly residing in institutions (83%). Compared to other countries, coverage in Belgium is lower than in France, UK and the Netherlands (between 70% and 80%), and similar to the EU-15 average (63%).

Accessibility of long-term care (residential care for elderly and informal carers)

Relative to the 65+ population, the number of beds in residential care facilities has remained constant over the past decade, at 7 beds per 100 persons of 65 and over in 2010.[41] This stable figure hides large shifts in the sector: the number of beds in homes for the elderly has decreased steadily in the last decade, from around 88 000 in 2000 to 64 000 in 2011, while the number of beds in nursing homes almost doubled, from around 33 000 to 65 000 over the same period. There are also large differences between regions. In 2010, the number of beds in homes for the elderly per 100 inhabitants of 65 years and older was considerably higher in Wallonia and Brussels than in Flanders (Table 16) while the density of nursing home beds does not diverge much between the regions. Overall, the number of beds in residential facilities in relation to the elderly population is much higher in Wallonia and Brussels than in Flanders.

Table 16 – Number of accredited beds in homes for the elderly and nursing homes per 100 population 65 years and older, per region, 2010

	Beds in homes for the elderly			Beds in nursing homes		
	Wallonia	Flanders	Brussels	Wallonia	Flanders	Brussels
Number of beds /100 inhabitants 65 +	4.9	2.5	6.3	3.4	3.3	3.8

Source: RIZIV – INAMI 2011

Data are available internationally for the proportions of population over 65+ recipient of long-term care (LTC) in residential care. With a percentage between 6% and 7%, Belgium is higher than the EU-15 average (that is between 4% and 5%), and similar to the Netherlands. No data are available for recipients of home care.

Informal carers, defined as people providing assistance with basic activities of daily living (ADL) for at least one hour per week, are an important component in the long-term care process.[5] The number of informal carers is estimated to decrease in the coming decades, as a result of declining family size, changes in residential patterns of people with disabilities and rising participation rates of women in the labour market.

The average proportion of informal carers varied from 8% in Sweden to 16.2% in Italy. The Belgian average of 12.1% of the population aged 50 and older is slightly higher than the overall average of the OECD-countries (11.7%).[5]

Other results are available in the documentation sheets (Supplement S1 available on the web) and include data on share of women, weekly hours of care, distribution of care recipients, employment rate and hours of work, leave from work, flexible work schedule, and mental health problems related to informal care giving.

As there are currently no data on patient needs, these two indicators are still insufficient to evaluate the accessibility of long-term care.

Accessibility of end-of-life care: timeliness to start palliative care

The last indicator of accessibility is specific to end-of-life care. The start of palliative care is sometimes delayed until patients are in terminal phase. This can denote either problems of accessibility of end-of-life care, either that the decision to start palliative care was taken too late. There is currently very little information on the real moment when palliative care is started, but the time when the palliative lump sum is requested for a patient can provide some indication.[n] A study from the Christian Sickness Funds (2006) gives some indications: the application for the palliative lump sum occurred for half of the patients in less than a month before their death. In 20% of the cases, patients died within the week of application.[42,43] More data are needed on this indicator.

n Patients who stay at home and have a life expectancy of less than three months can benefit from a “palliative statute”. It involves a lump sum and the abolition of patient co-payment for nursing, GP visits and visits of the physiotherapist. The use of palliative lump sums at home increased from 8 504 lump sum in 2004 to 20 170 in 2010 (source: RIZIV – INAMI).

3.3 Key findings

Workforce

- The density of practising physicians (those who performed more than one reimbursed clinical act) increased slightly from 2.83 /1000 population in 2000 to 2.91/1000 population in 2010. Expressed in full-time equivalents, medical density decreased to 1.95 /1000 population.
- The density of practising nurses in the healthcare sector was 10/1000 population in 2009. On 100% nurses, 68% were active in the healthcare sector (37% in hospitals, and the rest in residential care for older persons or in nursing home care). This result was not available in the previous report.

Financial accessibility

- The coverage of population by health insurance is very high (99.5%), due to compulsory affiliation to a sickness fund.
- Between 2003 and 2010, the out-of-pocket (OOP) expenditures rose from €5.33 to €7.25 billion. Their share in total health expenditures remained constant during the same time period: 20.0% in 2003 and 19.4% in 2010. OOP expenditures per capita amounted to €665 in 2010. Comparison with other European countries shows that OOP expenditures (expressed as a % of total health expenditures) in Belgium are at the higher end, with countries such as France, the Netherlands and the United Kingdom lying below 10%.
- In 2008, 14% of the households declared that they had to postpone some of their healthcare (medical care, surgery, drugs, glasses or lenses, mental healthcare) due to problems of financial accessibility. In 1997, this percentage was below 10%.

Coverage of preventive measures

- During the last five years, the coverage of organized breast cancer screening stagnates around 30%, with huge differences in participation between regions (Brussels: 12%, Flanders: 46%, Wallonia: 7%). Overall coverage, including all mammograms, stabilized around 60%, which is far below the EU-15 target (75%).
- Coverage of cervical cancer screening was stable between 2007 and 2010 (62%-63%), while the number of tests performed annually was divided by 2 between 2008 and 2010, due to changes in reimbursement rules. Coverage in Belgium is within the EU-15 average (63%) but lower than in the UK (around 80%).
- In general, the WHO-recommended coverage rates of children vaccination are reached in Belgium. The coverage rates of diphtheria-tetanus-pertussis, poliomyelitis, hepatitis B have increased and are now above 95%. Only for measles the coverage was still just below 95% in 2009.
- The WHO-recommended coverage of elderly vaccination against influenza is not met: 63% in the winter 2008-2009 against a 75% target. Vaccination rates for elderly residing in an institution are higher (82%).

Accessibility of long-term care (residential care for elderly and informal carers)

- **Relative to the 65+ population, the number of beds in residential care facilities has remained more or less constant over the past decade, from 71 beds per 1000 persons of 65 years and over in 2000 to 70 beds in 2010. With 6%-7% of 65+ residing in residential care, Belgium is higher than the EU-15 average, between 4% and 5%, and is similar to the Netherlands. No data on home care users are available for international comparison.**
- **Informal carers, defined as people providing assistance with basic activities of daily living (ADL) for at least one hour per week, are an important component in the long-term care process. The Belgian average of 12.1% of the population aged 50 and older reporting to be an informal carer is slightly higher than the overall average of the OECD-countries (11.7%).**

Timeliness to start palliative care

- **There is currently little information about the moment when a palliative status is requested. A study from the Christian Sickness Funds (2006) gives some indications: the application for the palliative lump sum occurred for half of the patients in less than a month before death. In 20%, patients died within the week of application. More data are needed (trend over time, international comparison) on this indicator.**

4 QUALITY OF HEALTHCARE

Quality is defined as "the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge".[6] It is further subdivided into 5 sub-dimensions: effectiveness, appropriateness, safety, continuity of care and patient centeredness.

4.1 Effectiveness of care

4.1.1 How did we evaluate the effectiveness of care?

Effectiveness is defined as "the degree of achieving desirable outcomes, given the correct provision of evidence-based healthcare services to all who could benefit but not those who would not benefit". All indicators are thus outcome (results) indicators.

4.1.1.1 Preventive care

No indicator provides information on the effectiveness of preventive care, as updating this set of indicators for preventive care did not belong to the operational objectives of this 2012 report. Examples of such indicators include: declines in mortality for cancer for which there is a screening programme, shifts in staging at diagnosis of cancer and incidence or mortality of epidemics for which vaccination exits.

4.1.1.2 Curative care

Four indicators have been selected to assess the effectiveness of curative care: three indicators related to the survival after a diagnosis of cancer, and one indicator on the effectiveness of ambulatory services to treat patients with a chronic condition (in this case: asthma).

Cancer Care

1. 5-year relative survival after breast cancer, by stage
2. 5-year relative survival after cervical cancer, by stage
3. 5-year relative survival after colon cancer, by stage

Chronic care

4. Avoidable hospital admissions for asthma

4.1.1.3 Long-term care

Three indicators are selected to assess the effectiveness of mental healthcare:

1. Suicide rate
2. Rate of involuntary committals as a percentage of all hospitalizations
3. Participation rates by people with mental illness of working age in employment

With regard to the effectiveness of long-term care for the elderly, no data are currently available at a national level. However, the BelRAI[o] will provide data soon on a selected indicator: the prevalence of malnutrition in elderly being in residential care facility or receiving home care (BMI<19)[p].

4.1.1.4 End-of-life care

Some indicators have been proposed by the expert groups, such as the percentage of palliative patients for which physical symptoms (pain for instance) have been assessed and controlled, but there are currently no data available for this indicator.

4.1.2 Facts and figures

This section is a short summary of the detailed results which are presented for each indicator in the Supplement S1 of this report (available on the website).

[o] The Resident Assessment Instrument (RAI)[44] is originally developed to assess the care needs of the elderly in institutions, and has later been extended with instruments for different care settings and subgroups. In Belgium a national pilot project (the BelRAI) is ongoing, but is not yet implemented in all care settings: the assessment instruments for home care, for long-term care facilities and acute care have already been adapted to the Belgian situation (details in Appendix C).

[p] This indicator is already measured in the Netherlands (Dutch Health Care Performance Report 2010[3,20]) and also belongs to the set of indicators proposed by the OECD working group on long-term care quality indicators.[45]

4.1.2.1 Survival after a cancer

Survival rates after cancer are one of the key indicators of the effectiveness of the healthcare system and are commonly used to track progress in treating disease over time. They reflect both how early the cancer was detected, and the effectiveness of the treatment.[5] In Belgium national 5-year relative survival data became available only recently and no evolution of relative survival can be given already in this report. For international comparisons, data refer to the incidence year 2004. Rates are expressed as “relative 5-year survival years”, meaning that they have been corrected for the age-specific expected mortality.

The 5-year breast cancer relative survival rate is 80% in most OECD countries[5] and has improved in all countries between 1997-2002 and 2004-2009. In Belgium, the 5-year relative survival of women diagnosed between 2004 and 2008 was 88%.[46] Survival rates are very good compared to other European countries (Figure 11).

The 5-year cervical cancer relative survival rate was 69.8% for women diagnosed between 2004 and 2008. Compared to other EU-15 countries, relative survival rates of patients diagnosed in 2004 are within the EU average (Figure 11).

All countries have also shown improvement in 5-year colorectal cancer relative survival over the years. There are differences in colorectal cancer relative survival between gender across countries: survival rates are usually higher for females.[5] In Belgium, on the cohort of patients diagnosed with colon cancer between 2004 and 2008, the relative survival was 62.3% for males and 64.6% for females. Again, relative survival rates after colorectal cancer[q] are very good compared to other European countries (Figure 11).

Only for breast cancer and colon cancer, the US has higher survival rates than Belgium (data shown in documentation sheet in Supplement S1). To be able to distinguish the effect of early screening from the actual care, relative survival rates should be compared across countries by stage, information which is not yet available at international level.

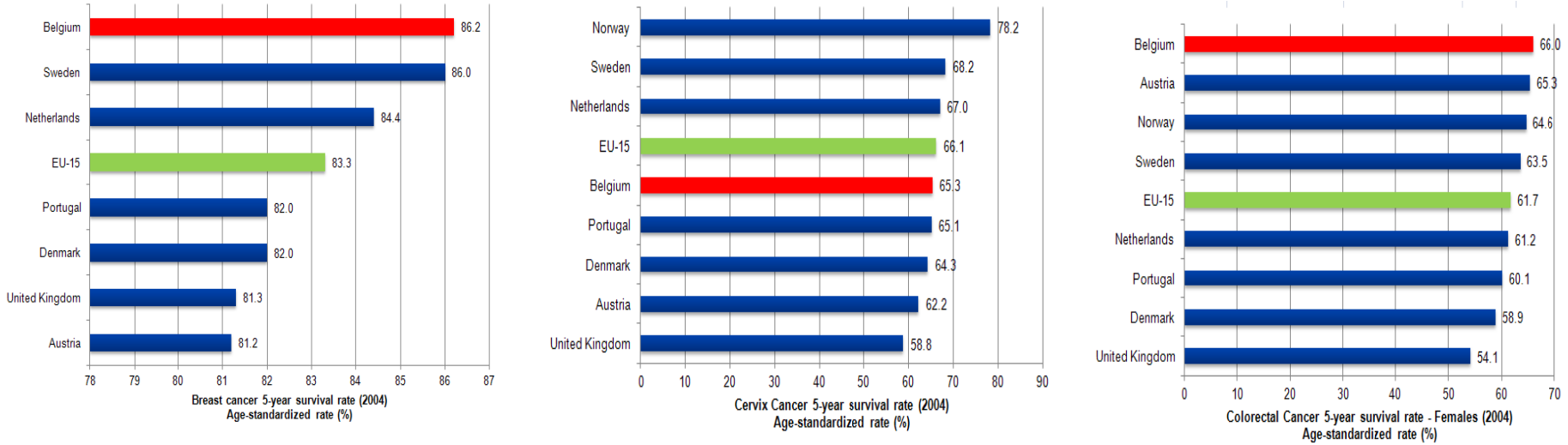
[q] Survival rates after colorectal cancer, and not specifically colon cancer, are available in the OECD Health Data 2012.

Table 17 – 5-year relative survival by stage, period 2004-2008: Belgium

Cancer type	All patients	Stage				
		I	II	III	IV	missing
Female breast cancer	88.0%	99.8%	93.3%	73.8%	29.2%	73.4%
Cervical cancer	69.8%	92.2%	63.6%	54.5%	17.0%	64.6%
Colon cancer: males	62.3%	91.6%	86.1%	61.7%	14.5%	54.5%
Colon cancer: females	64.6%	96.3%	86.1%	62.1%	16.0%	55.5%

Source: Belgian Cancer Registry and Evaluation of Cancer Plan (Cancer Centre)[46]

Figure 11 – 5-year relative survival after breast, cervix and colorectal cancer for females: international comparison (2004)



Source: OECD Health Data 2012
Note: results for colorectal cancer males give similar results for Belgium

Effectiveness of ambulatory care for a chronic condition

Asthma, a chronic condition, is either preventable or manageable on an outpatient basis through proper prevention or primary care intervention. Proper management of asthma in primary care setting can reduce exacerbation and costly hospitalisations. The hospital admission rate for asthma commonly serves as a proxy for primary care quality. Hence, high admission rates may indicate poor effectiveness of primary care, or poor care coordination or continuity.[5] This indicator belongs to the set of HCQI (healthcare quality indicator) of the OECD.

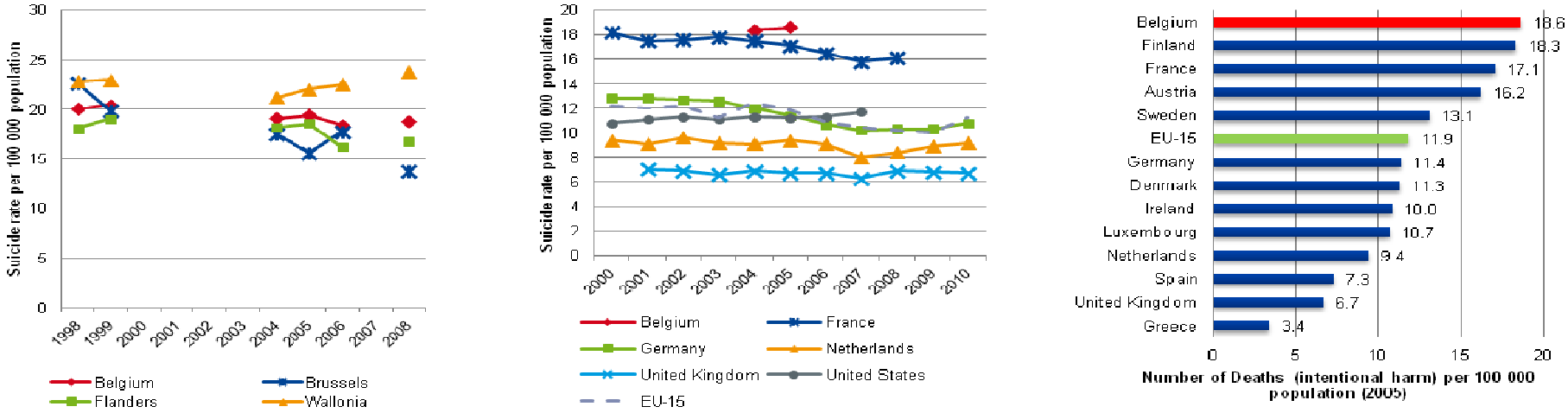
Across OECD countries, there is an 11-fold difference in hospital admission rate for asthma. Females have consistently higher rates for asthma admissions compared to males (on average 85% higher).[5] This is also the case in Belgium: in 2009, the asthma admission rate for females was 52/100 000 inhabitants and 28/100 000 inhabitants for males. Belgian rates in the OECD Health data (2007) show that 48.4/100 000 inhabitants are slightly above the EU-15 average (47.2/100 000 inhabitants). This might highlight the need for more effective and targeted care in primary care setting.

Effectiveness of mental healthcare: suicide rate in the general population, involuntary committals within the psychiatric hospitalization and working status of persons with mental illness

Suicide rate

Despite a slight decrease (from 20.05/100 000 inhabitants in 1998 to 18.75/100 000 inhabitants in 2008) the number of suicide deaths in the general population is considerably higher than in other European countries. For the time period of the analysis, suicides rates are higher in Wallonia than in Flanders and Brussels (Figure 12). Important differences within regions were also found in previous research. In Wallonia, the highest suicide rates are found in the province of Namur (25.4/100 000 inhabitants) while in Flanders the highest rates are observed in East Flanders (21.4/100 000 inhabitants).[47] The suicide rate is also higher for men than for women, and higher for middle-aged adults (aged 40-64 years).

Figure 12 – Suicide rates (number per 100 000 population) per region (1999-2008) and international comparison

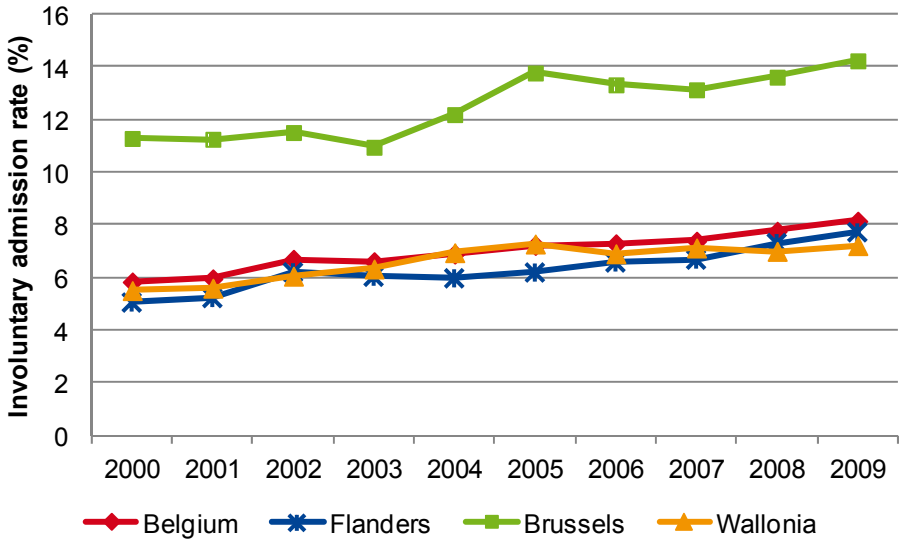


Source: DGSIE (Belgium) and OECD Health Data 2012 (international, data for Belgium only available in 2004-2005)

Involuntary committal in psychiatric hospitals

The percentage of involuntary psychiatric hospitalizations (”for observation”; “internment”; ”prolongation involuntary admission”; “probation”; “other judicial conditions”;) in Belgium steadily increased between 2000 and 2009 from 5.8% to 8.2% of all psychiatric hospitalizations (Figure 13). The rate in Brussels is twice as high compared to the two other regions (Brussels 14.2%, Flanders 7.7%, Wallonia 7.2%). The three most common conditions among the 7 719 involuntary committals registered in 2009 were schizophrenia (n=1 579 or 20.46%); psychotic conditions (n=1 270 or 16.45%) and alcohol abuse (n=723 or 9.37%). The three conditions with the largest share of involuntary committals in 2009 were paraphilia (57/157 or 36.31%); schizophrenia (n=1 579/6 274 or 25.17%) and psychotic conditions (n=1 270/5 747 or 22.10%). Results based on old data (year 1998) showed that rates of involuntary committal are very low in Belgium compared to other European countries. These results have been confirmed in analyses of involuntary committal population rates.

Figure 13 – Percentage of involuntary committals in psychiatric hospitals, by region (2000-2009)

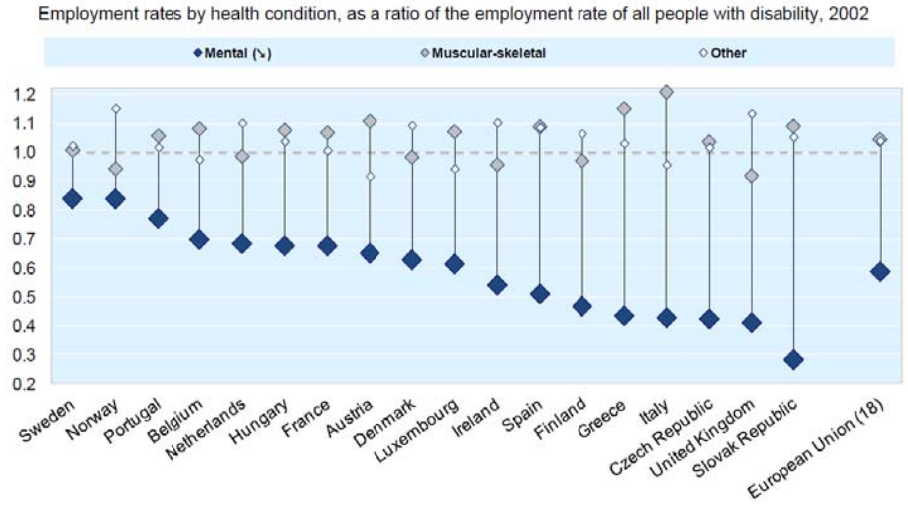


Source: FPS Public Health, Minimum Psychiatric data (RPM – MPG)

Participation rate by people with mental illness of working age in employment

The last EU Labour Force Survey performed in 2002 showed that the employment rate of people with mental disabilities is low compared to the employment rate of people with other disabilities.[29] Belgium performs well but is ranked lower than Norway, the Netherlands, Sweden and Portugal (Figure 14). An update of this study (year 2011) is expected to be released soon.

Figure 14 – Employment rates by health condition, as a ratio of the employment rate of all people with disability: international comparison (2002)



Source: European Labour Force Study 2002

4.1.3 Key findings

- **The relative survival 5 years after a diagnosis of breast cancer, cervix cancer and colon cancer is respectively 88%, 70% and 63% (62% for men, 65% for women). Belgium has the highest 5-year relative survival rate in Europe for female breast cancer, and colon cancer, but the cervical cancer survival is lower than the EU-15 average.**
- **Hospital admission rates for asthma are stable over time (2004-2009), and Belgium is just above the EU-15 average.**
- **The suicide rate is considerably high compared to other European countries, even if it decreased slightly in Belgium between 1998 and 2008. The suicide rate is higher for men than for women, and higher for middle-aged adults (aged 40-64 years). For the period analysed, the rate is higher in Wallonia than in Flanders and Brussels.**
- **The percentage of involuntary psychiatric hospitalizations in Belgium steadily increased between 2000 and 2009 from 5.8% to 8.2% of all psychiatric hospitalisations. The rate in Brussels is twice as high as in the two other regions (Brussels 14.2%, Flanders 7.7% and Wallonia 7.2%). Results are based on old data (year 1998). They showed that rates of involuntary committal are very low in Belgium compared to other European countries.**
- **The last EU labour survey (in 2002) showed that Belgium performs well compared to EU countries concerning the employment rate of people with mental disabilities, but more recent data are lacking.**

4.2 Appropriateness

4.2.1 How did we evaluate the appropriateness of care?

Appropriateness can be defined as "the degree to which provided healthcare is relevant to the clinical needs, given the current best evidence". The link between effectiveness and appropriateness reflects the link between outcomes and processes.

Seven indicators were selected to measure the appropriateness of care:

Screening out of the target groups

1. Breast cancer screening for women younger than target age group (aged 40-49)
2. Breast cancer screening for women older than target age group (aged 71-79)

Application of guidelines

3. Follow-up of diabetic patients (blood and eye exams)
4. Prescription of antibiotics according to guidelines

Geographic variation in surgical interventions

5. Geographical variation in caesarean sections per 1000 live births

Mental Health

6. Average daily quantity (ADQ) of medication prescribed (antidepressants / antipsychotics / hypnotics and anxiolytics)

Aggressiveness of care at the end-of-life

7. Proportion of cancer patients receiving chemotherapy in the last 14 days of their life

4.2.2 Facts and figures

This section is a short summary of the detailed results which are presented for each indicator in the Supplement S1 of this report (available on the website).

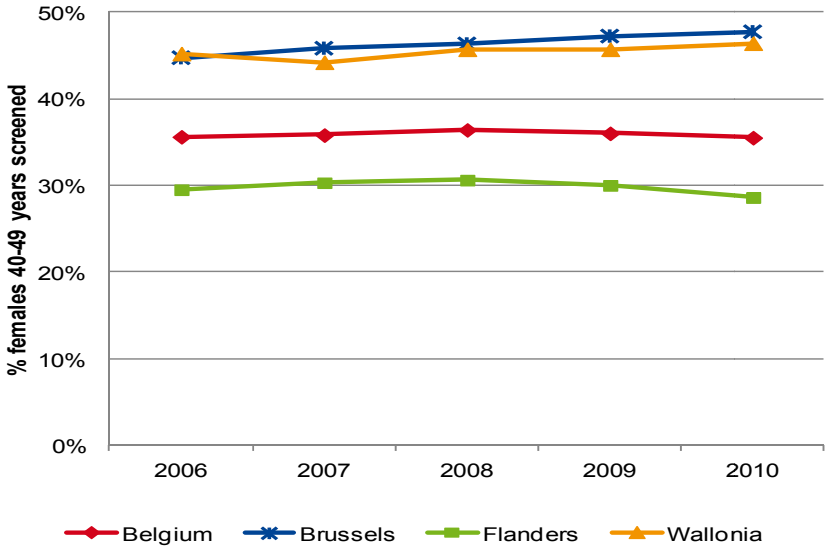
Mammograms coverage outside of the target groups

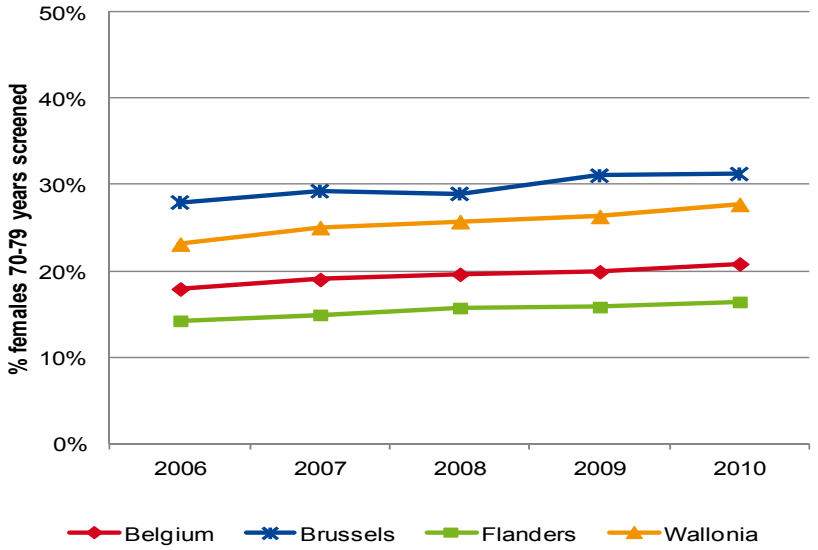
The national breast cancer screening programme set up since 2001-2002 targets women aged 50-69. Two recent guidelines have not recommended the extension of this target group to younger (40-49) or older age categories (70-79) in Belgium.[48, 49] Those two indicators reflect the extent to which the screening is performed outside of the target group.

The percentage of women aged 40-49 who received a mammogram[r] in the last 2 years was stable around 35% between 2006 and 2010, with large differences across regions. For women 71-79 years old, the rates are lower (21% in 2010), but increasing, and also with higher rates in Brussels and Wallonia (Figure 15). It should be noted that a small proportion of those mammograms are performed for diagnostic reasons[47](it is not possible to distinguish between opportunistic screening and diagnostic mammograms, based on the reimbursement codes).

[r] This includes all mammograms, for opportunistic screening and for diagnosis

Figure 15 – Mammogram coverage of women aged 40-49 years and of women aged 70-79 years, by year and region





Source: IMA-EPS, KCE calculation

Application of guidelines: follow up of diabetic patients (chronic care) and prescription of antibiotics (acute care)

Several situations permit evaluation of the quality of the monitoring of chronic patients, in particular the integrated and multidisciplinary management of diabetic patients. For diabetic patients, the guidelines recommend that glycated haemoglobin, albumin and creatinine are monitored preferably once a year, and never less often than every 15 months. It is also recommended that an ophthalmologist performs a dilated fundus examination every year in order to early detect ocular complications. Over a 15-month period, 95% of insulin-dependent patients received a blood sugar check, 93% a creatinine check and 56% an albumin check. In the last 12 months 57% had undergone a check and, over a period of three years, 20% of patients had no ophthalmologic consultation. The recommendations are relatively well observed with regard to glycated haemoglobin. The situation is less satisfactory among diabetic patients who are not treated with insulin. The ophthalmologic consultation appears to be an issue for one third of diabetics. Subgroup analyses showed that guidelines are less well followed for patients older than 75 years and for patients in residential care.[26]

The appropriateness of therapeutic prescription is evaluated on the basis of the prescription of antibiotics according to guidelines. Since the early 2000s, the authorities have been raising awareness among the public and physicians concerning the issue of antibiotic resistance. Antibiotics should be prescribed only where they are really necessary and the choice should preferably tend towards first-line antibiotics. For most indications, amoxicillin should be prescribed in first intention without clavulanic acid.

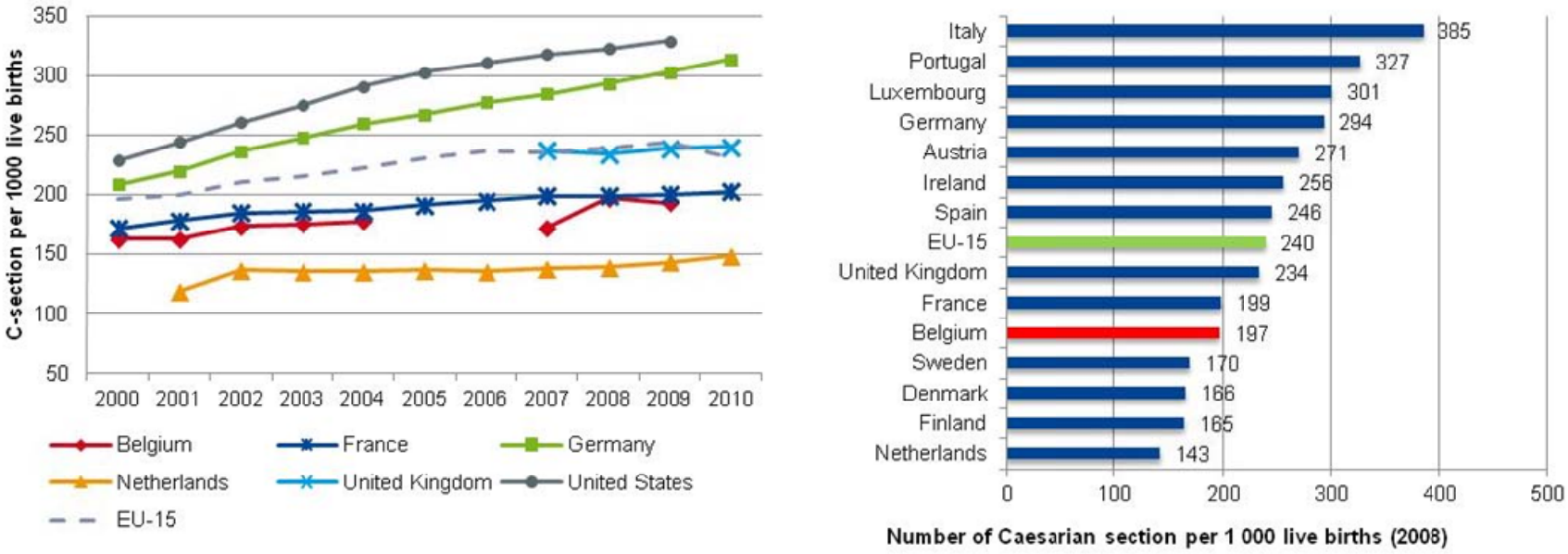
43% of patients who consult a GP receive at least one prescription for antibiotics during the year. This – high – figure has been stable since 2006. The number of days of treatment is increasing (23.9 in 2008 compared with 21.2 in 2006). Furthermore, the antibiotics prescribed are not always first-line. For example, a combination of amoxicillin and clavulanic acid is very often prescribed even though a prescription for amoxicillin alone would suffice (the 45% has been stable since 2006). In addition, a much higher rate of prescriptions to patients over the age of 75 in residential care is observed in comparison with the over-75s in general.[26]

There are no international data for this specific indicator, but comparison of antibiotics prescribed per capita reveals that Belgium is in the top 5, and more than twice as much as the Netherlands (Belgium, 27.5 DDD/1000 pop/day versus the Netherlands, 11.4 DDD/1000 pop/day).[5]

Geographic variation in surgical interventions as evidence of inappropriate care: the case of caesarian section

Results from international comparison show that C-sections are increasing in the majority of European countries, with EU-15 average at 251/1000 live births in 2009. Belgium has a C-section rate similar to France, and lower than the EU-15 average. In 2009, the C-section rate in Belgium was 193/1000 live births. Despite this somehow reassuring result, the rate is continuously increasing. Moreover, an analysis of the FPS Public Health revealed a very high variability between hospitals; in the period 2004-2007, the national rate was 13.7% (based on a selection of low-risk pregnancies from 2004-2007) and relative differences ranged from 61% to 70% around this average.[50] Geographic variability for elective surgical procedures has also been shown in Belgium for hip replacement and knee replacement, two procedures for which Belgium ranks in the top of EU-15 countries.[5, 51]

Figure 16 – C-sections per 1000 live births: international comparison



Source: OECD Health data 2012, except for Belgium 2009 (FPS Public Health)

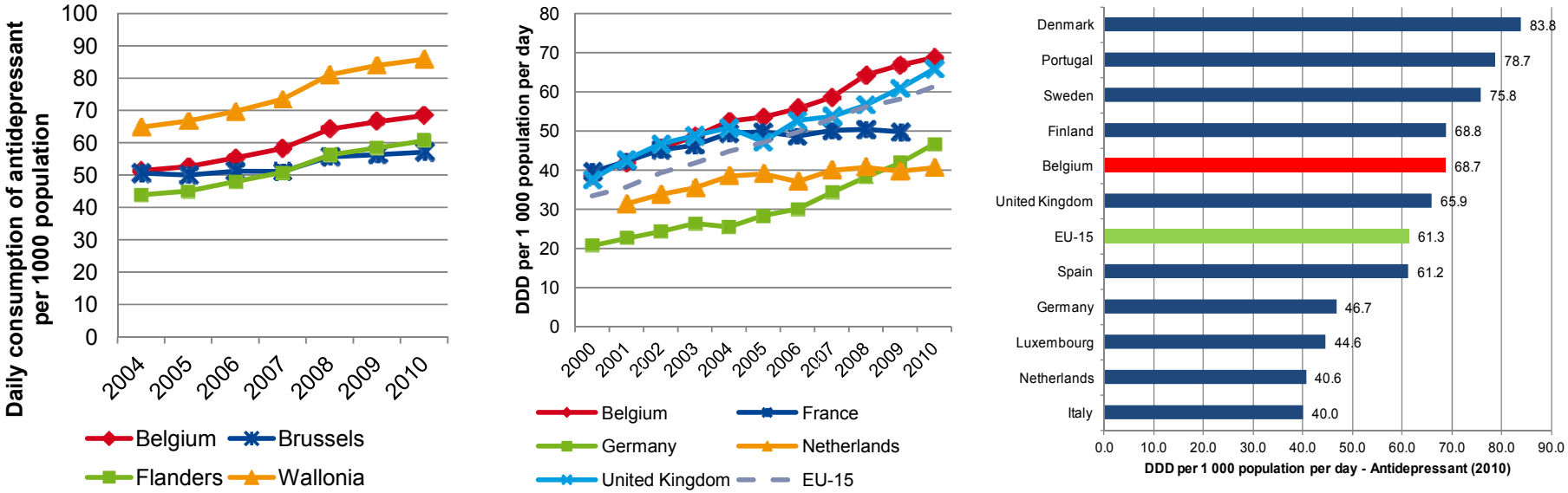
Appropriateness of prescriptions in mental healthcare: antidepressants

Average daily quantity of antidepressants prescribed (Defined Daily Dose (DDD) per 1000 population)

The prescription of the average daily quantity antidepressants prescribed per 1000 population increased from 51.4 (2004) to 68.4 (2010). Prescription of antidepressant drugs are highest in Wallonia (85.9, compared to 57.1 in Brussels and 60.7 in Flanders). It is considerably higher for females (92.8) compared to males (43.1).

International comparison shows that Belgium ranks high in terms of antidepressant consumption (see documentations sheet). We cannot conclude from these figures if Belgium is performing better or worse. Nevertheless, the large differences (between sexes; between regions; international context) pinpoint that the appropriateness of antidepressant drugs (e.g. over- and underconsumption) needs to be studied and monitored.

Figure 17 – Defined daily dosage of antidepressants per 1000 population per day: by region (2004-2010) and international comparison (2000-2010)



Source: Pharmanet (RIZIV – INAMI, for Belgium) and OECD Health Data 2012 for international comparison

Average daily quantity of antipsychotics prescribed (per 1000 population per day)

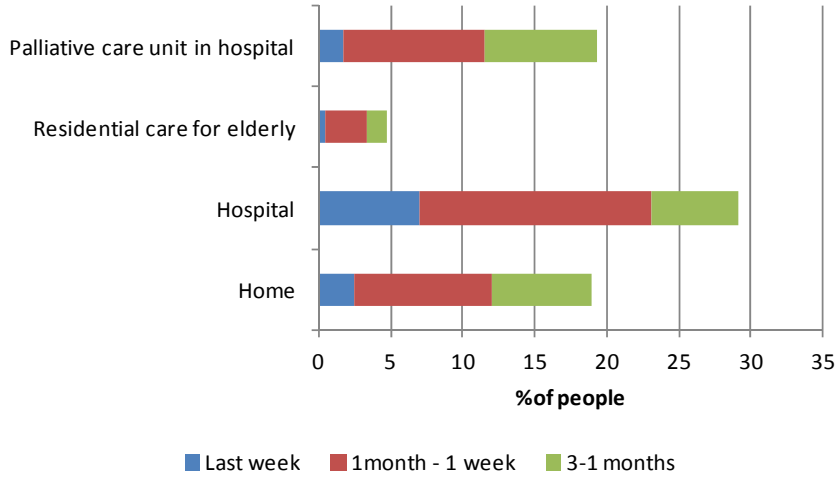
The prescription of antipsychotic medication increased from 2004 (8.0 per 1000 population) to 2010 (10.5 per 1000 population), with differences between regions (higher in Brussels and Wallonia than in Flanders).

Aggressiveness of care at the end-of-life: chemotherapy for cancer patients

Receiving (or initiating) a session of chemotherapy near the end-of-life for cancer patients is considered unappropriate aggressiveness of treatment.

The percentage of people receiving chemotherapy near the end of their life is an internationally used indicator. A study of the Christian Sickness Funds on end-of-life care for cancer patients (data 2005)[43,42] showed that the highest use of chemotherapy during last month of life was observed for cancer patients who died in hospital (23.1%). The use of chemotherapy was 12.1% for patients dying at home and 11.5% for those dying in palliative care units. The lowest use of chemotherapy was seen in cancer patients who died in residential care for elderly (3.4%).

Figure 18 – Chemotherapy near end-of-life for patients with cancer, by place of death



Source: Results from study "De CM neemt het levenseinde onder de loep: de cijfers" [43]

4.2.3 Key findings

- **Breast cancer screening is recommended for women aged 50-69 years. However, there is a large group of women who are screened before that age (36% in Belgium overall, 48% in Brussels, 46% in Wallonia and 39% in Flanders). Evolution over time shows no real declining trend. Older women undergo less often a mammography: 21% of 71-79 years old women had a mammography in the last two years (Brussels 31%, Wallonia 28% and Flanders 16%). Evolution over time shows rising trends (from 18% in 2006).**
- **Over a 15-month period, 95% of insulin-dependent patients received a blood sugar check, 93% a creatinine check and 56% an albumin check. In the last 12 months 57% had undergone a test and, over a period of three years, 20% of patients had no ophthalmological consultation.**
- **The percentage of prescription with amoxicillin alone (compared to amoxicillin and clavulanic acid) is stable, around 45% (Brussels: 43%, Flanders: 46%, Wallonia: 41%). Belgium ranks very high internationally in terms of antibiotic prescription but there are concerns about comparability of results in total of Defined Daily Doses (DDD), especially if differences in package size exist between countries.**
- **Caesarean rates in Belgium are lower than the EU-15 average (in Belgium 193/1000 live births in 2009, EU-15 average 251/1000 live births), but increasing, as in the majority of European countries. Several studies on Belgian data have shown a large variability in caesarean rates between hospitals.**
- **The prescription of antidepressants also increased from 2004 to 2010, with large differences between regions (higher in Wallonia than in Brussels and Flanders). International comparison shows that Belgium ranks high in terms of antidepressant consumption.**
- **The use of chemotherapy during the last days of life for patients dying from cancer is an indicator of the aggressiveness of care. There are currently no national data on this indicator. In a study from the Christian Sickness Funds, the highest use was observed for cancer patients who died in hospital (23.1%) and the lowest for patients who died in residential care (3.4%). To interpret this indicator correctly, more data are needed on trends over time, regional differences and international comparability.**

4.3 Safety of care

4.3.1 How did we evaluate the safety of care?

Safety can be defined as “the degree to which the system has the right structures, renders services, and attains results in ways that prevent harm to the user, provider, or environment”.[4] Including the provider and environment in this definition extends the dimension beyond quality.

Six indicators to evaluate the safety of healthcare have been studied:

A generic indicator

1. Medical radiation exposure of the Belgian population

Healthcare Acquired Infections

2. Incidence of MRSA in hospital
3. Incidence of post-operative sepsis (Patient Safety Indicator, PSI, calculated on hospital discharge databases)

Other safety indicators in hospital

4. Incidence of pressure ulcer in hospitals (Patient Safety Indicator, PSI, calculated on hospital discharge databases)
5. In-hospital mortality after hip fracture

Prescription of antidepressants to elderly

6. Percentage of persons aged 65 years and older prescribed antidepressants using an anticholinergic antidepressant

Four other indicators related to safety of long-term care for elderly patients are not yet measurable, but data from the BelRAI will probably be available for the next performance report (details on those indicators in Appendix C).

4.3.2 *Facts and figures*

This section is a short summary of the detailed results which are presented for each indicator in the Supplement S1 of this report (available on the website).

Medical radiation

Medical ionising radiation is particularly high in Belgium, in particular due to a large use of scanner and medical imaging in general. The irradiation level is measured in millisieverts (mSv). The average level of medical radiation by inhabitant increased from 2004 to 2009, stabilized in 2010 (2.29 mSv/pop) and decreased in 2011 (2.22 mSv/pop). The patients more exposed are chronic patients, patients in residential care, and persons above 45 years old. Children are less exposed. Prescription of medical imaging is more frequent and more intense in Wallonia.[26] Results from international comparisons show that average doses of medical irradiation are particularly high in Belgium (Figure 19).

Table 18 – Exposition to medical radiation per inhabitant (expressed in nb mSv): Belgium (2004-2011)

	2004	2005	2006	2007	2008	2009	2010	2011
nb mSv/inhab.	2.00	2.01	2.11	2.18	2.25	2.29	2.29	2.22
Evolution year (X+1)/X		0.4%	4.6%	3.6%	3.4%	1.6%	0.1%	-2.9%

Source: RIZIV – INAMI

Figure 19 – Exposition to medical radiation per inhabitant (most 20 exams, expressed in mSv): international comparison

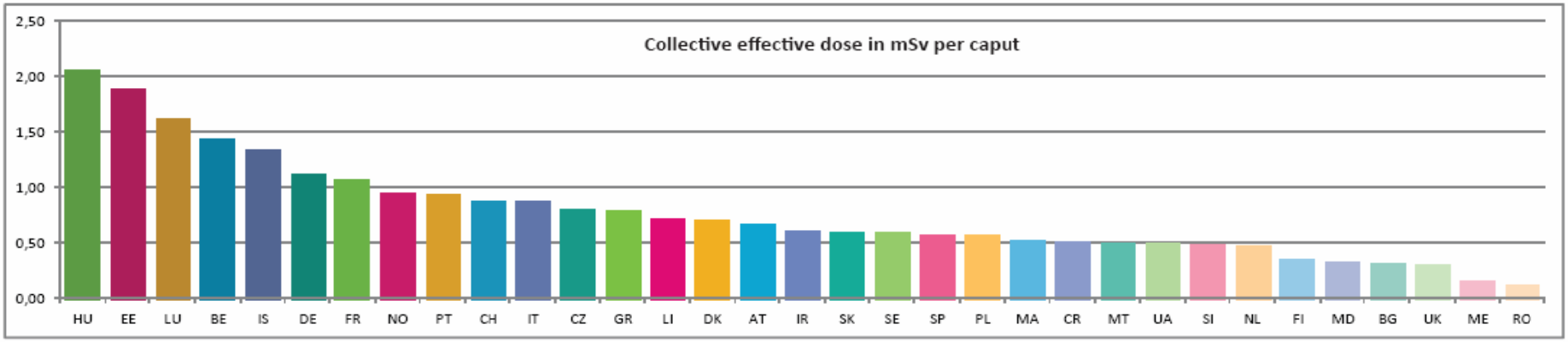


Figure 1. Collective effective dose [mSv] per caput in 33 European countries was estimated using Top 20 method. The data is preliminary data available on 12th March 2012 and will be verified by countries before the Workshop in Athens on 24-26 2012. Some countires have expressed their willingnes to submit their data later during the project.

Source: European Population Dose from Radiodiagnostic Procedures – Results of Dose Datamed 2 (http://ddmed.eu/_media/results:ddm2_results_irpa13v2.pdf)

Healthcare-acquired infections (HAI)

Healthcare-acquired infections occur after exposure to healthcare. According to the European Centre for Disease Control and Prevention (ECDC, www.ecdc.europa.eu) each year 4 million patients acquire a HAI in the EU and about 37 000 of them die as the direct consequence of the infection. The most frequent types of HAIs are surgical site infections, urinary tract infections, pneumonia, bloodstream infections and gastrointestinal infections. In Belgium, the last prevalence survey in half of the acute hospitals occurred in 2007, and showed that 6.2% of the patients were infected by a HAI.[52] New results of prevalence are expected to be available at the end of 2012, based on a common protocol developed by the ECDC.

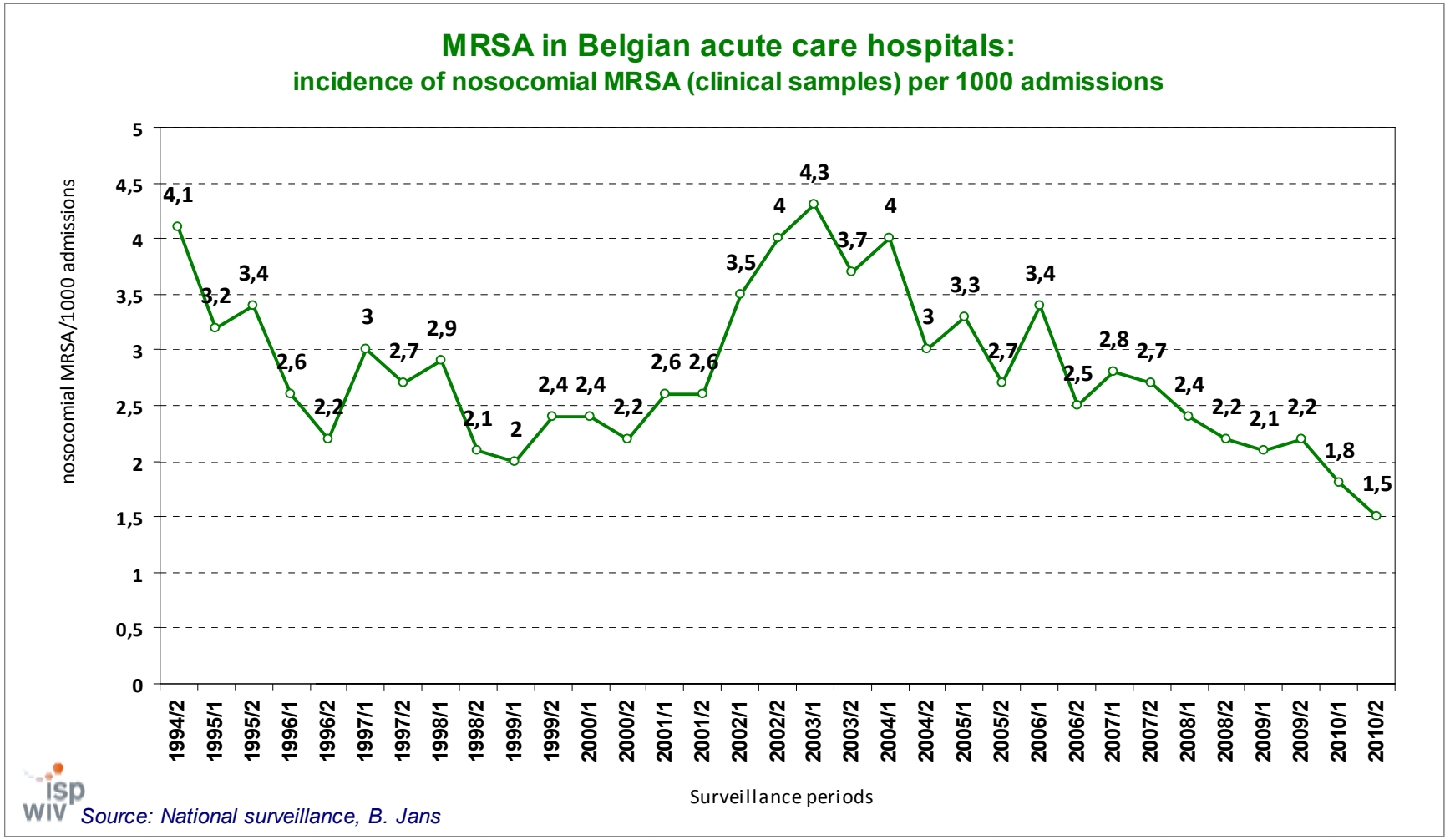
In Belgium, surveillance of HAIs is under the responsibility of the WIV – ISP, and is organized by the NSIH group (National Surveillance of Infections in Hospitals). For MRSA, the surveillance is mandatory in all acute care hospitals (since 2007). The third indicator, post-operative sepsis, belongs to the set of safety indicators from the OECD.

Incidence of MRSA

A decreasing incidence was found between 1994 and 1999 (from 4.1 to 2 cases/1000 admissions), after which the incidence again increased reaching 4.3 in 2003. Since 2003, we measure a slow, constant and statistically significant decrease of the incidence of nosocomial MRSA in acute care hospitals, finally reaching 1.5 new cases/1000 admissions during the second semester of 2010 (test for linear trend for a cohort of hospitals participating at least at 5 surveillance periods since 2003: annual decrease of -0.29 new cases/1000 admissions, $p<0.001$) (Figure 20). This decrease was most impressive in the Brussels hospitals. Probably, the application of the recommendations for the control of MRSA (since 2003, actually in revision), the national hand hygiene campaigns, and the rationalization of the use of antibiotics influenced positively this evolution. Nevertheless, the interpretation of the indicator remains influenced by the screening practices which vary in coverage rate and intensity between hospitals.[53]

No international organisations include data on MRSA, making comparison difficult. An exception is the European Antimicrobial Resistance Surveillance System (EARSS), but this European program does not focus on nosocomial acquisition.

Figure 20 – Mean incidence of Healthcare Acquired MRSA, per 1000 admissions (1994-2010)



Source: National Surveillance of Infections in Hospitals (NSIH), WIV – ISP

Patient Safety Indicators (PSI)

Incidence of post-operative sepsis

Incidence of post-operative sepsis is an international indicator of patient safety in hospital (Patient Safety Indicator, PSI)[54, 55], which is monitored on the basis of hospital discharge data. This indicator has also been studied on Belgian data, although with a slightly different methodology.[56]

Between 2000 and 2007, the incidence of post-operative sepsis was stable around 8 cases per 1000 admissions. However, when compared to the few other European countries which provided data, Belgium ranks rather high, but it is unclear whether this is due to higher incidence rates or differences in coding of secondary diagnoses.

Incidence of pressure ulcer

The occurrence of a pressure ulcer in a hospitalised patient has a serious negative impact on the individual's health[57] and often leads to a longer hospital stay. Pressure ulcers can be prevented with appropriate nursing care.[58, 59] This indicator also belongs to the set of safety indicators that can be calculated based on discharge data, but its accuracy largely depends on the accuracy of the coding practices in hospitals.

The global rate of pressure ulcers in acute hospitals was 12/1000 stays in 2000 and reached 17/1000 stays in 2007, with increasing trends over time for both surgical and medical hospitalisations. No more recent data are available on the OECD Health Data for Belgium.

Other data than administrative discharge databases are available to estimate prevalence of pressure ulcers. In 2008 a prevalence study was organised for the first time, following the last European Pressure Ulcer Advisory Panel guidelines (specific for registration and classification of pressure ulcers). This study was organized in 84 hospitals in 2008, and included 19 964 patients. A pressure ulcer prevalence of 12.1% was observed. Contrary to previous Belgian pressure ulcer prevalence measurements, no distinction was made between a pressure ulcer and incontinence associated dermatitis. The prevalence of grade 2 to 4 pressure ulcers was 7%.[60]

In-hospital mortality after hip fracture

Hip fractures are frequent causes of disability in elderly and are associated with an important mortality risk. Because in-hospital mortality after hip fracture gives direct information about outcomes and indirectly about the technical quality of care, it is first considered as an indicator of in-hospital safety, and secondly as an indicator of quality-effectiveness of care. The in-hospital mortality rate after a hip fracture was 6.3% in Belgium between 2004 and 2007. There was also a high variability in mortality rates between hospitals.[50]

Patients aged 65 years and older prescribed antidepressants using an anticholinergic antidepressant drug (%)

While elderly individuals can be treated effectively with antidepressant medications, they are at greater risk of adverse drug reactions due to the physiological changes associated with the aging process. In particular, antidepressants with strong anticholinergic effects (e.g., imipramine, amitriptyline and doxepin) are not recommended for ongoing use in the elderly as they can cause orthostatic hypotension, sedation and confusion. Use of these agents has been associated with high rates of adverse effects, including falls, among elderly patients. The health system has considerable influence over this indicator, as it is treatment-based. The appropriateness of prescribing behaviours by clinicians within the health system can be increased through education and training and the use of guidelines.[61, 62]

During the last 5 years the prescription of antidepressants known for their anticholinergic side-effects for elderly (≥65 years) is stable (14%). The percentages are consistently higher in Flanders (17%) compared to Wallonia (11%) and Brussels (10%). It should be noted that international comparisons are hampered by absence of available data but also by lack of consensus about what is an antidepressant with anticholinergic side-effects.[63,64,65] Nevertheless, the relatively high prescription rates of antidepressants with (potential) anticholinergic side effects warrant further investigation. Problems with the appropriateness of the prescription of psychopharmacological drugs in the elderly population have been documented before[66] and should be a continuous area of attention.

4.3.3 Key findings

- **The average level of medical irradiation increased from 2004 to 2009, stabilized in 2010 (2.29 mSv/pop) and decreased in 2011 (2.22 mSv/pop). The patients more at risk are chronic patients, patients in residential care, and persons above 45 years old. Children are less exposed. Prescription of medical imaging is more frequent and more intense in Wallonia. Results from international comparisons show that average doses of medical radiation are particulary high in Belgium.**
- **A decreasing incidence in healthcare-acquired MRSA was observed between 1994 and 1999, after which the incidence again increased in 2003. Since 2003, we measure a slow and constant decrease of the incidence of MRSA in acute care hospitals. This decrease was most impressive in the Brussels hospitals.**
- **Incidence of post-operative sepsis is an international indicator of patient safety (PSI) which is monitored on the basis of hospital discharge data. Between 2000 and 2007, the incidence of post-operative sepsis was stable around 8 cases per 1000 admissions. Belgium ranks high in comparison with other European countries, but this might be due to large differences in coding practices between countries.**
- **Incidence of pressure ulcer is another PSI. The incidence rate of pressure ulcers in acute hospitals was 12/1000 stays in 2000 and reached 17/1000 stays in 2007, with increasing trends over time for both surgical and medical hospitalisations.**
- **The in-hospital mortality rate after a hip fracture was 6.3% in Belgium between 2004 and 2007, with large variability between hospitals. More data are needed on trends over time, and few data are available for benchmarking at international level.**
- **During the last 5 years the prescription of antidepressants known for their anticholinergic side-effects for elderly (≥65 years) is stable (13-14%). The percentages are higher in Flanders (16-17%) compared to Wallonia (13-14%) and Brussels (10%).**

4.4 Continuity of care

4.4.1 How did we evaluate the continuity of care?

Continuity addresses "the extent to which healthcare for specified users, over time, is smoothly organised within and across providers, institutions and regions"[4], and to which the entire disease trajectory is covered.[1]

Several aspects of continuity have been distinguished, based on the fact that continuity is the result of good information flow, good interpersonal skills, and good coordination of care.[67-72]

Informational continuity: availability and use of data from prior events during current patient encounters; information links care from one provider to another and from one health event to another[70];

Management continuity: coherent delivery of care from different providers, most commonly whether follow-up visits are made when care crosses organisational boundaries (often focus on care plan for specific, chronic health problem)[69];

Relational continuity: an ongoing relationship between patients and one or more providers that connects care over time and bridges discontinuous events[68];

Coordination: the integration, coordination and shared information between professionals or between provider organisations.[70]

Six indicators that assess the four above-mentioned aspects of continuity are presented:

Informational continuity

1. Percentage of persons who have a global medical record (GMD – DMG)

Management continuity

2. Percentage of hospital discharge followed with a GP's encounter within a 6-weeks period for senior patients (65+)

Relational Continuity

3. Proportion of encounters that were conducted by the GP consulted most frequently: Usual Provider Continuity (UPC) index.

Coordination

4. Proportion of cancer patients discussed at the multidisciplinary meeting
5. Number of re-admissions per 100 patients with a diagnosis of (a) schizophrenia or (b) bipolar disorder
6. Number of contacts between the GP and the palliative patient during the 3 last months of his/her life

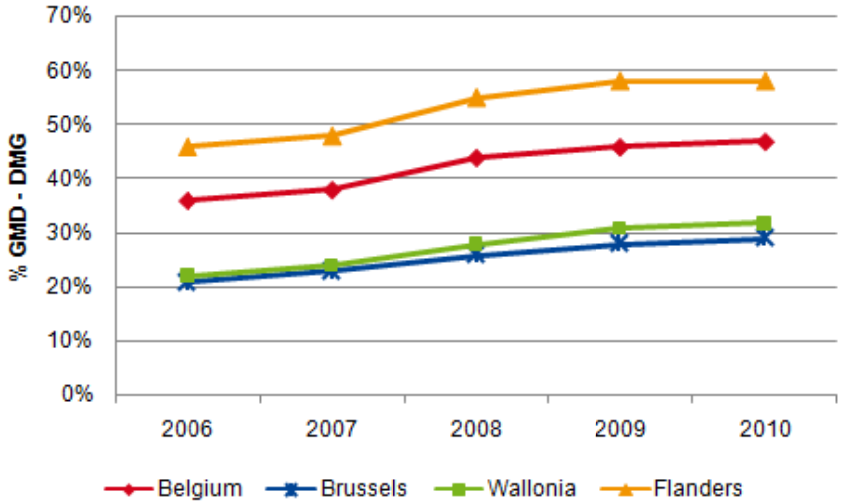
4.4.2 *Facts and figures*

This section is a short summary of the detailed results which are presented for each indicator in the Supplement S1 of this report (available on the website).

Informational continuity

Since 2001, the global medical record (GMD – DMG) allows patients to entrust a GP with the task of managing their medical data. The use of a GMD – DMG increases progressively and reached 46% in 2009 but with large differences between regions (Flanders 58%, Wallonia 31%, and Brussels 28%). The coverage by the GMD – DMG is higher for the elderly (78% coverage for the 75+), and persons entitled to increased reimbursement (entitled 54% versus not entitled 44%).

Figure 21 – Percentage of population with a global medical record (GMD – DMG), by region (2006-2009)



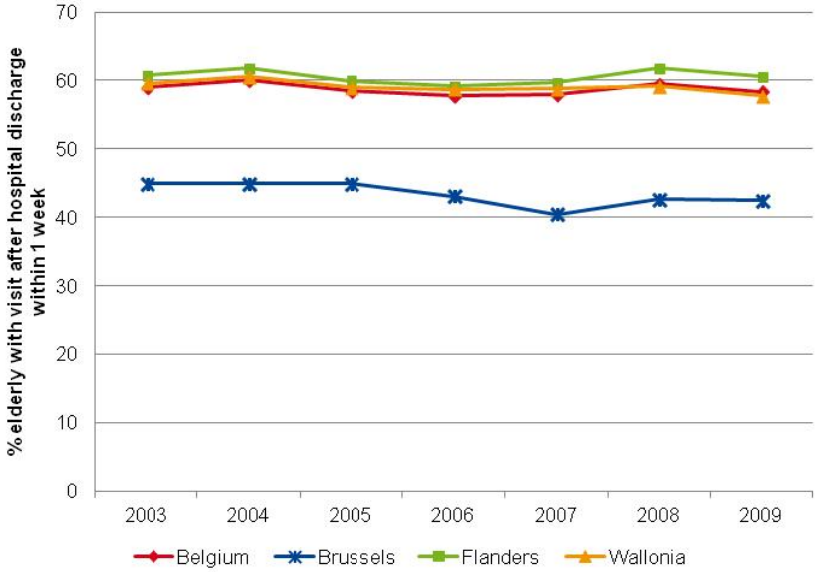
Source: RIZIV – INAMI

Management continuity

Link Hospital-GPs

As hospitalisation discharge is a pivotal moment in the care of an older person, a GP's encounter in the 6 weeks following discharge is advised in the U.K.[73] We have adapted the definition to one week, which is more relevant in Belgium. A majority of elderly (58%) have at least one contact with a GP in the week after a discharge from the hospital. In the Brussels region, this percentage is lower (42.5%). This result is an indication of continuity of care between the hospitals and the first line, even if we do not know if the GP's encounter followed a discharge plan from the hospital or from the patient's own initiative.

Figure 22 – Percentage of hospitalisations for the elderly (aged 65 and over) followed by a contact with a GP within 1 week after discharge, by region (2003-2009)



Source: IMA – EPS, KCE calculation

Link GPs-specialists

Since 2007, patients with a GMD – DMG are entitled to a larger reimbursement of health expenditures for a specialist consultation if they are referred by a GP. The measure is limited in scope: it applies only to certain specialists and to one consultation per year per specialist. This measure aims to improve the specialist-general practitioner's collaboration and to stimulate a first encounter with a GP because in Belgium, patients are free to go directly to the second line. However, the percentage of specialist consultations identified as prescribed by a GP and leading to increased reimbursement is very small (around 2% of all consultations at specialists). This result does not allow drawing any conclusion on the real proportion of referrals between GPs and specialists. Possible explanations for the low percentage found in the data are a lack of knowledge by GPs or a too heavy administrative burden.

Relational continuity

A longitudinal relationship between physician and patient is acknowledged to encourage communication, improve satisfaction, medication compliance, and behavioural problems, and stimulate receipt of preventive services and decrease hospitalisations and emergency department visits for patients with chronic disease.[74] There are several measures of longitudinal continuity with the Usual Provider of Care (UPC) index as one of the most common index used. The advantage of this indicator is its easy interpretation.

In the population of patients who had at least 3 contacts with a GP during two years, around 44% have seen the same GP (not taking into account out-of-hours contacts). This percentage was stable in the period 2003-2009. It reaches 55% for patients aged 65-84 years. 72% of the patients meet the less stringent criteria of having seen the same GP at least 75% of the time (UPC ≥ 0.75). Some differences are observed between the three regions, with a greater proportion of patients having encounters with the same GP at least in 75% of the cases (UPC ≥ 0.75) in Wallonia (74%), Flanders (71%) and a smaller proportion in Brussels (66%).

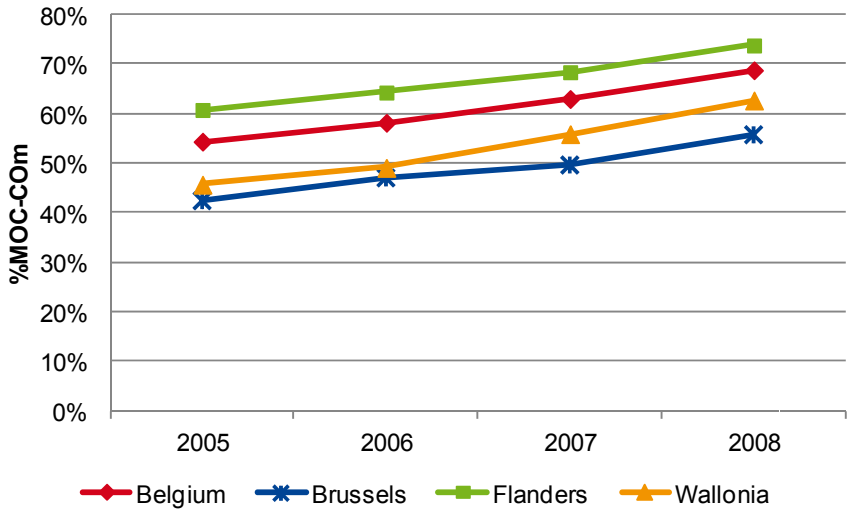
These results also show that the relational continuity with the main provider of care is good and stable over time. It also shows that the lower coverage rates of the GMD – DMG in Wallonia do not implicate a worse relational continuity with the GP.

Coordination: Multidisciplinary team for cancer patients

Multidisciplinary team meetings (MOC – COM) have been implemented in many countries as the predominant model of cancer care to ensure that all patients receive timely diagnosis and treatment, that patient management is evidence-based, and that there is continuity of care.[75] In all cancer guidelines developed by the KCE and the College of Oncology, multidisciplinary discussion is recommended to decide on the diagnostic, staging and treatment plan of cancer patients. Since its introduction in 2003, a clear increase of its use is noticed for all cancer types and discussions about how to better involve GPs are currently conducted.

Overall, about 69% of cancer patients were discussed at the MOC – COM in 2008, with large variations between types of cancer (in 2008: 84% of breast cancer patients, 74% lung cancer, 59% prostate cancer).[46] Although an increasing use is noticed for all three regions, cancer patients are more frequently discussed at the MOC – COM in Flanders (74% in 2008), followed by Wallonia (63% in 2008) and Brussels (56% in 2008).

Table 19 – Percentage of cancer patients who had a MOC – COM, per region, (2005-2008)



Source: Belgian Cancer Registry and evaluation of Cancer Plan[46]
Note: all tumours excl. non-melanoma

Coordination: Mental health care

Although unforeseen and unavoidable emergencies do arise in mental health, mental health related emergency room (ER) admission is used as an indicator of poor coordination of care and service failures. Due to delays in receiving data, results on the ER use for mental health problems are not available for this report. They will be analysed for the next update.

Hospital readmission rates are also widely used as proxies for relapse or complications following an inpatient stay for psychiatric and substance use disorders since they indicate premature discharge (sub-optimal discharge planning: follow-up care and support have not been appropriately coordinated before discharge) or lack of continuity of services (e.g. follow-up visits after discharge).

The re-admission rates for patients with schizophrenia and bipolar disorders within the 30-days of the initial hospitalisation are situated around the OECD-average of EU-15 countries (20.2% for schizophrenia and 15.6% for bipolar disorders). For both conditions these readmission rates are the highest in Flanders (schizophrenia 25.2%; bipolar disorders 19.7%) and lowest in Brussels (schizophrenia 10.2%; bipolar disorders 7.1%). For schizophrenia, there is an overall increasing trend in Belgium (especially in Flanders and Wallonia). For bipolar disorders, there is only an increasing trend in Flanders. The re-admission rates for patients with bipolar disorders are decreasing in Wallonia.

Coordination: End-of-life of palliative patients

With the regulation of palliative care services in the residence of the patient (at home or in a residential setting) a more prominent role of the GP is needed for the coordination of services. This is thus an indicator of continuity of care. There are currently no national data on the contacts with GPs during end-of-life of palliative patients but some results can be given from different studies. A study on Christian Sickness Funds members shows that 72% of the palliative patients who died at home in 2005-2006 had a contact with a GP during the last week of their life.[42, 43] The number of contacts between palliative patients and their GP appeared however higher in the Netherlands than in Belgium.[76]

4.4.3 Key findings

- **The continuity of medical information managed by GPs is stimulated since 2001 by the global medical record (GMD – DMG) in Belgium. Since its introduction, the use of the GMD – DMG shows an increasing trend. Moreover, the GMD – DMG particularly reaches the vulnerable population (elderly and persons entitled to increased reimbursement) but it could be improved, especially in Brussels and in Wallonia.**
- **The management continuity between hospital and GPs is a interesting indicator, overall for elderly. Within one week after a hospitalisation discharge, a majority of elderly patients (58%) have at least one contact with a GP. Results are however lower in Brussels compared to the two other regions.**
- **The relational continuity with the same GP is good in Belgium, particularly in the age group 65-84 years and in Wallonia.**
- **The coordination of care for cancer patients is organised by multidisciplinary oncology meetings for about 69% of cancer patients, with large variations between types of cancer (89% breast cancer), and between regions.**
- **The coordination of mental health care requires a broad array of services (e.g. assertive community care; follow-up by GPs) in the community. The re-admission rate within the same hospital for patients with schizophrenia and bipolar disorders are situated around the OECD-average, with higher and increasing rates in Flanders.**
- **The coordination of palliative care at home or in nursing homes should be at the level of the GP. However, national data are lacking and some studies showed less contacts between palliative patients and their GP when they compared the Belgian situation to the Netherlands.**

4.5 Patient Centeredness

4.5.1 How did we evaluate patient centeredness?

Patient-centeredness is defined as “providing care that is respectful of and responsive to individual patient preferences, needs, and values, and ensuring that patient values guide all clinical decisions”.[6]

According to this definition, several categories are used to classify the indicators:

- Acknowledgement of patients needs, wants, preference: patients’ right; patients’ needs; preference of care; pain management; privacy; spiritual support; cultural needs; patients’ strengths; psycho-social aspects; comfort; social support.
- Providers skill of communication: providers ability to listen to their patients carefully; providers ability to explain things clearly; courtesy/respect; spent enough time to their patient; emotional support to relieve fear and anxiety; language; global communication skills; poor communication.
- Patients and carers involvement (enabling patients to manage their care and to make informed decisions about their treatment options): patients/carers information; informed consent; self-management support; patients/carers involvement in services and delivery planning; patients involvement in quality improvement; patients’ participation in decision or shared decision-making.

Three indicators related to centeredness are available:

1. Percentage of population above 15 years old who report to be satisfied with healthcare services
2. Percentage of adult inpatients who reported how often their pain was controlled
3. Percentage of patients dying in their usual place of residence (home or institution)

4.5.2 *Facts and figures*

This section is a short summary of the detailed results which are presented for each indicator in the Supplement S1 of this report (available on the website).

Patients' satisfaction

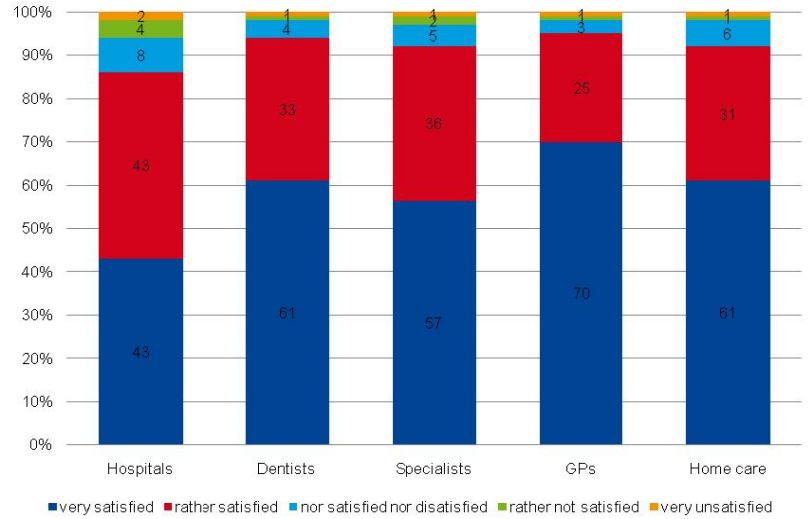
Patients have often other expectations, wishes and priorities than healthcare providers and their satisfaction depends of the answers to these issues. Although patients' satisfaction is only one limited aspect of a patient's experience with the healthcare system, it is still a very widely used measure in evaluating patients' care experience.[77, 78]

Belgian citizens reported in the HIS that they are in general satisfied with their contact with the healthcare system: the satisfaction level is above 90% for contacts with GP, dentists, specialists and home care services. Only for hospitals the satisfaction level is lower (87%).

Differences between men and women are negligible. Differences with respect to age are limited. The satisfaction level also hardly differs between socioeconomic groups.

Large differences are however observed with regard to the geographical location of the patient: satisfaction is systematically lower in cities than in rural areas. Also, large differences exist between regions, as satisfaction is always higher in Flanders than in Wallonia. Lowest satisfaction rates are observed in Brussels.

Figure 23 – Degree of satisfaction with healthcare services, by type of service (2008)



Source: Results from Health Interview Survey, Scientific Institute of Public Health (WIV – ISP)

Pain control

Pain control or pain assessment is paramount in a patients' perspective. The RN4CAST-project included a one-off international survey (European countries) of nurses and patients. Sixty Belgian hospitals participated in the patient survey, with 2 623 patients surveyed and a response rate of 68%.[79] Results showed that 69% of patients needed medicine for pain during their hospital stay and among them 41% declared that their pain was always well controlled. This places Belgium very low compared to the average of 54% for the 8 countries who participated. Other data from the study show that 47% of the patients said that their pain was usually well controlled. Less than 2% said their pain was never controlled. The vast majority of patients considered that the hospital staff did everything they could to help them with their pain (always 71% of patients; usually 23% of patients).

Place of death

Place of death is considered an important indicator of quality of palliative care. A survey showed that in Flanders, 71.6% of persons interviewed expressed a preference for dying at home.[80] There are currently no national data published on the place of death of patients eligible for palliative care in Belgium. Data are however available from death certificates (palliative or not) in Flanders and in Brussels. A recent study (2007) on these death certificates showed a shift from dying in hospital (55.1% of all deaths in 1998 to 51.7% in 2007) to dying in a nursing home (18.3% in 1998 to 22.6% in 2007). The percentage of deaths at home remained stable.[81] The decline in hospital beds and the increased number of deaths in nursing homes can be explained by the substitution of residential beds by skilled nursing beds in care homes.

Table 20 – Evolution of place of death over time in Flanders and Brussels (1998-2007)

Period	Home	Hospital	Nursing Home	Other
1998	23.0%	55.1%	18.3%	3.6%
2007	22.5%	51.7%	22.6%	3.1%

Source: A study on death certificates in Flanders and Brussels [81]

There are large differences between countries with regard to the place of death of patients with cancer. The percentage of cancer patients dying at home is very low in Norway (13%), higher in Flanders (28%) and much higher in the Netherlands (45%).

4.5.3 Key findings

- **There is currently a real lack of data on patients' centeredness. The few measurable indicators only provided fragmented information of a complex subject.**
- **Belgian patients are in general satisfied with their contact with the healthcare system. Data of the patients' experience will be available in the new wave of the Health Interview Survey.**
- **One survey in hospitals showed a relatively good management of pain. The vast majority of patients considered that the hospital staff does everything they can to help them with their pain (always 71% of patients; usually 23% of patients).**
- **A recent study on death certificates in Flanders and Brussels showed a shift from dying in hospital to dying in a nursing home. The percentage of deaths at home remained stable. There are large differences between countries with regard to the place of death for patients with cancer. The percentage of cancer patients dying at home is very low in Norway (13%), higher in Flanders (28%) and much higher in the Netherlands (45%).**

5 EFFICIENCY IN HEALTHCARE

5.1 How did we evaluate the efficiency in healthcare?

Efficiency is defined as "the degree to which the right level of resources (i.e. money, time and personnel, called input) is found for the system (macro-level) and ensuring that these resources are used to yield maximum benefits or results (called output)".[4, 8]

Three indicators measure specifically the efficiency of the healthcare system:

1. Percentage of prescription of low-cost drugs in ambulatory setting
2. Rates of one-day hospitalisations for surgery
3. Length of hospitalisation for a normal delivery

Other indicators already mentioned above can also help to illustrate the efficiency of the health system (for instance the coverage of mammograms outside target groups for breast cancer screening).

5.2 Facts and figures

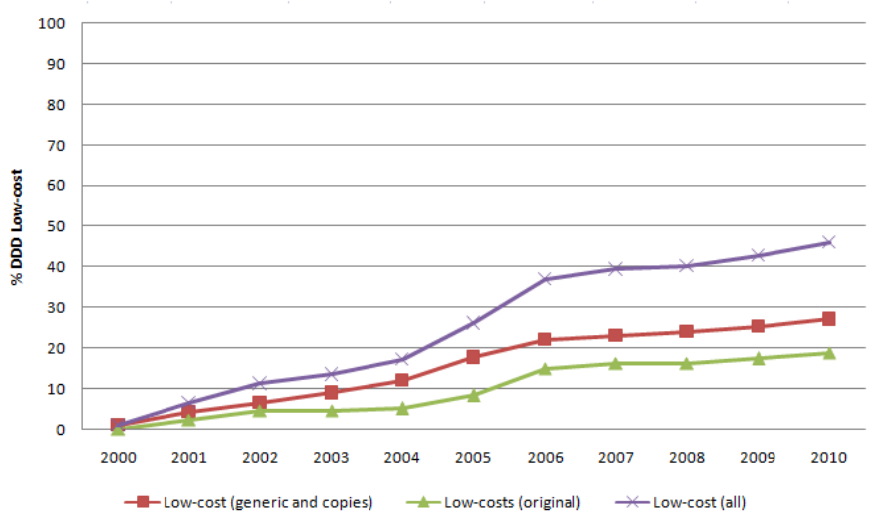
This section is a short summary of the detailed results which are presented for each indicator in the Supplement S1 of this report (available on the website).

Utilisation of less costly drugs in ambulatory care

The price of generic drugs is minimally 31% less expensive than the price of the original drug. Low-cost drugs are defined as (1) original drugs for which a generic alternative exists and which have lowered their public retail price to the reimbursement basis so that there is no supplement to be paid by the patient; (2) generic drugs and copies. Promoting the prescription of low-costs drugs is thus a good way to limit health expenditures, both for the third-party payer and for the patient. Depending on their specialty, physicians and dentists are required to prescribe a certain minimum percentage of low-cost drugs, the so-called "quotas", introduced in 2006 and revised (higher) in December 2010.

Between 2000 and 2010, the total number of DDD prescribed in ambulatory setting increased from 2.76 billion to 4.7 billion. On the same period, the proportion of low-cost DDD continuously increased to reach 46.0% in 2010 (27.1% from generic drugs and 18.9% as original drugs which lowered their price).

Figure 24 – Percentage of low-cost medication delivered in ambulatory setting (DDDs) (2000-2010)



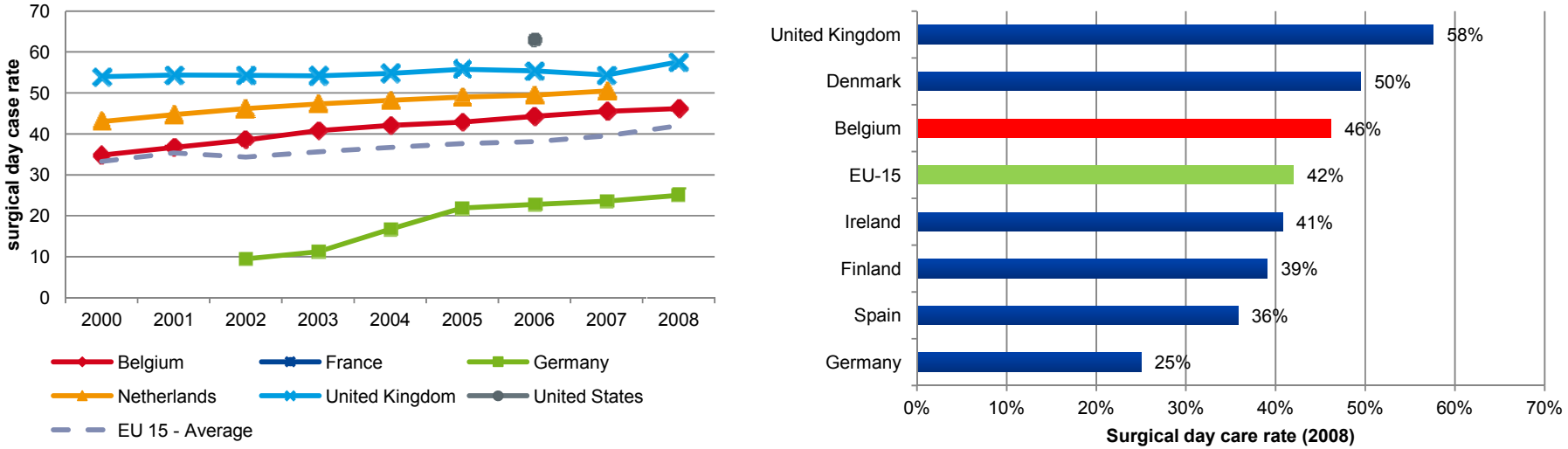
Note: DDD Defined Daily Doses
Source: RIZIV – INAMI, Pharmanet

Utilisation of less costly infrastructures (one day versus classic hospitalisation)

Carrying out elective procedures as day cases when allowed by clinical circumstances (e.g. inguinal hernia repair, circumcision, cataract surgery, etc.) saves money on bed occupancy and nursing care. It is therefore considered as an indicator of efficiency.

The Belgian surgical day-case rate grew from 42.1% in 2004 to 46.2% in 2008. The comparison with other European countries shows similar increasing trends, with Belgium higher than the European average (Figure 25).

Figure 25 – Percentage of surgical one-day hospitalisations on all surgical hospitalisations: international comparison



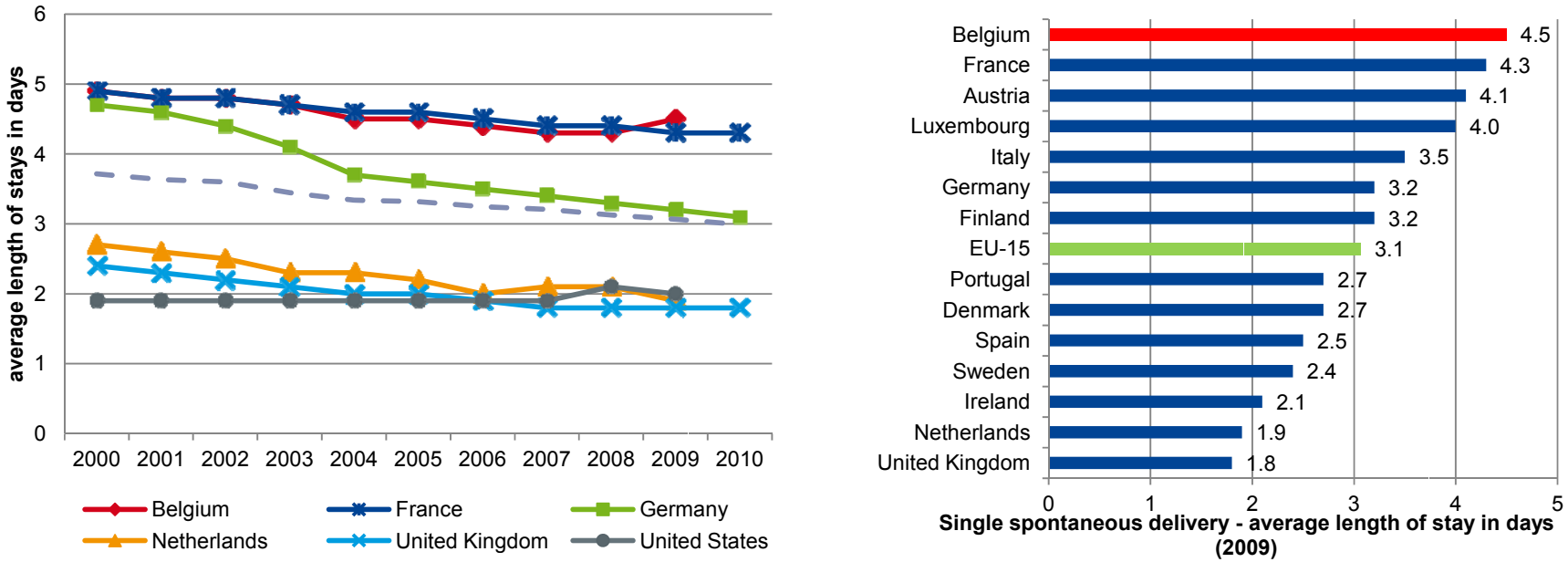
Source: OECD Health data 2010 [82], except KCE calculation for Belgium 2008

Utilisation of less costly infrastructures (shortening classic hospitalisations)

The length of stay after a normal delivery is determined more by factors of organisation and care provider characteristics than clinical patient characteristics only (e.g. severity of illness). It is therefore a good indicator to benchmark the efficiency of the healthcare system.

In Belgium, the duration of hospitalization for a normal delivery slightly decreased from 5 days in 2000 to 4.3 days in 2008. This is approximately 1.5 day above the EU-15 average of 2.9 days (Figure 26).

Figure 26 – Average length of stay for a normal delivery: international comparison



Source: OECD Health Data 2012

5.3 Key findings

- **The percentage of low-cost drugs in ambulatory setting increased from 7% in 2001 to 46% in 2010.**
- **The percentage of surgical hospitalisations that were performed in one-day hospital grew from 42.1% in 2004 to 46.2% in 2008. These increasing trends are observed overall in Europe. Belgium is situated above the EU-15 average.**
- **The duration of hospitalization for a normal delivery slightly decreased from 5 days in 2000 to 4.3 days in 2008. This is approximately 1.5 day above the EU-15 average of 2.9 days.**

6 SUSTAINABILITY OF THE HEALTH SYSTEM

6.1 How did we evaluate the sustainability of the health system?

Sustainability is defined as the system's capacity:

- To provide and maintain infrastructure such as workforce (e.g. through education and training, facilities and equipment;
- To be innovative;
- To stay durably financed by collective receipts;
- To be responsive to emerging needs.

For all four elements of the definition, specific indicators were selected. The last indicator, total health expenditures, is a generic indicator of financial sustainability.

Maintenance of workforce

1. Evolution over time of the mean age of practising GPs
2. Medical graduates becoming GPs
3. Nursing graduates

Maintenance of facilities

4. Acute care bed days (number per capita)

Innovation

5. Number of GPs using an electronic medical file

Financial Sustainability

6. Health expenditures according to the System of Health Accounts (Total, repartition, % gross domestic product (GDP), per capita)

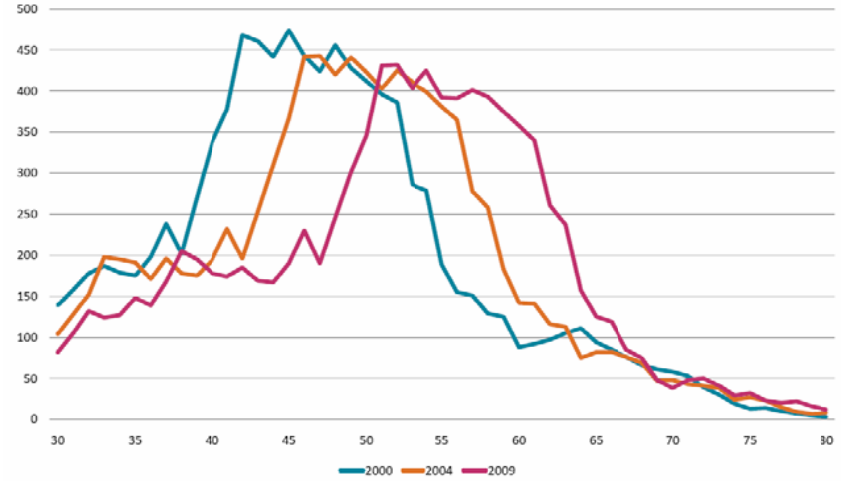
6.2 Facts and figures

This section is a short summary of the detailed results which are presented for each indicator in the Supplement S1 of this report (available on the website).

Maintenance of workforce: GPs

The cohort of active GPs is changing: it is very fast approaching retirement age, as shown by the lines superimposed for the years 2000, 2004 and 2009 of physicians with over 1 250 contacts (Figure 27). Another way of measuring this change is to calculate the average age of GPs currently practising. The average age of full time equivalents (FTE) was 51.4 years in 2009, while it was 47.3 years in 2000.

Figure 27 – Age distribution of GPs (2000-2004-2009)



Note: only GPs with more than 1 250 contacts /year
Source: Performance of general medicine in Belgium, a check up (RIZIV – INAMI)[26]

Table 21 – Mean age of practising GPs (2000-2009)

	2000	2004	2008	2009
Number of GP smoothed FTE	8 515	8 472	8 336	8 283
Mean age	47.3	49.2	51.3	51.4

Source: Performance of general medicine in Belgium, a check up (RIZIV – INAMI)[26]

One of the reasons for this ageing of GPs is the problematic recruitment of new GPs. As a matter of fact, the non-replacement of older GPs is directly related to the numbers of new physicians entering the medical profession and, of these, the percentage entering general medicine. The percentage of newly-graduated generalists is calculated by comparing the number of graduates entering general medicine to all graduates entering a specialist area in the two years following graduation (upon completion of the seven-year study cycle). This percentage currently stands at 30%, while it was 34% in 1996.[26]

Table 22 – Progression between 1996 and 2008 of graduates in medicine in the two years following graduation according to type of specialisation

Graduates after 2 years	1996	1998	2000	2002	2004	2006	2008
number of physicians (after 7 years)	**1 105**	**1 235**	**1 172**	**1 180**	**1 142**	**814**	**941**
physicians without specialisation	193	247	202	211	118	110	160
% physicians without specialisation	17%	20%	17%	18%	10%	14%	17%
physicians with a specialisation (GP+SP)	**912**	**988**	**970**	**969**	**1 024**	**704**	**781**
specialists (SP)	600	628	632	684	756	493	554
generalists (GP)	312	360	338	285	268	211	227
%GP compared to GP +SP	**34%**	**36%**	**35%**	**29%**	**26%**	**30%**	**29%**

Source: RIZIV – INAMI

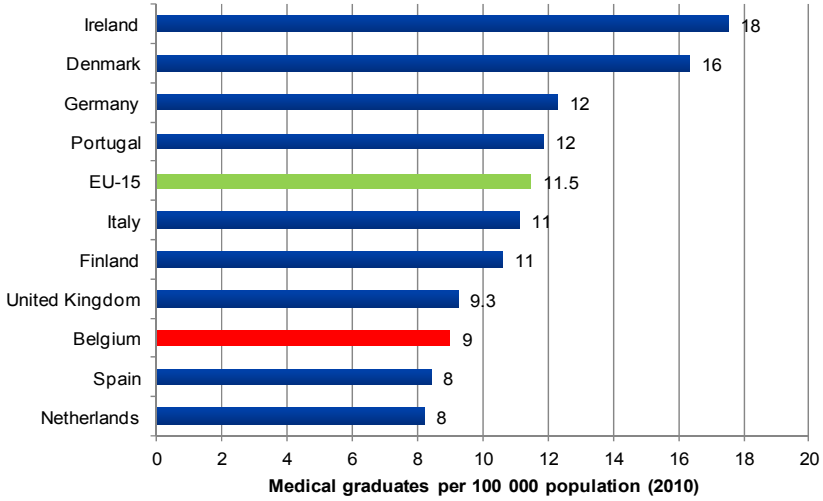
Compared to other European countries, Belgium has a number of medical graduates (all) of 9 medical graduates per 100 000 pop, slightly lower than the 11.5/100 000 pop EU-15 average (Figure 28).

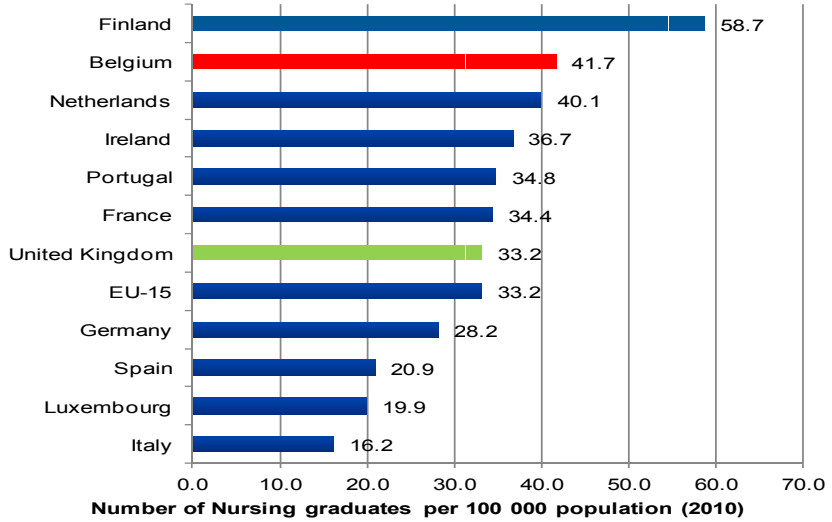
Workforce: nursing

There is currently no indicator at the macro level to document the question on workforce in nursing. However, macro-level data should be complemented with data that reflect the situation at the micro level. An example of micro-level data is the recent large-scale European nursing workforce study based on survey data. It was illustrated that in Belgian hospitals nurses have, on average, to take care for more patients compared to other EU countries.[79]

Contrary to the GPs, the source of this problem does not seem to be from the education side, as Belgium forms a very high number of nursing students every year, where the number for 100 000 is 41.7, high above the EU-15 average of 31.3. A word of caution is necessary when interpreting this figure, as also foreign students are counted, and those will probably not work in Belgium.

Figure 28 – Medical and nursing graduates (per 100 000 pop): international comparison (2010)





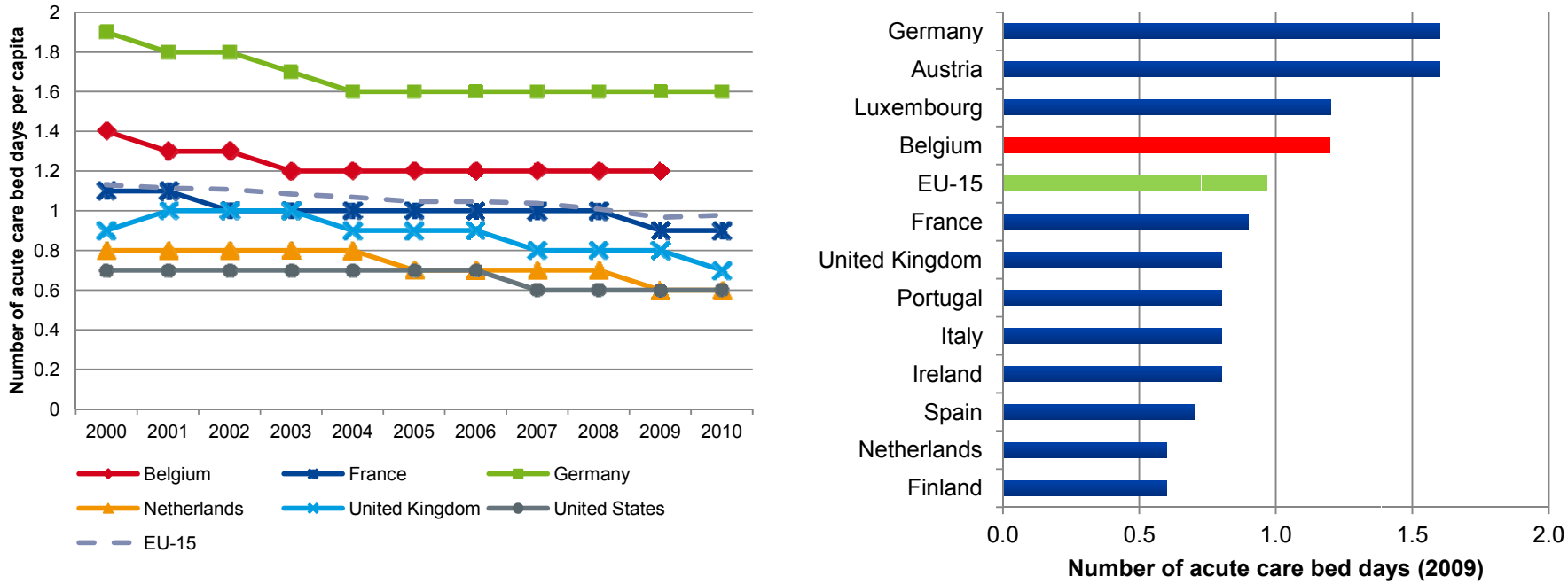
Source: OECD Health data 2012

Maintenance of facilities: number of acute bed days

The number of acute care bed days per capita is indicative of the population's need for acute care beds, and thus about the needed infrastructure. This indicator indicates how this need is met.

In 2009, there were 13 million days spent in acute care hospitals (classic hospitalisation only, excluding one day). Per capita, this represents 1.2 acute care bed days. This figure is decreasing between 2000 and 2003, and stable since 2003. The EU-15 average is a bit lower, around 1 day/inhabitant. Of the neighbouring countries, only Germany has a higher utilisation of acute care hospitals per inhabitant.

Figure 29 – Acute care bed days per capita, international comparison



Source: OECD Health data 2012

Innovation: the percentage of GPs using an electronic file to maintain their patients' medical records

The percentage of GPs using an electronic file with recommended software to maintain their patient's medical record increased from 61% in 2004 to 74% in 2010.

Table 23 – Percentage of GPs using recommended software to maintain their patients' medical records

	2004	2008	2009	2010
% of GPs who received a lump sum for using an electronic medical records.	61%	72%	75%	74%

Source: RIZIV – INAMI

Total healthcare expenditures as an indicator of financial sustainability

Trends in health expenditure are an important indicator of affordability, and thus sustainability. For international comparisons, the standard international definitions for healthcare and healthcare expenditure of the OECD's System of Health Accounts (SHA) are classically used. SHA aims at measuring consumption of health and long-term care services.

Health Accounts are only comparable since 2003. The total health expenditures increased from €27.6 billion in 2003 to €37.3 billion in 2010. Per capita, this represents an increase from €2660/inhabitant in 2003 to €3430/inhabitant in 2010. To allow comparisons between countries, these data are also expressed in 2005 US$ Purchasing Power Parities (PPP). Finally, the share of Total Health Expenditures (THE) in Belgian gross domestic product (GDP) accounts for 10.5% of GDP, compared to 10.0% in 2003.

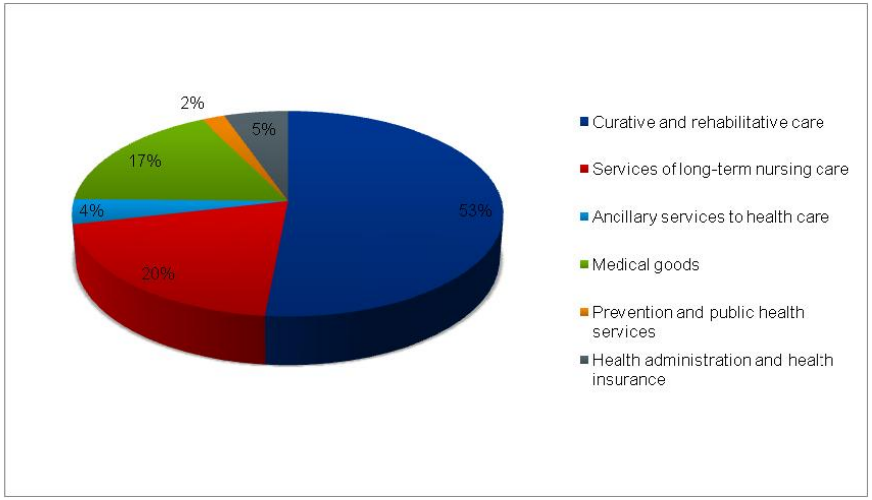
Table 24 – Total health expenditures according to the System of Health Accounts (2003-2010)

	2003	2004	2005	2006	2007	2008	2009	2010
Absolute amounts (in billions €)	27.6023	29.4811	30.6064	30.5214	32.2427	34.5992	36.303	37.3737
Per capita	2660.18	2828.97	2920.84	2893.59	3034.41	3230.56	3362.48	3430.17
Per capita (US$ PPP)	3026.8	3155.5	3246.8	3277.6	3423.3	3698.4	3911.4	3968.8
% GDP	10.0	10.1	10.1	9.6	9.6	10	10.7	10.5

Source: OECD Health Data 2012

More than half of the total health expenditures (53%) is spent for curative care (HC.1) or rehabilitation care (HC.2). The following two most important contributors are services for long-term care (LTC) (specifically the health component, not the social component, HC.3, 20%)[s] and medical goods (mainly pharmaceuticals products, HC.5, 17%).

Figure 30 – Health expenditures in Belgium by main function in the System of Health Accounts (2010)

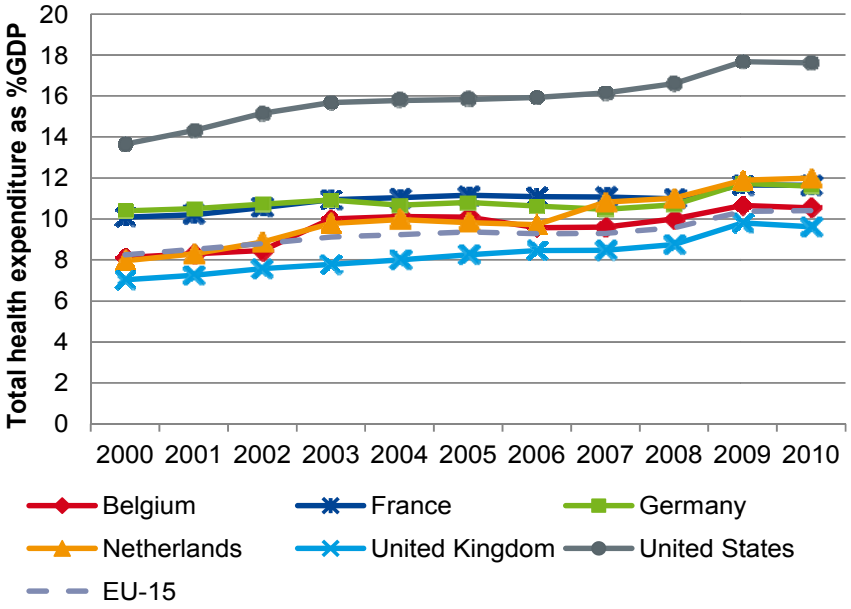


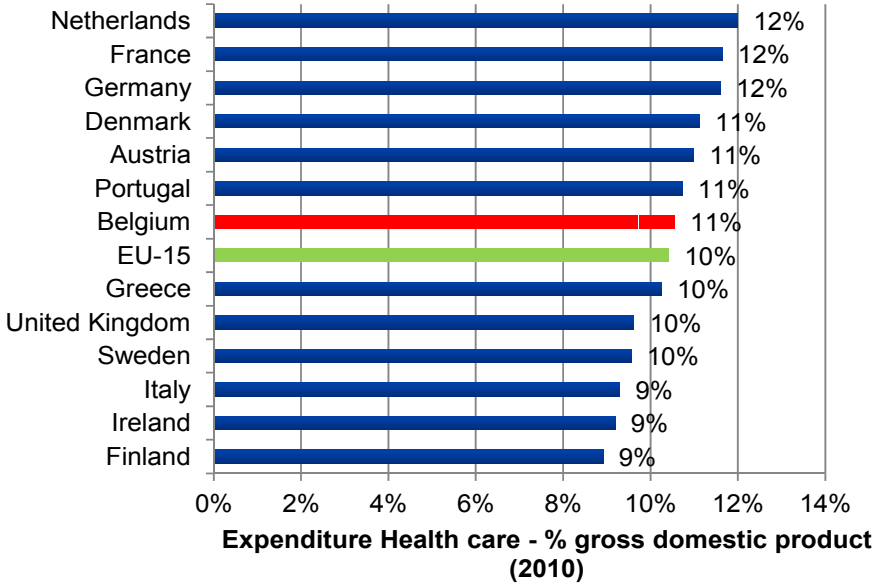
Source: OECD Health Data 2012

Expressed as a percentage of the GDP, Belgium is very close to the EU-15 average. But caution is needed when comparing total healthcare expenditures, as the better and the more exhaustive the registration of healthcare expenditures, the higher the level of these expenditures.

[s] Roughly speaking, one could define healthcare as care helping individuals performing activities of daily living (ADLs) (e.g. dressing, eating…), and social care as care helping individuals performing instrumental activities of daily living (IADLs) (e.g. shopping, laundry, …). In practice, the division of LTC into its health and social components is challenging as many services provided to LTC recipients have both a health and social component. To ensure comparability of the System of Health Accounts (SHA) for long-term care, the OECD issued specific guidelines.[24]

Figure 31 – Total health expenditures as a % of GDP: international comparison





Source: OECD Health data 2012

6.3 Key findings

- **Concerning the Belgian healthcare workforce, some results are challenging since GPs are aging. The average age of FTEs of GPs is currently 51.4 years. This average age has risen very rapidly since 2000, when it was 47.3 years. One of the reasons of this ageing of GPs is the problematic recruitement of new GPs. The number of graduates who specialize either in general medicine or in another specialty was 781 in 2008. Among these graduates, the percentage of graduates in general medicine was 34% in 1996 and is actually (2008) 29%.**
- **The number of nursing graduates per 100 000 population is very high in Belgium compared to other EU-15 countries: 41.7/100 000 population compared to the average EU-15 of 31.3 /100 000 population but the foreign students are counted although they will probably not work in Belgium.**
- **The analysis of the maintenance of the facilities shows a relative high utilisation of acute care hospitals per inhabitant. In 2009, there were 13 million days spent in acute care hospitals (classic hospitalisation only, excluding one day). Per capita, this represents 1.2 acute care bed days in 2009, a bit higher than the EU-15 average (1 bed day/inhabitant).**
- **The innovative perspective of the health system is measured by the percentage of GPs using an electronic file to maintain their patient's medical record. This percentage increased from 61% in 2004 to 74% in 2010.**
- **Concerning the financial sustainability, the total health expenditures increased from €27.6 billion in 2003 to €37.3 billion in 2010. Per capita, this represents an increase from €2 660/inhabitant to €3 430/inhabitant in 2010. The share of total health expenditures in Belgian gross domestic product (GDP) accounts for 10.5%, compared to 10.0% in 2003, which is very close to the EU-15 average.**

7 PERFORMANCE OF HEALTH PROMOTION

7.1 How did we evaluate the performance of health promotion?

According to the Ottawa charter[23], "health promotion is the process of enabling people to increase control over, and to improve their health". The process of health promotion is complex and can be understood as all the efforts that a society does to promote the health of the citizens. It covers a whole range of interventions (e.g., policies, law, environmental interventions), situated for a considerable part outside the health system. It is also largely situated outside the so-called "health promotion sector"[t].

The guiding principles of health promotion are the following:

- Participation
- Empowerment
- Sustainability
- Multistrategic
- Equity
- Multisectorial

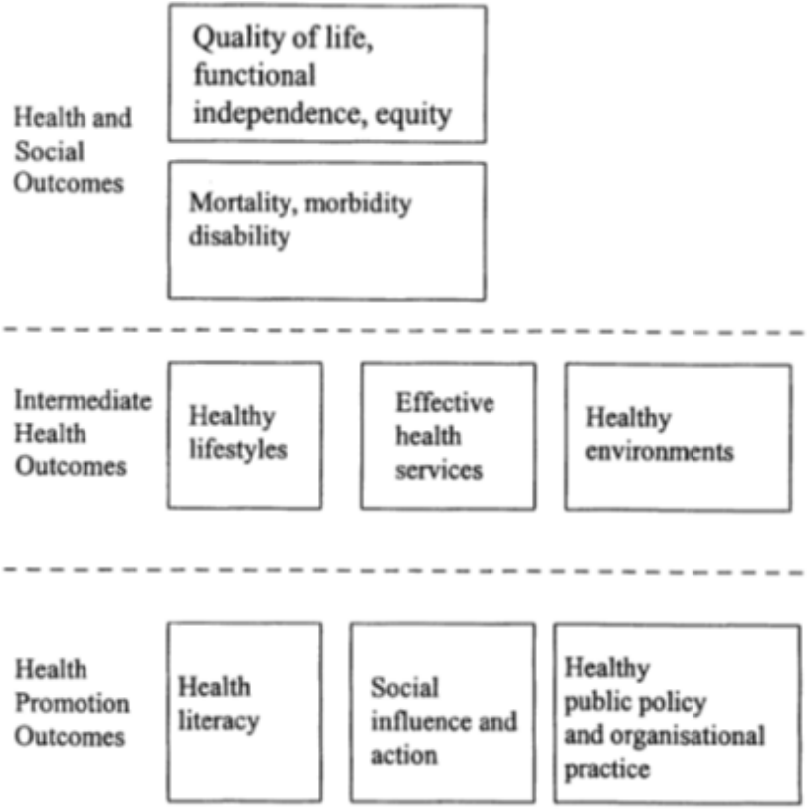
[t] In Belgium, the "health promotion sector" is represented by the structures depending on the Health Administrations and Ministries of the Regions and Communities.

Several frameworks have been proposed to classify health promotion indicators. Nutbeam[83] has proposed a framework that classifies health promotion indicators in 4 broad classes ranking from most proximal indicators (health promotion actions), through health promotion outcomes (health literacy, social influence and policies), intermediate health outcomes (healthy lifestyle, effective health services and healthy settings), to final health and social outcomes (physical health like morbidity and mortality, and social health like well-being and equity). In this work, we adopted the Nutbeam's framework to classify the indicators, because it corresponds largely to the broad axes and principles of the Ottawa Charter.[23]

In the context of this project, it has not been possible to perform a full evaluation of health promotion in Belgium since this would necessitate a complete study in itself. With regard to the limitations we faced (constraint of a limited set of indicators and unavailability of data for many indicators), we illustrated some categories of the Nutbeam's framework. Although the most distal from action outcomes like health outcomes and healthy lifestyles are easier to document, we also tried to define indicators and present results for more proximal indicators (as healthy environment, health promotion outcomes).

Figure 32 – The Nutbeam's framework and selected indicators to measure performance of health promotion

The Nutbeam's framework



Indicators selected and classified within the Nutbeam framework

Health and Social outcomes

- Overweight and obesity
- Dental health: decayed, missing, filled teeth at age 12
- Incidence of HIV

Intermediate Health outcomes

Healthy Lifestyles

- Daily smokers
- Alcohol consumption
- Physical activity
- Nutrition (fruits and vegetables)

Healthy Environment

- Composite index of health promotion policies in the municipalities
- Percentage of schools with a participative health promotion team
- Offer of physical activity at secondary school

Health Promotion outcomes

- Health Literacy: health literacy level (not measured)
- Social influence and action: poor social support
- Healthy public policy and organisation practice: Tobacco Control Policies Scale

Source: adapted from the Nutbeam framework[83]
"Health promotion actions", the last category in the Nutbeam's framework, is not represented here

7.2 Facts and figures

This section is a short summary of the detailed results which are presented for each indicator in the Supplement S1 of this report (available on the website).

7.2.1 Health outcomes

Four important indicators of general health outcome have already been described above in the chapter on the health status of the population: life expectancy, health expectancy, self-perceived health and infant mortality, as they are less specific to health promotion.

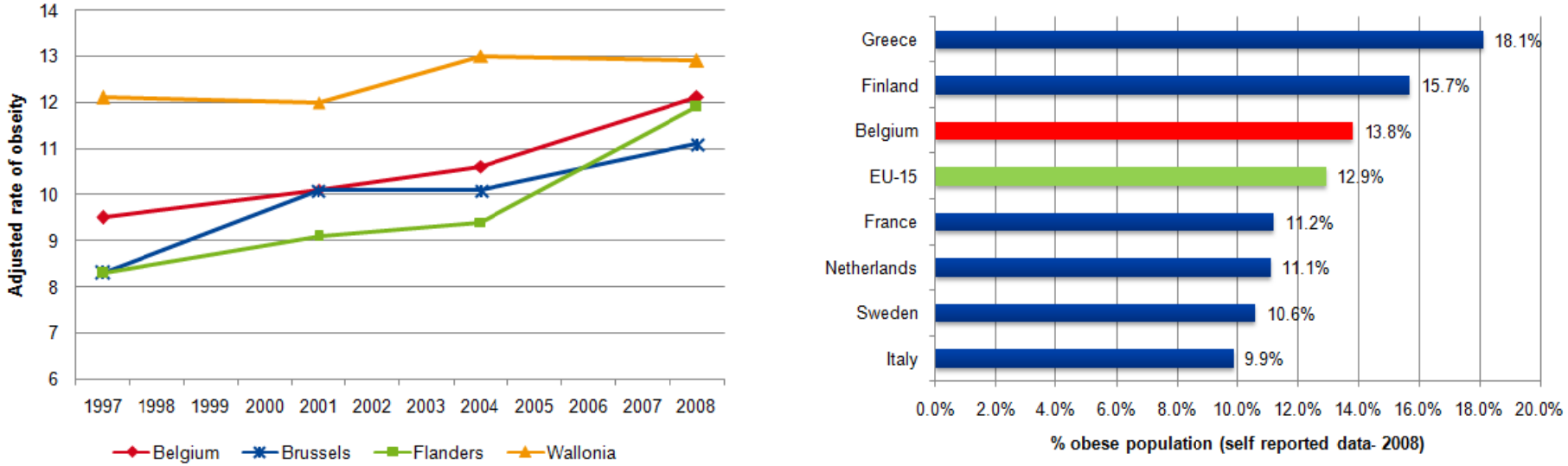
Overweight and obesity

Adult population (aged 18 years or older)

In 2008, 47% of the Belgian population (aged 18 years or older) was considered as being overweight or obese (Body Mass Index (BMI) ≥25), and almost 14% was considered as obese (BMI ≥30). Results are based on the reported weight and height. Overweight is more frequent in men than in women. For obesity, no differences were found between men and women.

Although the obesity and overweight rates are slightly lower than the average EU-rate, they gradually increased over time. After standardization for age, the rate of obese people is higher in Wallonia than in the two other regions, but the difference tends to have decreased over time (Figure 33). As for other indicators related to overweight, like poor nutritional habits or lack of physical activity, a strong social gradient is observed.

Figure 33 – Percentage of the adult population (aged 18 years or older) with obesity (BMI ≥30), by region (1997-2008), and international comparison (2000-2008



Source: Health Interview Survey, Scientific Institute of Public Health (WIV – ISP), and OECD Health Data for international comparison

Overweight and obesity in children and adolescents

The HIS survey provides information about the overall prevalence of overweight and obesity in young people (2-17 years) (https://www.wiv-isp.be/epidemio/epifr/CROSPFR/HISFR/his08fr/9.etat%20nutritionnel.pdf): overall 18% of the young people (aged 2-17 years) are found to be overweighed and 5% was found to be obese. There was no difference between genders.

Dental health: decayed, missing, filled teeth (DMFT) at age 12

DMFT is an international index describing the amount – the prevalence – of dental caries in an individual. DMFT numerically expresses the caries prevalence and is obtained by calculating the number of Decayed (D), Missing (M), Filled (F) teeth (T). WHO goals set for the year 2010 a maximum mean DMFT score below 1.0 for 12-year-olds.

In a national survey performed in 2009-2010[84], the mean DMFT score in a sample of 30 children aged 12 was 0.9 (± 1.37). This confirms the result (1.0) from a previous study based on a large sample performed in Flanders in 2001. Nevertheless, 43% of these children had sign(s) of dental caries in permanent teeth. The mean DMFT score was 1.3 (± 1.82) for the 12-14 year-olds (n=95). The very small sample does not allow any stratified analysis by sex, region or by socioeconomic status.

The number of studies performed in Belgium to date still remains limited. Moreover, the scope is often limited to small selected areas.[85]

Incidence of HIV

HIV is an important communicable disease in Europe. It is associated with serious morbidity, high costs of treatment and care, significant mortality and shortened life expectancy. It is also a perfectly avoidable infection, since the transmission is largely avoidable by behavioural measures (safe sex, safe injection). Therefore, its incidence in a defined population is an indicator of the success/failure of health promotion.

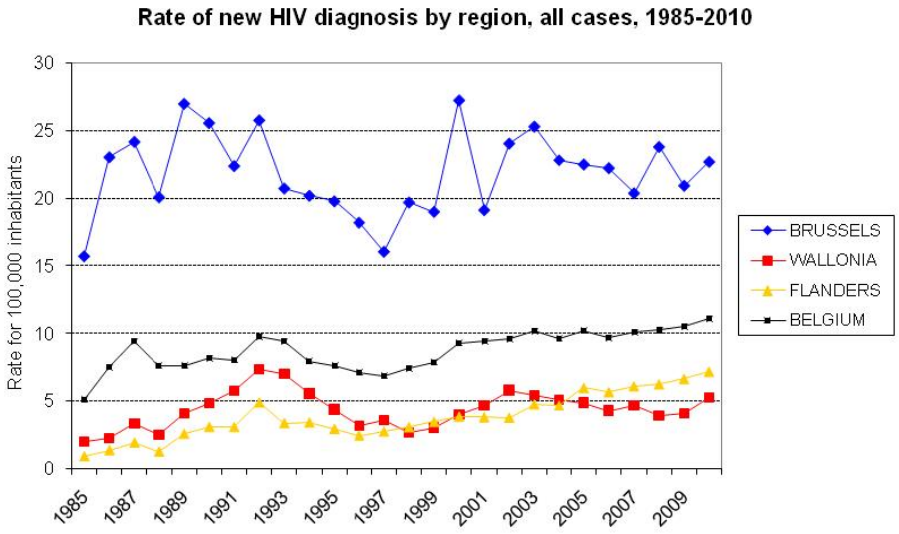
In Belgium, the true incidence rate is not known, and is approached by the diagnostic rate. This is an approximation since the diagnostic can occur long after the infection (the HIV-infection remaining long asymptomatic).

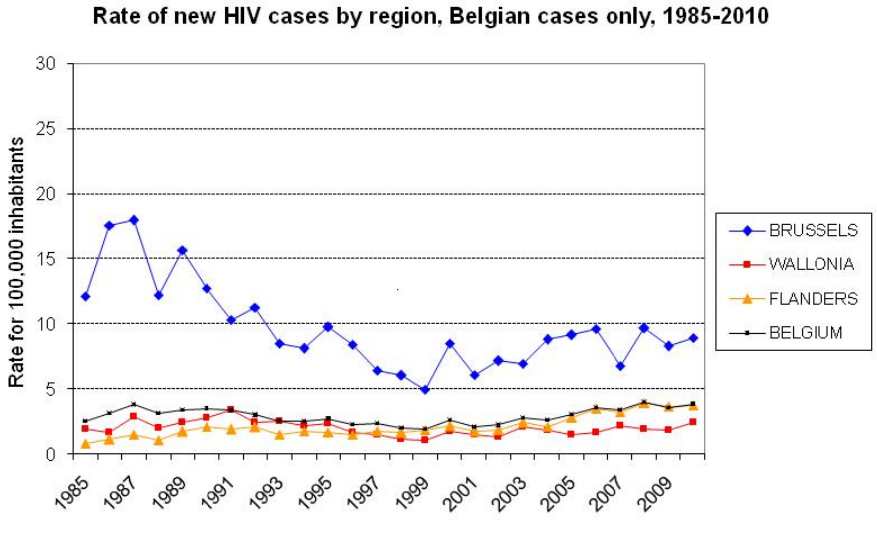
The diagnostic rate in Belgium for all cases is around 10 per 100 000 inhabitants. Belgium has the particularity to have a large proportion of non-Belgian cases (60% of cases with a known nationality), being a mix of resident and non-resident people. A large proportion of the non-Belgian cases originate from countries with a high prevalence of HIV (such as Sub-Saharan African countries). Parts of this large number of non-Belgian cases are imported cases, and as such cannot be interpreted as a failure of health promotion in Belgium. There is no clear-cut explanation for the large number of imported cases in Belgium. Further analysis is needed. For Belgian cases only, the rate is fluctuating around 3-4 per 100 000 inhabitants.

Figure 34 (a and b) show the evolution of the diagnostic rate of HIV by region from 1985 to 2010, for all cases and for Belgian cases only. The rates in Flanders and Wallonia are quite comparable. However, a steady increase is observed in Flanders since 1997. The rates in Brussels are much higher than in the other regions. The Brussels region mainly consists of a large city, with the socio-cultural characteristics of an urban context. A high HIV-rate is a usual phenomenon observed in large towns. The HIV-rates in the two other regions represent an average of rates from rural, semi-urban and urban contexts.

For Belgian patients, the most frequent way of infection was male homosexual contact (see Supplement S1).[86]

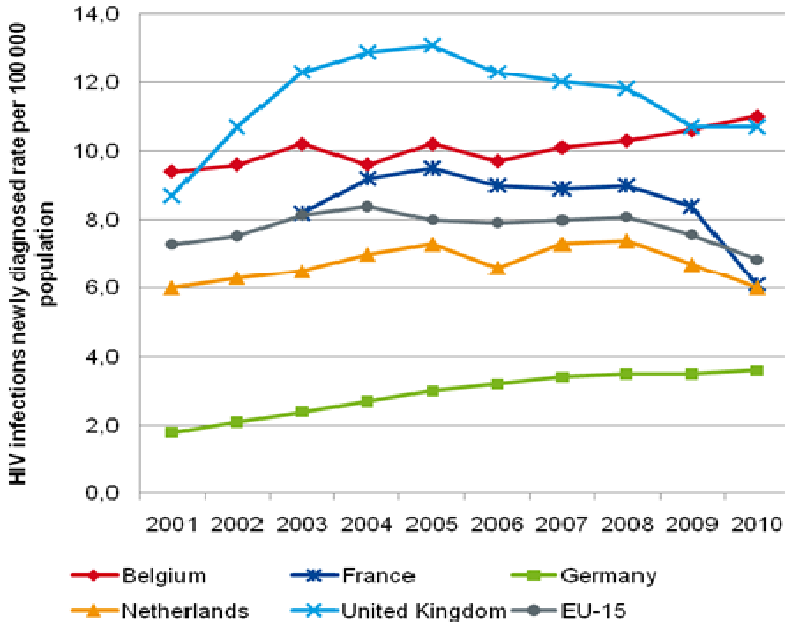
Figure 34 – Diagnostic rate of HIV by region, for all cases (a) and for Belgian cases only (b) (1985-2010)

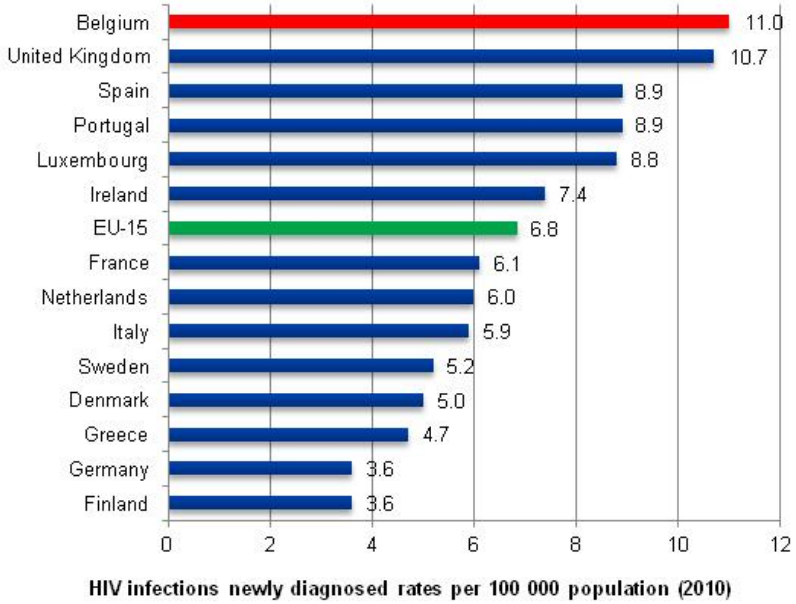




Source:Scientific Institute of Public Health (WIV – ISP) [86]

Figure 35 – Rate of the new HIV diagnosis per 100 000 inhabitants: International comparison





Source: OECD Health Data 2012

7.2.2 Intermediate health outcomes

7.2.2.1 Healthy Lifestyle

Daily smokers

The percentage of daily smokers was around 20% in Belgium in 2008, which is slightly lower than the EU average. It has significantly decreased since 10 years, mostly in men, in whom the rate of daily smoking passed from 31% in 1997 to 23.7% in 2008. The rate in women is lower, but it remained stable until 2004. The decrease in the rate of smoking is mainly found in highly-educated people. The rate of smoking in young people is as high as for the rest of the population. However, a closer examination of the data in this age group reveals that smoking prevalence peaks between 21 and 24 years, a priority target for prevention.

The comparison between regions shows that the rate of smoking is lower in Flanders than in the other regions.

Alcohol consumption

The consumption of alcohol is assessed on the basis of three indicators:

- Percentage of men and women aged 15 years and over reporting an excessive alcohol consumption (more than 21 glasses/210g a week in men and 14 glasses/140g a week in women);
- Percentage of the non-abstinent population (aged 15 years and over) reporting a problematic alcohol consumption (defined as a tendency to addiction based on CAGE scale, 2+ cut off);[87]
- Percentage of the population (aged 15 years and over) reporting a risky single-occasion drinking (≥ 6 drinks) at least once a week.

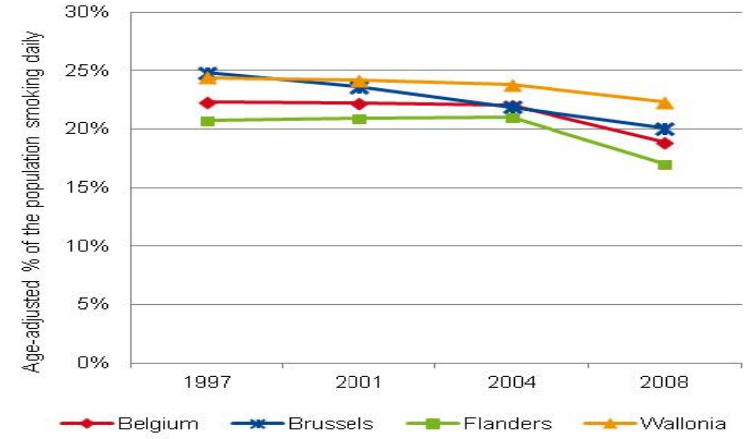
The percentage of excessive alcohol consumption has remained stable around 8%. However, the rate of people with problematic drinking behaviour (tendency to addiction) is increasing, mostly in Brussels. Alcohol consumption behaviour is more typically masculine. Risky single-occasion drinking is highest in the 15-24 age group.

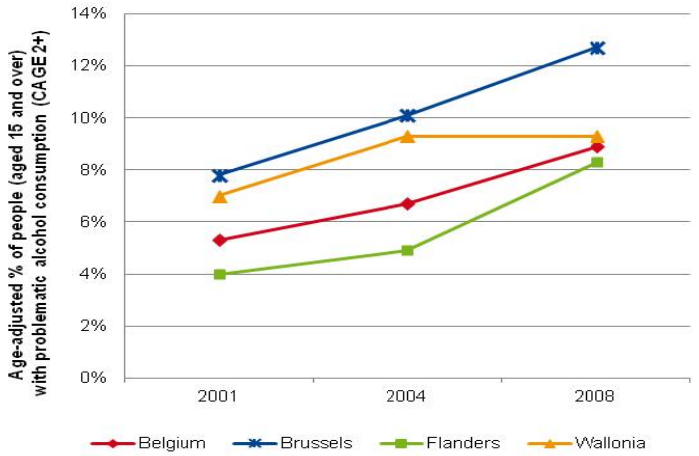
Table 25 – Alcohol consumption habits for the population (aged 15 or older) (1997-2008)

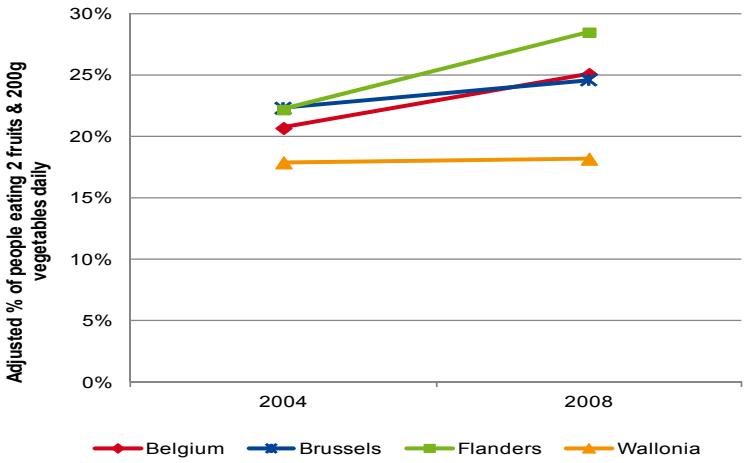
	1997	2001	2004	2008
Drinks alcohol in excess	7%	9%	9%	8%
Exhibits problematic drinking behaviour (CAGE questionnaire)		7%	8%	10%
Drinks 6 or more drinks in a single occasion at least weakly				8%

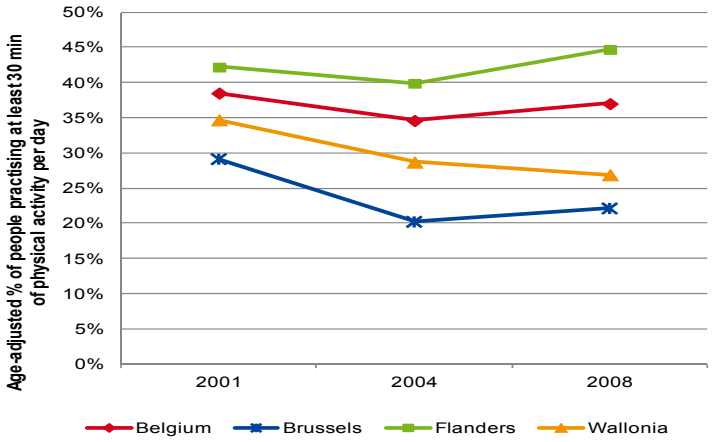
Source: Health Interview Survey, Scientific Institute of Public Health (WIV – ISP)

Figure 36 – Percentage of the population (a) smoking daily, (b) with problematic alcohol consumption, (c) consuming at least 2 fruits and 200 vegetables daily, (d) performing at least 30 min of physical activity per day, by region (1997/2001-2008)









Source: Health Interview Survey 2008, Scientific Institute of Public Health (WIV – ISP)

Consumption of fruits and vegetables

The consumption of fruits and vegetables is expressed by three complementary indicators:

- Percentage of the population reporting to eat fruits daily;
- Percentage of the population reporting to eat vegetables daily;
- Percentage of the population reporting to eat at least 200g vegetables and 2 fruits per day.

The daily consumption of fruits and vegetables (in the whole population) has progressed over time, and reaches 65% for fruits and 84% for vegetables. Although this is an encouraging progression, the quantity consumed is far too low. Only 25% of the people reports to eat at least 200g vegetables and 2 fruits daily, which is a proxy of the nutritional recommendations (which are “300g vegetables and 2 fruits per day” according to the “Actieve Voedingsdriehoek”,[88] or five portions of either fruits or vegetables, according to the WHO[89] and the Belgian Nutritional Plan[90]).

Physical activity

Strong evidence demonstrates that compared to less active individuals, more active people have lower rates of all-cause mortality, coronary heart disease, high blood pressure, stroke, type 2 diabetes, metabolic syndrome, colon and breast cancers, and depression.[91, 92] But the quantity of physical activity is difficult to measure. The questionnaires and the development of indicators raised many questions and criticism. The questionnaire will be changed in the next (E)-HIS. Moreover, very few international data are currently available. This being said, we present the currently available data on physical activity in Belgium.

The global percentage of people (15 years or more) practising at least 30 minutes of any type of (at least moderate) physical activity per day is 38%. There is a lot of room for improving this global level. The (at least moderate) physical activity rate is almost twice as higher in men than in women. There are important regional differences with a higher rate of practising (at least moderate) physical activity in Flanders (45%) than in Wallonia (27%) or Brussels (22%).

7.2.2.2 Healthy Environment

In Flanders, the Vlaams Instituut voor Gezondheidspromotie (VIGeZ) has developed a set of global indices aiming to measure the level of intensity of "health promotion" in several settings (schools, work, and municipalities). Such indicators focus on public health authorities responsibilities (as opposed to the usual measures of health behaviour).

It is in line with two axes of the Ottawa charter:[23]

- Developing healthy public policies
- Developing healthy environment

Three specific themes were analysed: smoking, healthy eating and physical activity. Those indicators of health promotion in settings can be seen globally as a summary result, or can be decomposed into specific dimensions. They can be used as an (auto)-evaluation indicator for the municipalities, which can compare themselves to the others. The trends over time can also be followed (with caution). For the indicators on schools, results can also be obtained from the Health Behaviour in School-aged Children (HBSC) studies in Wallonia and Brussels.

Index of health promotion policies in the municipalities

The municipalities represent the most close-to-the-citizen level of public authority.

Results are only available for Flanders. The scores, that represent the weighted sum of “good” answers to questions related to the health promotion policies at municipality-level (in the field of tobacco, healthy eating and physical activity), range between 0 and 100%. The municipalities score low for tobacco prevention (global score=37%) and healthy eating (global score=36%), a bit better for physical activity (global score=50%). The average scores hide a large dispersion of scores with some municipalities doing nothing, and others performing very well. It is important to further analyse the reason for those low rates and for the variability, in order to intervene efficiently.

Percentage of schools with a health promotion working group

The percentages of schools with activities in health promotion are calculated separately for 3 themes: smoking prevention, healthy eating and physical activity. The existence of a working group working on health promotion as a whole cannot directly be deduced from those results. However, the separate indicators are a good proxy of the situation.

For Flanders, the following results are extracted from the VIGeZ 2009 report:[93]

- The existence of such a working group is rather good implemented in the secondary schools (42% for smoking prevention, 64% for healthy eating and 54% for physical activity; the main roles of the working group are “to give advice to the Direction” or “taking part in setting up the health promotion policies of the schools”.
- Whatever the theme, in the majority of schools, the working group is composed mostly of teachers; parents and students are not part of the team as such.
- However, other participation mechanisms exist for the students: a feedback of the discussions of the working group is given to students and parents. In almost half of the schools, the students can take part in the decisions. In 38% they only can give their opinion or make suggestions.

From the VIGeZ report we can conclude that a working group for health promotion is implemented in a majority of schools. While students and parents are seldom part of those groups, other participation mechanisms exist. The authors conclude that the participation culture is quite largely implemented.

In Wallonia and Brussels, the Health Behaviour in School-aged Children (HBSC) study is a cross-national research survey conducted in collaboration with WHO-Europe. The HBSC aims to gain new insight into young people's health, well-being, health behaviours, and their social context. A part of the survey is devoted to the health strategies and environmental context of the school, and is answered by the school directors.

In the French speaking part of Belgium (Wallonia and Brussels) survey 2010, 44 secondary schools directors were interviewed regarding the health related projects conducted in the school. Some indicators that we retained as performance indicators could be extracted from the report.

Almost half of the schools report they have a permanent health cell (40%). However, it seems that the participation of students is quite poor, since students are only implied in 7.7% of the cases. Other mechanisms of participation are maybe present, but were not part of this questionnaire. This point could be explored more profoundly in the future. As participation is an essential dimension in the success of health promotion, this dimension should be further improved.

Offer of physical activity at secondary school

Physical activity in young people is an important health-enhancing activity. Schools can offer many opportunities to young people to engage in physical activities. For Flanders, the following results are extracted from the VIGeZ 2009 report[93].

Table 26 – Offer of physical activity in secondary schools in Flanders

	N	Minimum	Maximum	Mean	Std. Deviation
Education	416	.00	10.00	6.0643	2.08702
Supply	416	.00	8.59	5.4758	1.29252
Reglementation	416	1.21	10.00	6.9500	1.74638
Participation	416	.00	10.00	5.3100	2.31019
Networking	416	.00	10.00	4.7332	3.41978
Total	416	8.74	84.27	56.3475	14.46473

Note: The table provides an overview of the partial scores for several health promotion dimensions. Those partial scores are calculated as a 0-10 index resulting from the weighted sum of "good" answers to a long questionnaire. The score of "supply" is one of those partial scores. The global score, called "Total score of the physical activity policy in the secondary schools" (calculated as a percent), represents a global intensity of the health promotion policies on the theme of physical activity, in all respondent schools. The global score ranges between 0 and 100, and should be interpreted as a "percentage" of a perfect score (in terms of health promotion policy).
Source: VIGeZ report[93]

In summary, we can conclude that health promotion policies related to physical activity in Flemish schools are in progress, score quite good and are generally integrated in a global school policy. A separate analysis of the dimension "supply" reveals that infrastructure scores quite good. Nearly 100% of schools have (access to) a gym but with sometimes insufficient space available. However, the availability of a swimming pool is more problematic. Although the range of activities has increased since 2006, the accessibility of facilities could improve.

Data for Brussels and Wallonia are extracted from the HBSC survey.[94] This report shows that 20% of the responding schools had no adequate sport facilities, and that another 10% had no sport facilities. In those schools, the children are going to another place to have the sport lessons.

Data on the availability of (extra) physical activity and on the integration of the physical activity in the global school-policy should be collected in Wallonia and Brussels in order to conclude and eventually make recommendations.

7.2.3 Health Promotion outcomes

7.2.3.1 Health Literacy

Health literacy is one of the most important indicators for health promotion. It can be defined as "the individual skills to understand and manage the information related to health, health determinants, and health care". It is related to the "empowerment" dimension, which is one of the most representative aspects of health promotion.[95]

Unfortunately, no data exist in Belgium yet. At international level, the tools to adequately measure health literacy are still under validation.[96, 97]

7.2.3.2 Social influence and action

Social support

Social support is a protective factor in times of stress. It is a resource that helps individuals to deal with the difficulties of life (according to different modalities, like emotional support, material aid, information…). Low levels of social support have been linked to increased rates of depression, somatic illnesses and mortality.

Fifteen percent of the population aged 15 years or older reported poor social support in 2008. There is no significant gender difference. The lack of social support is gradually increasing with age. There is also a strong association with educational level (age-adjusted rate equals 22% on the lowest educational level versus 10% in the highest). The rate is much lower in Flanders than in the other regions, especially in Brussels.

7.2.3.3 Healthy Public Policy

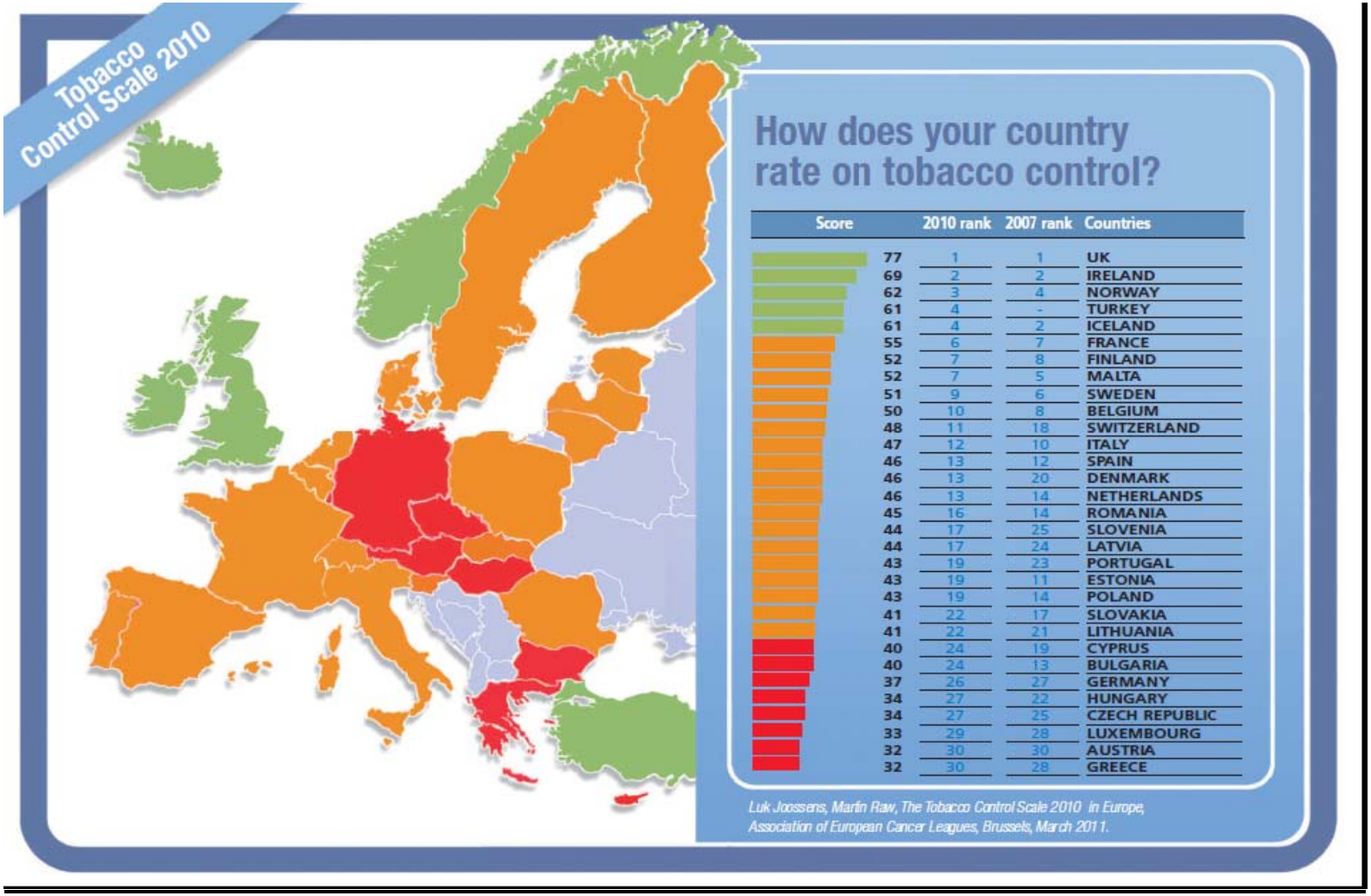
The Tobacco Control Policies Scale

The concept of multi-pronged and "comprehensive" tobacco control policies arose from governments' and non-governmental organisations' policy initiatives during the 90s. The interest of the composite index "Tobacco Control Policies Scale" is to provide a global and internationally comparable level of the Tobacco Control Policies in a country. It is composed of the following elements[98]:

- Price increases through higher taxes on cigarettes and other tobacco products;
- Bans/restrictions on smoking in public and work places;
- Better consumer information, including public information campaigns, media coverage, and publicising research findings;
- Comprehensive bans on the advertising and promotion of all tobacco products, logos and brand names;
- Large, direct health warning labels on cigarette boxes and other tobacco products;
- Treatment to help dependent-smokers stopping, including increased access to medications.

Belgium is situated on the 10th place out of 32, with a global score of 50/100. The scores of the more extreme countries were respectively 32 (Greece) and 77 (UK). The authors conclude that "Belgium missed a golden opportunity to adopt comprehensive smoke-free legislation when the parliament modified legislation in December 2009 (articles 4 and 5). The new law still permits smoking in bars, discotheques and casinos. Also smoking is still allowed in some public places in smoking-rooms under strict rules. Data from the Ministry of Health show that half of the bars in 2010 do not respect the weak restrictions which applied to them. On the other side, Belgium was the first EU country to introduce pictorial health warnings in 2006 and to print the number of the quit line on all cigarette packs in 2011".

Figure 37 – International comparisons on the Tobacco Control Scale in Europe (2010)



Score	2010 rank	2007 rank	Countries
77	1	1	UK
69	2	2	IRELAND
62	3	4	NORWAY
61	4	-	TURKEY
61	4	2	ICELAND
55	6	7	FRANCE
52	7	8	FINLAND
52	7	5	MALTA
51	9	6	SWEDEN
50	10	8	BELGIUM
48	11	18	SWITZERLAND
47	12	10	ITALY
46	13	12	SPAIN
46	13	20	DENMARK
46	13	14	NETHERLANDS
45	16	14	ROMANIA
44	17	25	SLOVENIA
44	17	24	LATVIA
43	19	23	PORTUGAL
43	19	11	ESTONIA
43	19	14	POLAND
41	22	17	SLOVAKIA
41	22	21	LITHUANIA
40	24	19	CYPRUS
40	24	13	BULGARIA
37	26	27	GERMANY
34	27	22	HUNGARY
34	27	25	CZECH REPUBLIC
33	29	28	LUXEMBOURG
32	30	30	AUSTRIA
32	30	28	GREECE

Source: A survey of tobacco control activity in 31 European countries in 2010[98]

7.3 Key findings

- In 2008, 47% of the population was in overweight, and 14% was obese. These percentages are increasing over time. Both overweight and obesity increase sharply with age until the age of 65, and are strongly associated with educational level. The obesity rate in the lowest educational level is twice as high as in the higher educational levels. Differences between regions are small.
- The number of studies performed in Belgium on oral health of the population is scarce and are often limited to small selected areas. In a 2009-2010 study, the mean DMFT (dental health: decayed, missing, filled teeth) score was 0.9. This score meets the WHO goals set for the year 2010 (maximum mean DMFT score below 1.0 for 12-year-olds). However, more data are needed on larger samples.
- The rate of new HIV diagnosis in Belgium is a bit higher than the European (EU-15) mean. A large proportion of those new diagnosis are made in non-Belgian people. Those are probably imported cases, with different patterns of transmission than those of the Belgian cases. The rate in Brussels is higher than in the other regions, representing an urban phenomenon. The male homosexual transmission is the main way of transmission for the Belgian cases. The number of cases resulting from this transmission way is increasing; the number of cases transmitted by other ways is not diminishing either.
- The percentage of daily smokers was around 20% in Belgium in 2008. It has significantly decreased since 10 years. It is higher in men than in women, in all age groups. However, the rate is more decreasing in men than in women. The Belgian rate is slightly below the EU-15 average rate.
- In 2008, 8% of the population was considered to have a weekly alcohol over-consumption. Over-consumption is already common in young people (aged 15-24 years). Regional differences are observed in this age group, with more young people reporting over-consumption in Flanders than in the other regions. The problematic alcohol consumption (trends to dependency) seems to increase in all regions and mostly in Brussels. The regular risky single-occasion drinking (more than 5 glasses) among young people is of concern.
- In 2008, almost two-third of the population ate fruit every day, which is an improvement compared to 2004. The daily vegetables consumption was still higher than that of fruits (84%). However, only 26% of the people ate 2 fruits and 200g vegetables daily, with even lower rates in Wallonia (F: 28.5%, B: 24.6%, W: 18.2%).
- The global percentage of people practising at least 30 minutes of any type of physical activity per day is low, at 38%. It is lower in women. It is much higher in Flanders (45%) than in the two other regions, and is especially low in Brussels. The rate is also surprisingly declining in Wallonia.
- When assessing the global public policy on tobacco control with the Global Tobacco Scale, Belgium is ranking at an intermediate position.

8 EQUITY AND EQUALITY

8.1 Introduction

Equity is a key feature in the evaluation of the performance of a health system.[1] It is also a controversial normative issue, referring to judgement and political position. A broad range of perspectives and definitions have been proposed, and are discussed in the Supplement S2 of this report: "The place of equity in assessments of the performance of health systems."

Being aware of this feature, we have approached the dimension of equity with two complementary ways:

1. In a first subchapter, called "Socio-economic inequalities", we document the inequalities in health, health determinants and healthcare utilization in Belgium across the socioeconomic position. Indeed, for the purpose of operationalisation and measurements, Braveman[99, 100] suggests defining equity in health as "the absence of systematic inequalities in health/health determinants between social groups who have different social positions in a social hierarchy".

2. In a second subchapter, we have proposed contextual indicators that can highlight issues of equity in healthcare at a global level. This is the purpose of the second part of the chapter, called "Equity of the health system at a global level".

8.2 Socio-economic inequalities

8.2.1 How did we evaluate socio-economic inequalities?

Socio-economic health inequalities refer to disparities in health status/health determinants/utilization of health services, most often in disfavour of the social groups that are already disadvantaged by their position on the social scale. The presence of socio-economic inequalities is consistent and has long been recognized.[101, 102] Tackling health inequalities has long been a priority for the WHO.[103] It has become a high level priority target at European level, with the DG Sanco 2d Health Programme[104] and in the USA.[105] To assess the progress towards reducing social inequalities in health, it is important to measure them[100], and to monitor if they change over time (by repeating those measurements).

The measurement of health inequalities requires choosing:

- a characteristic defining the social groups
- one or more synthetic inequality measures in the health-related indicator(s).

Characteristics used to define the social groups

The social groups can be defined by different characteristics at household, individual or even geographical levels: the household income, the educational level, the occupation, a deprivation index, or a combination of some of those variables.

Social groups' definition varies according to the availability of the socio-economic variables in the different data sources we used.

For the indicators issued from the Health Interview Survey, different socio-economic (SE) variables are available. For most indicators of this report, the highest educational level attained by the reference person and his/her partner was chosen to define the social position. Indeed, this information is considered to be the most comparable and robust choice, because it is largely available, less sensitive and prone to bias than the income level. It was coded according to the International Standard Classification of Education (ISCED) summarized as lower education (no diploma or primary school diploma), lower secondary education, higher secondary education and higher education. For the indicator "delayed contacts with health services for financial reasons", the income level of the household was chosen as proxy for the SE level. Indeed, this choice is more pertinent when explaining purely financial barriers.

For the indicators of Life and Health Expectancy, the educational level was grouped into 5 groups (no education and primary level were split).

For the indicators calculated from the Permanent Sample or from the RIZIV – INAMI, the status of increased reimbursement was chosen as proxy for the SE level. Two social categories were defined with this variable, the BIM[u] (increased reimbursement, mostly corresponding to people with a low income level) and BO (normal reimbursement).

[u] BIM: Bénéficiaire à Intervention Majorée (beneficiary of increased reimbursement); BO: Bénéficiaire Ordinaire

Measurement of inequalities

In a first step, we showed the disparities across the socio-economic groups for all the indicators for which data were available (this detailed information can be found in the documentation sheets in the Supplement S1).

In a second step, we summarized the detailed information by computing indices, allowing quantifying the size of the inequalities. A wide variety of summary indices can be used.[106] They differ by several properties: their nature (absolute versus relative), their scope and complexity: simple pairwise measures (like the rate difference, or the relative risk) comparing only two groups are easy to compute and to understand. However, from a public health perspective, more complex measures involving all social groups are more useful since they measure the total impact of the inequality on the population health.[107]

The following inequality indices are described in this chapter:

- For the Life/Health Expectancy:
  - The absolute difference in years between the lowest and the highest educational groups
  - The Relative Concentration Inequality Indices (CII rel): the relative concentration index is the sum of the difference in life expectancy between each group and the highest educational level, weighted by the size of each group, and divided by the life expectancy
- For the indicators issued from the Health Interview Survey
  - The age-adjusted rate ratio (between the extreme educational levels)
  - The absolute difference in age-adjusted rates (idem)
- The Population Attributable Fraction (PAF): this is the relative gain in health (or health determinant) rate that would be expected at population level if all the groups experienced the rate of the more advantaged social group. It is computed as the difference between the overall rate in the population and the rate in the more advantaged group, divided by the overall rate in the population.

In this chapter, we highlighted the indicators for which we observed a relative risk (RR) as large as 1.2 (or 0.83 when the gradient was reverse).

Limitations

The inequalities could not be measured for all the indicators due to lack of data on social position. This is the case for many of the quality indicators. Therefore, our conclusions for this dimension are largely incomplete.

Some issues known to be related to social inequalities were not studied in this work (like the waiting time for some interventions). A deeper focus of the topics specifically linked to the inequalities should be performed in the next report.

For the indicators from the Permanent Sample (EPS), only two statutes are available. It is difficult to measure the impact of inequalities at population level with the BIM status. Indeed, people with a preferential reimbursement status for financial reasons are people with a very low income, representing less than 5% of the population. On the other hand, the preferential reimbursement status also comprises people with a physical handicap but no financial disadvantage. The definition could be refined in the next survey.

We did not perform an analysis of the small scale geographical disparities in the indicators. Such a representation is a way to highlight health inequalities related to ecological poverty indices. This was beyond the scope of this work. Moreover, the data originating from the HIS cannot be analysed on a small scale, because of the size of the sample.

8.2.2 *Facts and figures*

This section is a short summary of the detailed results which are presented for each indicator in the Supplement S1 of this report (available on the website).

8.2.2.1 *Inequalities in indicators of General Health Status*

Life and Health Expectancies

To assess inequalities in life and health expectancies, complex processing of data on mortality, social position and disability are needed.[108] Currently, the most recent and robust data in Belgium concern the year 2001 for the inequalities in life expectancy[109, 110] and the year 2004 for the inequalities in health expectancy.[111] As mentioned, in both studies, the educational levels are reported in 5 categories (no diploma, primary, secondary lower, secondary higher, and higher education). With this way of grouping, more extreme groups are compared with the pairwise indices than for the other indicators, making the differences between the compared appearing very large. Concentration inequality indices are more appropriate measures because they take into account the share of the social levels.

Table 27 shows the life expectancy at 25 years by educational level, in 2001. Large inequalities in life expectancy between the educational levels are observed in both sexes, defined as the difference in life expectancy between a particular educational level to the highest level. A gradient of inequalities is observed. The difference between the extreme levels is 7.5 years in men. The Relative Concentration Index in men was 3.7%. In women, the same tendencies were observed as for men, but the gaps between each educational level and the highest were smaller than in men. The gap between the extreme educational levels was 5.9 years in women and the Relative Concentration Index in men was 3.7 %.

Table 27 – Life expectancy at 25 years by sex and educational level, absolute difference to highest educational level and concentration inequality indices (CII) (Belgium 2001)

	Men		Women	
Diploma	Total	Diff to the highest level	Total	Diff to the highest level
Higher	55.0		59.9	
Secondary higher	52.5	-2.5	58.5	-1.4
Secondary lower	51.3	-3.7	58.0	-1.9
Primary	49.3	-5.7	56.2	-3.7
No diploma	47.6	-7.5	54.0	-5.9
Total	51.4	-3.7	57.1	-2.8
CII absolute		1.9		0.8
CII relative		3.7		1.4

Source: Deboosere et al.[112]

Table 28 shows the health expectancy at 25 years by educational level, in 2001. Inequalities between the educational levels in health expectancy are much larger than for life expectancy. Again, a gradient of increasing inequalities when the educational level decreases is observed. The difference between the extreme levels is 18.6 years in men. The Relative Concentration Index in men is 15.3%, which is much larger than for life expectancy. In women, the same tendencies were observed as for men. The gap between the extreme educational levels was 18.2 years in women. The Relative Concentration Index in women was 16.6%. This means that people with low educational level not only live shorter than those with a high educational level, but also that they spend much less time in good health.

Table 28 – Health expectancy at 25 years by sex and educational level, absolute difference to highest educational level and concentration inequality indices (Belgium 2004)

	Men		Women	
Diploma	Total	Diff to the highest level	Total	Diff to the highest level
Higher	46.33	0.0	47.1	
Secondary higher	41.54	-4.8	41.27	-5.8
Secondary lower	39.71	-6.6	42.01	-5.1
Primary	36.65	-9.7	36.27	-10.8
No diploma	27.75	-18.6	28.92	-18.2
Total	40.5	5.9	40.4	6.7
CII absolute		6.2		6.7
CII relative		15.3		16.6

Source : Van Oyen et al.[113]

The self-perceived health

Important inequalities are observed in self-perceived health. An absolute difference of 29% is observed between the lowest and the highest educational levels (Table 29); the relative risk is 67%. The Population Attributable Fraction is 11%, meaning that the global increase of the rate in the whole population would be 11.2% if all educational levels experienced the rate of subjective health of the people of the highest educational level.

Infant mortality is also known to be linked with socio-economic status. In Belgium, only partial data exist and confirm this fact. For instance, a clear association was found in Brussels between the number of household incomes and infant mortality.[114] These data are not presented in detail in this report.

8.2.2.2 Inequalities in the indicators of accessibility

The percentage of households reporting to have delayed contacts with the health system for financial reasons was strongly related to the income level, with 27% of delay in the households of the lowest quintile versus 4% in the households of the highest quintile (Table 29). This represents a relative risk of 6.2. The population attributable fraction was as large as 71%.

Inequalities of smaller size are observed for the screening of breast and cervix cancer. Lower coverage rates are observed for patients with lower socio-economic status (identified by their entitlement to increased reimbursement). The absolute difference of coverage between lowest and highest educational levels were respectively 14.3% and 15.3% for breast and cervix cancer screening. The relative risks were respectively 0.77 and 0.76.

For the indicators on vaccination (vaccination of children and vaccination of the elderly), a reverse phenomenon was observed. The vaccination against influenza in the elderly, measured with the EPS data, showed a better coverage in the patients with BIM. It could be due to the fact that they reside more often in institutions for elderly, where vaccination is more systematic. For the vaccination rate in children, in the last vaccination survey in children in Wallonia (2009), children with lower socio-economic status (measured with the educational level of the mother) had slightly better coverage than children from higher socio-economic level. This association was not found in Flanders.

8.2.2.3 *Inequalities in the indicators of quality of care*

Data by social status were only available for some indicators of quality of care.

Socio-economic inequalities could be observed in:

- The follow-up of diabetic patients: the absolute difference in the percentage of patients with a correct follow-up was 10%, the relative risk was 0.83, and the PAF was 7.4%.

No important inequality was observed for the following indicators:

- Prescription antibiotics according to guidelines
- Physician encounter after hospital discharge for eldery patients (65+)
- % of people with at least a contact with a GP in the year
- Percentage of people with a high fidelity to their GP (Index of Usual Provider of Care > 0.75)

Reverse Inequalities

Some interventions are not appropriate. Hence, a high rate for those interventions signs a lack of appropriateness. This is the case for breast cancer screening outside the target groups (< 50 or ≥ 70 years). Since the coverage is higher in the advantaged social groups, the appropriateness is also worse in this group.

Missing data

Unfortunately, for a large number of interesting indicators of quality, the socio-economic inequality could not be measured. Conclusions must be considered as largely incomplete. The missing data concern 14 indicators.[v]

8.2.2.4 *Indicators of the Health promotion domain*

Daily smoking and obesity present a high relative risk (respectively 1.68 and 2.11) between the lowest and highest educational groups. For daily smoking, the absolute difference in rates is as high as 8.9%. Moreover, for daily smoking and obesity, a high Population Attributable Fraction (PAF) is observed (-36.1 % for smoking and -34.8% for obesity). This means that for those 2 factors, the inequalities have a large global impact on the population health, and that a large gain could be obtained in the population health if all social classes experienced the level of smoking/obesity prevailing in the more educated group.

The rate of overweight people (defined as the people with a BMI ≥ 25) presents more moderate inequalities, with a relative risk of 1.45 and a PAF of 14.7%.

For the determinants having a positive impact on health, a higher rate is generally observed in the more educated classes, meaning that the relative risk will now be lower than 1. We observe important inequalities for the consumption of at least 200g of vegetables and 2 fruits daily (RR= 0.74, and PAF=13.1%). For physical activity, the inequalities are rather important, with a RR of 0.56 and a PAF 12.3%.

Strong inequalities are observed in the level of social support, with 24.4% of the people from the lowest educational level reporting a poor social support, versus only 10.1% for the people of the highest level. This represents a RR of 2.4, and a PAF of -34.8%.

[v] Cancer 5-year relative survival rate after breast cancer; Cancer 5-year relative survival rate after cervix cancer; Cancer 5-year relative survival rate after colon cancer; Deaths due to suicide (/100 000 pop); Patients who died within one week after start of palliative care service (%); Hospital admissions for asthma in adult patients (/100 000 pop); Caesarean sections (per 1000 live births); Incidence of hospital acquired MRSA infections (/1000 admissions); Incidence of post-operative sepsis (/100 000 discharges); Incidence of pressure ulcers in hospitals (%); In-hospital mortality after hip fracture (%); Patients with cancer discussed at the multidisciplinary team (MDT) meeting (%); Number of contacts between the patient and the GP during the 3 last months of life; Pain control during hospitalisation (% of patients with pain always controlled).

No or weak inequalities

The daily consumption of fruits or vegetables once a day showed no important link with the social status.

The link between the consumption of alcohol and social status was not clear.

Data by socio-economic status were not available for: Decayed/ missing/ filled teeth at age 12 (mean score at age 12) and Incidence of HIV (/100 000 pop).

Table 29 – Inequalities expressed with absolute difference, relative difference, and summary measures

	Overall value (f)	Value in lowest social group (f)	Value in higher social group (f)	Absolute difference (lowest vs highest)	Relative Risk (lowest vs highest)	Summary measure (CII or PAF)
General Health Status						
Life Expectancy at 25 in men, 2001 [i; ii]	51.38	47.56	55.03	-7.47	n.a.	3.73%
Life Expectancy at 25 in women, 2001 [i; ii]	57.09	53.98	59.9	-5.92	n.a.	1.43%
Healthy Life Years at 25 in men, 2001 [i; ii]	40.47	27.75	46.33	-18.58	n.a.	15.30%
Healthy Life Years at 25 in women, 2001 [i; ii]	40.42	28.92	47.1	-18.18	n.a.	16.56%
% of the population (aged 15+) that assess their health as good or very good [iii]	76.8%	57.4%	85.7%	-28.3%	0.67	11.6%
Accessibility of care						
Delayed contacts with health services because of financial reasons (% of households) [iv]	14.0%	27.0%	4.0%	23.0%	6.75	-71.4%
Breast cancer screening (% women aged 50-69) [v]	60.1%	48.6%	62.9%	-14.3%	0.77	4.7%
Cervix cancer screening (% women aged 25-64) [v]	61.8%	48.9%	64.2%	-15.3%	0.76	3.9%
Appropriateness						
% of adult diabetes patients receiving appropriate care, in terms of regular retinal exams and blood tests [v]	54.0%	48.0%	58.0%	-10.0%	0.83	7.4%
Health promotion						
% of the population (aged 15+) that reports to smoke daily [iii]	20.5%	22.0%	13.1%	8.9%	1.68	-36.1%
% of the population (aged 15+) reporting a poor social support [iii]	15.5%	24.4%	10.1%	14.3%	2.42	-34.8%

% of the adult population considered as being obese (BMI ≥ 30) [iii]	13.8%	19.2%	9.1%	10.1%	2.11	-34.1%
% of the adult population considered as being overweight or obese (BMI ≥ 25) [iii]	46.9%	57.8%	40.0%	17.8%	1.45	-14.7%
% of the population reporting to eat at least 200g vegetables and 2 fruits per day [iii]	26.0%	21.7%	29.4%	-7.7%	0.74	13.1%
% of the population reporting to practice at least 30 minutes of PA per day [iii]	38.1%	24.0%	42.8%	-18.8%	0.56	12.3%

[i] in years; [ii] 5 educational levels; [iii] 4 educational levels; [iv] 5 income levels; [v] 2 reimbursement categories;
rates are not adjusted for age; summary measures= CII (Concentration Index of Inequalities) relative for life and health expectancy, PAF (Population Attributable Fraction) for all the other indicators
Source: Health Interview Survey and EPS (WIV – ISP and KCE calculations)
PA: physical activity

8.2.3 Key findings

With regard to general health status:

- **Life expectancy presents a strong increasing gradient with the social position. This gradient is still much more important with health expectancy. Inequalities are observed in self-perceived health.**
- **Inequalities in those global and "end of course" indicators reflect inequalities in factors influencing them: social and living conditions, health determinants, health system. Those should be identified and tackled.**

With regard to accessibility:

- **Very large inequality is observed in the delay of health care for financial reasons.**
- **Moderate inequality is observed in breast and cervix cancer screening.**
- **On the contrary, for vaccination, it seems that the coverage in the disfavoured group is at least as good as in the favoured group (with some partial data showing even a better coverage). This is a good point for the action of preventive health services.**
- **Also the coverage of the global medical record is better in the less advantaged groups.**

With regard to the quality of care:

- **For most of the indicators, socio-economic inequalities could not be measured. The conclusions are incomplete.**
- **Moderate inequality was observed for the surveillance of diabetic people.**

With regard to health promotion indicators:

- **Very important inequalities are observed for daily smoking and obesity (with a Population Attributable Fraction of more than 30%). As obesity and smoking are strongly associated with a higher morbidity, tackling the inequality in those factors represents a top priority.**
- **Inequalities are also observed for overweight, eating enough fruits and vegetables, and in a lesser extent for practising physical activity.**
- **Very important inequalities are observed for the social support.**

8.3 Equity of the health system at a global level

8.3.1 How did we evaluate the equity of the health system at a global level?

Equity is a controversial dimension. Generally, equity refers to "equality of something". However, there is a large heterogeneity in the different approaches. Indeed, vertical equity is defined as the unequal treatment of the unequals and horizontal equity is defined as equal treatment of the equals. An example of vertical equity are tax systems which are organized so that everyone pays taxes based on ability to pay. An example of horizontal equity is the attempt to provide the same care to patients who have the same needs. Equity implies therefore some degree of solidarity between the richest and the poorest, between the healthy and the sick. In an attempt to reconcile solidarity and personal responsibility[115], approaches have been proposed to define what should be equalized among individuals. Some propose to equalize resources[116-118], while others prefer to equalize outcomes[119-121]. These theories offer interesting lines of thought and show how the definition of fairness and how to achieve it, are essentially normative issues and therefore philosophical issues.

To establish equity indicators in the context of a report on the performance of a healthcare system requires an approach as neutral as possible and must reflect societal choices. In this chapter, we have evaluated the global equity of the healthcare system in an indirect (or contextual) way.

Belgium background: In Belgium, some specific measures such as entitlement to increased reimbursement and the Omnio status have been taken to promote the financial accessibility. The maximum billing aims to avoid “catastrophic” health expenditures and other measures are targeting categories of patients, such as patients with chronic illness or children. Several Belgian studies, and their results, are discussed in detail in Supplement S2 of this report: “The place of equity in assessments of the performance of health systems.”

8.3.1.1 Global or contextual indicators

Two contextual indicators are described below:

- the progressivity of the financing of the healthcare system
- the Gini coefficient of inequality in income

The progressivity of financing the healthcare system translates the equity before using the system. By progressivity, we do not mean the “cost sharing” at the point of care (i.e. supplement, co-payment, coinsurance, non-reimbursable drugs, premiums to private insurance …) but the way to finance the public system. A financing is defined as progressive (regressive) when the average rate of “taxation” (considered in a broad sense) is increasing (decreasing) with the income. And the financing is defined as proportional when the average rate of taxation is constant. We characterize the relative progressivity of the most important sources of financing of the Belgian healthcare system: the direct taxes are more progressive than the social contributions which are more progressive than the indirect taxes. Simple ratios are computed to describe the progressivity of the financing for the period 2005-2011. We do not evaluate the global redistribution effect of the financing and use of the healthcare system because such an evaluation implies the knowledge of individual data about consumption of care, all financing sources and about the available income. These data are not totally available for Belgium and a robust comparison with other countries is not possible due to lack of data. Wagstaff and van Doorslaer have contributed in a substantive way to the evaluation of the equity in financing and delivering of healthcare but, unfortunately, they do not mention Belgium in their work.[122-128]

We contextualize also the equity issue by means of the income inequality measured by the Gini coefficient. Some authors have showed the association between the income inequality and some indications of poor objective or subjective health.[100, 129-131] The Gini coefficient is simple to interpret and to compute for Belgium and international organizations use it to characterize the income inequality in an international perspective. It has been recently recommended by a WHO workgroup which was working on indicators for the "Health 2020 targets".[132]

8.3.2 Facts and figures

This section is a short summary of the detailed results which are presented for each indicator in the Supplement S1 of this report (available on the website).

The disparities of health status and health consumption are presented with the indicators of the other dimensions. The computation of the two contextual equity indicators (progressivity of the financing and income inequality) shows that the public financing of the healthcare system becomes less progressive and that our redistribution system (tax and transfers) makes our country one of the most egalitarian in the world.

The public financing of the healthcare system becomes less progressive essentially for two reasons: (1) the part of the regressive receipts (indirect taxes) is increasing and (2) the part of the progressive receipts (direct taxes and special contribution for social security) is decreasing. Globally, these two evolutions make the financing less progressive.

Nevertheless, the Belgian society is one of the most egalitarian if we compare the Gini coefficient pre and after taxation and transfers (social allowances).

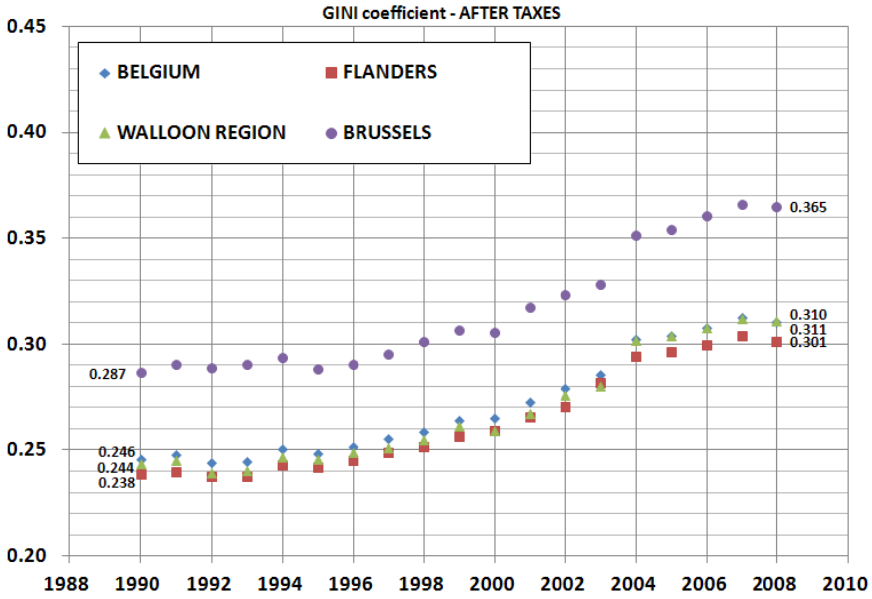
These two results are not contradictory because the society can organize a substantial income redistribution using a large system of transfers and taxes and finance a specific collective sector (i.e. the public healthcare system) using resources (taxation and contributions) which are little progressive.

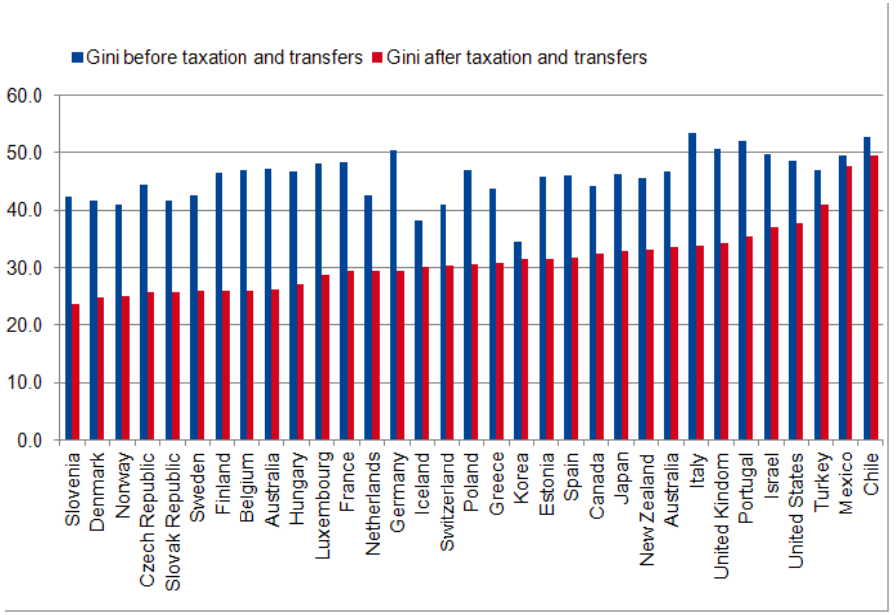
Table 30 – Progressivity indicators of the financing of the public healthcare system (2005-2011)

Indicators of progressivity	2005 (final accounts)	2006 (final accounts)	2007 (final accounts)	2008 (provisional accounts)	2009 (provisional accounts)	2010 (budget)	2011 (budget)
Ratio proportional receipts/total receipts	71.1%	71.0%	72.0%	70.6%	69.4%	64.8%	61.4%
Ratio progressive receipts/total receipts	18.9%	19.0%	18.0%	17.3%	17.2%	19.4%	18.4%
Ratio regressive receipts/total receipts	10.0%	10.0%	10.0%	12.1%	13.4%	15.8%	20.2%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Vade mecum de la sécurité sociale, RIZIV – INAMI, KCE calculation

Figure 38 – Gini coefficient before and after taxation and transfers (1998-2010): Belgium and international comparison





Source: DGSIE (Belgium) and OECD Health Data 2012 (international comparison)
Note: the Gini coefficient is a coefficient for inequality of income in a population. When there is perfect equality (everybody has the same income, the coefficient is 0). When there is perfect inequality, the coefficient is 1 (one person has all the revenues). A lower coefficient indicates a more equal distribution of the incomes.

8.3.3 Key findings

Equity in financing

- **Public financing of the Belgian healthcare system becomes less progressive, certainly since 2005.**
- **The international comparison of the progressivity is not relevant because of the great diversity of systems.**

Income inequality

- **Income inequality in Belgium is relatively high before the redistributive impact of taxes and transfers.**
- **Thanks to the system of taxation and transfers, Belgium is one of the most egalitarian countries.**
- **The high level of income redistribution and the more egalitarian distribution of disposable incomes should have a positive impact on Belgian population health.**

9 TOWARDS A MORE COMPREHENSIVE HEALTH SYSTEM PERFORMANCE ASSESSMENT: ADDRESSING CURRENT SHORTCOMINGS

In this section, we identified 10 limitations that should be addressed to improve the evaluation of the health system performance. Those issues relate to the lack of suitable indicators, the lack of data, the need for a better indicator or for more details. Some of the following conclusions result from the many indicators for which we could not find any data (see section “Indicators under development” in Supplement S1 of this report, available on the KCE website), and from the discussions with Belgian experts.

An indicator of global health status with potential for action: avoidable/amenable mortality

The previous report included one indicator of health status which was premature mortality, expressed as potential years of life lost (PYLL) before the age of 70 years. This indicator was too general, limiting the potential of action and was not retained in this report. Instead, the avoidable/amenable mortality expressed by group of causes could be more informative for the measurement of the effectiveness of health services. A recent EU funded project established the list of conditions for which variations in mortality between countries are likely to reflect variations in performance of healthcare systems.[133] This indicator could replace premature mortality in a future set of performance indicators.

Financial accessibility: need for a more comprehensive picture

While the coverage of the compulsory health insurance is quasi exhaustive in terms of the proportion of the population covered, part of covered services is paid directly by patients. Out-of pocket payments remain high, and 14% of the people report to delay healthcare because of financial reasons (with a strong gradient with household income). Several protection mechanisms were introduced to maintain a financially accessible healthcare system. Examples are lump sums for the chronically ill and the maximum billing system (MAB).[134] In addition to these publicly-funded

mechanisms, individual private insurances reimburse several healthcare services. A prerequisite to guide policy within this domain is an improved transparency in ambulatory supplements as well as in private hospital insurances (the percentage of people with private hospital insurance, and what is specifically covered by these private insurances).[135, 136]

Workforce counts: better data on the supply side available, but data on the need side still lacking

An effective healthcare workforce planning should be considered within a global policy taking into account supply and patient needs.

Data on the supply side

Current head counts of practising physicians undoubtedly represent an improvement of the information compared with the former situation when the medical workforce was estimated by the total number of licensed medical doctors (regardless of whether they worked in the healthcare sector or not). However, the real activity level of physicians was not taken into account. Since 2009, this count is conducted by the RIZIV – INAMI, which evaluates the number of full-time equivalents (FTE) of active physicians. For the first time, preliminary counts of the number of practising nurses by sector of activity are now available.

However, the density of practising healthcare workers is difficult to interpret, as no optimal density to meet population needs has been defined. International comparisons are of little help here since they are not interpretable without taking into account the organisation of care, which varies across countries.

Data on the need side

Workforce planning also requires information on the need/demand side, information that is currently scarce.

Indeed, several informal sources point out that the needs are insufficiently met, at least as far as the nurse workforce is concerned. It is widely known that there is general lack of nurses in the Belgian hospitals. Moreover, the continuously rising and changing demand for health services, due to ageing populations, technological advances and higher patient expectations, require a larger and more skilled nursing workforce.[137]

Macro-level data on the needs should be complemented with data that reflect the situation at the micro level. An example of micro data is a recent large-scale European nursing workforce study based on survey data. It illustrated that in Belgian hospitals nurses have, on average, to take care for more patients compared to other EU countries.[79] More nurses reported to be dissatisfied with their job and have the intention to leave their job.[79,138]

No indicators of the needs have been defined yet in this report, but the reflection should continue on this topic.

Mental healthcare: current indicators do not reflect the recent changes in the sector

In the field of mental health, the currently available indicators do not reflect the recent major changes in the sector. Indeed, since the end of the 20th century, a strong de-institutionalization movement in the mental healthcare sector has led to the development of new models of organization. One model, the “balanced care” model is gaining influence in most industrialized countries.[139] It implies that community services should be offered whenever possible, while hospital services should be available when ambulatory care cannot provide a good answer to the patient’s needs.

In Belgium, the most recent reform efforts to attain a balanced integrated care model focus on the development of “care networks” (the so-called “Art. 107 project”) oriented to 5 functional modules:

1. Prevention and promotion of mental health;
2. Intensive, community based, treatment teams for acute as well as for chronic physical conditions;
3. Rehabilitation teams focusing on social integration;
4. Intensive residential teams for acute and chronic mental health problems that require inpatient treatment;
5. Specific residential facilities in which care can be provided in a home or home-replacing environment.[140]

Some indicators can be proposed to monitor these evolutions (e.g. the percentage of patients with case management; the percentage of expenditures spent on community care compared to total expenditures on mental health care). They could not yet be measured because of limitations in the current data. Instead, we had to rely on general indicators (e.g. suicide rates) or indicators focusing on the psychiatric hospitalization episode (e.g. re-admission rates; involuntary committals).

At international level, despite several performance measurement initiatives, a recent survey of twenty-five EU countries noted that data on suicide rates and the number of psychiatric beds were readily available but other data were scarce.[141] Efforts are undertaken by international organizations such as the OECD[62] to propose indicators specific for mental healthcare. However, the operational development and data availability are often limited. For instance, despite the inclusion of "Persons aged 65+ years prescribed antidepressants using an anticholinergic anti-depressant drug (%)" in the OECD shortlist for mental healthcare indicators, there is no operational development of this indicator. What's more, the few published studies disagree about what is an antidepressant with anticholinergic side effects.[63, 64] As a consequence, international comparison of mental healthcare system performance is seriously hampered.

Continuity and coordination of care: new data soon available with the new pathways in ambulatory care, but still many gaps remain

The fact that new pathways in ambulatory care for type 2 diabetic or chronic renal failure patients were recently started and are currently being evaluated, shows the importance of the coordination of care for the policy makers.[142] We plan to include the results of those projects in the next edition of this report.

Some other relevant indicators have been identified, for instance:

- The experience of the patient with regard to the coordination of his/her care. Some countries such as the Netherlands, France, U.K., Germany, Canada, U.S. or Australia[20, 143] have performed specific surveys to answer that question. This indicator, although being central, is currently still not measured in Belgium.
- The availability of the whole health information of a patient at any time by all care providers is a central question, linked to the one of the patient electronic medical record, and to the access to it. Two indicators under development reflect this issue: the % of general practices with access to the hospital data of their patient, and the % of patients for which information on medication prescribed at any setting is accessible at any setting. Some initiatives are already in place, such as the "Réseau Santé Wallon" (https://www.reseausantewallon.be/) and pilot projects are being run, such as Vitalink in Flanders (http://www.vitalink.be/), but without many connections between them, and currently without much data to evaluate them. In this matter, the e-Health platform should have an important role to play.

Patient centeredness: many initiatives but few data

Patient centeredness is intrinsically difficult to measure with quantitative data, because it is related to the health system's ability to successfully answer to the particular needs of the patient or to encourage the patient's involvement. To effectively measure this, there are two main methodological approaches used:[144]

- Self-report measures of doctors' patient-centeredness;[145]
- External observation of consultation process: rating scales or verbal behaviour coding system.

In Belgium, the Health Interview Survey (HIS) is a major source of data self-reported by the population. It provides a measure of the patient's satisfaction with the health system, an indicator that has been discussed above, but which is subject to many critiques, both on the validity of the concepts and on the measures of satisfaction.[77, 78] To improve our understanding on patient experiences, in the next wave of the HIS the item on satisfaction will be replaced by a question on the patient's experience with ambulatory healthcare services (GP or specialists), based on the OECD questionnaire.[15] Patient experience with ambulatory care will thus be included in the following update of this report.

Patient centeredness is nevertheless a matter of concern for the Belgian healthcare system: several initiatives have been launched in Belgium. Three of them are described below. These 3 initiatives emphasize the commitment of the healthcare system to the patient centeredness approach. More detailed analysis should be performed to evaluate their quality.

First, since 2003, an ombudsman service exists for managing patients' complaints in public hospitals. This service records the number and the motive of complaints each year but does not assess the justification and the follow-up of the complaints. In 2010, 16 907 records were registered versus 9 026 in 2006. However, these numbers should be interpreted carefully: more registered complaints can refer to declining services but also to more effective ombudsman services in terms of visibility, availability, comprehensiveness of the recording… or a change in the patients' culture of complaints. There is also an international trend to develop a similar indicator for assessing the existence of a complaint resolution process in general practice[146-148]. In Belgium, this is not yet operational.

Second, since 1999, general and psychiatric Belgian hospitals can ask for financial support to create a post of intercultural mediator or intercultural mediation coordinator. Linguistic and cultural barriers have indeed a negative impact on access and quality of care. In 2009, intercultural mediators have done more than 80 000 interventions in 17 languages. The mode of organization is hospital dependent: one or several mediator(s); availability during office hours only or also very exceptionally during out-of-hours in case of an emergency. The coordination cell of the FPS Public Health ensures the follow-up and the assessment of the requests. The assessment encompasses patients encounters, care providers training, booklet editing... However, an assessment of real patients' (or physicians') needs and responses quality is lacking. Moreover, it remains difficult to comply to all language translations (no less than 170 different nationalities are taken care of in some hospitals). In this context, a pilot project has started recently (2012) to allow mediation support by internet (video conferences). In this pilot project, a network is set up between hospitals with intercultural support and also local medical home or health centres. This project will be evaluated each year.

Third, some pilot projects are recently launched in Flanders to stimulate the patients' involvement in decision concerning their disease in hospital quality management systems. In 2013, several public hospitals will allow the participation of patients' representatives in their board of governors. Measurement of quality indicators is soon expected in this domain.

Long-term care: no data currently, waiting for first results using the BelRAI assessment

Long-term care in this report refers to long-term care for the elderly needing assistance (mainly in residential care or receiving home care) and long-term care related to mental health problems. Indicators from the latter topic have been discussed above.

Some indicators have been chosen to assess the long-term care for disabled elderly patients, as the prevalence of malnutrition in elderly being in residential care or receiving home care (BMI <19), the percentage of elderly physically restrained, the prevalence of falls, the incidence of pressure ulcers and the problem of polymedication. Those indicators could not been measured, which highlights the current lack of data in this domain. However, the BelRAI[w] will soon provide data on some selected indicators.

At the international level, a working group from the OECD is currently developing a project specifically for long-term care[45], focusing on quality. The proposed framework for monitoring and improving quality in long-term care services will be based on the national framework of six OECD-countries (Australia, Canada, England, Finland, the Netherlands and the United States). This framework prioritised care effectiveness and user safety as key quality dimensions, followed by patient centeredness (including responsiveness, empowerment and communication) and care coordination and integration. The final phase in the report is the development of policies to achieve quality in long-term care and to address the shortcomings. The release of the report is planned for the end of 2012.

[w] The Resident Assessment Instrument (RAI)[44] is originally developed to assess the care needs of the elderly in institutions, and has later been extended with instruments for different care settings and subgroups. In Belgium a national pilot project (the BelRAI) is ongoing, but is not yet implemented in all care settings. The assessment instruments for home care, for long-term care facilities and acute care have already been adapted to the Belgian situation. Data are expected before the edition of the next performance report.

Efficiency deserves more attention in future report

Obviously, efficiency in healthcare cannot be sufficiently assessed with the few indicators selected in this work. International literature proposes efficiency measures which explicitly identify inputs and outputs.[8, 16] This could certainly be an interesting area of research.

End-of-life care: many local studies in Belgium, but few national data

The few indicators measured in this report are based on the population of patients dying from cancer, or on the population of patients receiving palliative care at home. This does not cover the whole population of patients eligible for palliative care, which highlights a real gap in data availability. Moreover, so far no data at national level have been published on accessibility nor on quality of end-of-life care in Belgium. Results from local studies (especially from Flanders) are well available, but are based on restricted number of patients, do not allow studying evolution of trends over time, and hence cannot be included in a performance report whose aim is to be reproduced every few years. Compared to the other domains of care, end-of-life care is little or not at all represented in databases from international organisations.

Health promotion: data on health literacy are lacking, while they are already available in other European countries

Health literacy is a relatively new concept considered as a crucial resource in health management. It can be defined as the individual skills necessary to understand and manage factors interacting with one's health. This gives individuals the opportunity to make healthier choices. It has been defined as a priority of action for the 2008-2013 European Union strategy. Different tools have been used in the world to measure it. The European project on health literacy has developed a comprehensive questionnaire aiming to build and validate 12 indicators. Those intend to measure various aspects of health literacy. A first survey occurred in Europe in 2010-2011, but Belgium did not participate.[97]

10 GENERAL CONCLUSION

This report presents the results of a first global evaluation of the performance of the Belgian health system, building on a former feasibility study. By means of seventy-four indicators with numerical values, this report intends to provide an overall overview of the health system performance, pointing to some directions for policy actions and generating questions for further follow-up or research.

It represents a substantial improvement over the previous report, by being more comprehensive and by updating the former set with more relevant indicators. Moreover, it allows in some cases the measurement of evolution. Also, important previous gaps in basic data have been filled since the last edition, like the cause-specific mortality rates or the cancer survival.

Belgium is not the first country having exercised this challenge. With the signing of the 2008 Tallinn Charter on health systems, the Member States formally committed themselves to the monitoring and evaluation of health system performance. Several neighbouring countries, having years of experience with health system performance measurement served as example for this report. This is certainly true for the Dutch Performance Report. One of the weaknesses hampering successful performance measurement (also identified in former Dutch performance reports) is the availability of up to date data. Regular updating of administrative data and dynamic publishing of results on a website could partially solve this problem. Yet, this is only one of the options that can be considered if policy makers commit themselves to a systematic measurement and monitoring of the performance of the Belgian health care system.

APPENDICES

APPENDIX 1. LIST OF INDICATORS MEASURED IN THE 2012 REPORT, CLASSIFIED BY TIER OF THE HEALTH SYSTEM, DOMAIN OF CARE AND DIMENSION

Health Status
• **Life expectancy** • **Health expectancy** • **Self-perceived health** • **Infant mortality rate**

	Healthcare				
Dimension	**Domain of care** **Generic**	**Preventive Care**	**Curative Care**	**Long-term care (elderly/mental health)**	**End-of-Life Care**
Accessibility	• Number of practising physicians (per 1000 population) • Number of practising nurses (per 1000 population) • Coverage health insurance status of the population • Amount of co-payments and out-of-pocket payments • % of people who delay contacts	• Coverage breast cancer screening • Coverage cervical cancer screening • Coverage vaccination coverage children • Coverage influenza vaccination for elderly		• Number of beds in residential care facilities per population 65 years and older • % of population over 50 years old reporting to be an informal carer	• % of patients who died within one week after start of palliative care service

	because of financial reasons					
Quality - Effectiveness				• 5-year relative survival rate after breast cancer, by stage • 5-year relative survival rate after cervix cancer, by stage • 5-year relative survival rate after colon cancer, by stage • Hospital admissions for asthma	• Suicide rate • Rate of involuntary committals as a percentage of all hospitalizations per year • Participation rates by people with mental illness of working age in employment	
Quality - Appropriateness		• % of women aged 40-49 years old who had a mammogram within the last two years • % of women aged 70-79 years old who had a mammogram within the last two years		• Prescription of antibiotics according to guidelines • % of adult diabetics receiving appropriate care, in terms of regular retinal exams and blood tests • Geographic variability in caesarean sections (per 1000 live births) • Average daily quantity of medication (antidepressants, antipsychotics, hypnotics and anxiolytics) prescribed		• % of cancer patients receiving chemotherapy in the last 14 days of life
Quality - Safety	• Medical radiation			• Incidence of hospital		

	exposure of the population		acquired MRSA infections • Incidence of post-operative sepsis • Incidence of pressure ulcers in hospitals • In-hospital mortality after hip fracture • % of persons aged 65 years or older prescribed antidepressants using an anticholinergic antidepressant drug		
Quality - Continuity of Care	• Coverage of global medical record • Usual provider of care index		• % of cancer patients discussed at the multidisciplinary team meeting • % of physician encounter after hospital discharge for elderly patients (65+)	• % of discharges from psychiatric in-patient care readmitted to psychiatric in-patient care that occurred within 30 days (schizophrenia, bipolar disorder)	• Number of contacts between the patient and the GP in the last 3 months of life
Quality - Patient centeredness	• Satisfaction with health care services		• Assessment of pain level during hospitalization		• Patients dying in their usual place of residence
Equity	• Indicators of the progressivity of public healthcare financing • Gini coefficient before and after taxation and transfers				
Efficiency	• % prescription of low-		• % surgical day-case		

	cost drugs	• Average length of stay for normal delivery
Sustainability	• Medical graduates becoming GP • Mean age of GP • Nursing graduates • % of GPs using an electronic medical file • Health expenditures (total, distribution, % of gross domestic product, per capita)	• Acute care bed days (number per capita)

Health Promotion	
Type of indicator	**Indicator**
Health outcomes	• % of overweight or obese adults • Average number of decayed, missing, filled teeth in children at age 12 • Incidence of HIV
Intermediate health outcomes: healthy lifestyles and healthy environments	• % of daily smokers • % of problematic alcohol drinkers (3 indicators) • % of daily consumption of fruits and vegetables • % of daily physical activity
	• % offer of physical activity at primary and secondary level in schools • % health promotion policies in the municipalities • % of schools with health promotion dimension in their school project
Health promotion outcomes	• % of persons with poor social support • Tobacco Control Scale

APPENDIX 2. LIST OF CHANGES TO INDICATORS COMPARED TO THE 2010 REPORT

This section lists the modifications that were done to indicators since the 2010 report. Indicators for which no data were available in 2010 are in red.

Indicator in 2010 report	Status in 2012 Report
Accessibility	
A1: Number of physicians and nurses **No data available for the number of nurses in 2010**	Some data available in 2012
A4: Coverage of preventive child health care	Removed in 2012 Rationale: this indicator was defined as an indicator of accessibility, as its initial aim was to focus on infants from underprivileged families (defined according to six criteria) or infants from migrants. The previous report showed that only results at national level were available, which makes it less interesting as an indicator of accessibility.
A5: Additional illness-related costs for chronically ill people **No data available in 2010**	Removed in 2012 Rationale: The calculation of additional illness-related costs for chronically ill people would require a good definition of chronic diseases and a cost-of-illness study of each identified chronic disease. This is a project in itself, and is not feasible within the time-frame of the present project.
Quality	
QA1: Prescription according to guidelines (Urinary tract infection, acute otitis media, uncomplicated hypertension) **No data available in 2010**	Modified in 2012
QA3A: Utilisation of minimal and non-invasive surgical techniques (laparoscopic cholecystectomies, PCIs)	Removed in 2012 Rationale: the use of minimal-invasive techniques is a means for reducing post-operative complications, length of stay and costs. It is therefore an indicator of efficiency. However, these techniques are not considered appropriate for all patients and careful patient selection is necessary. The use of these newer minimal-invasive techniques is also considered to be an indication of innovation (sustainability). In 2012, laparoscopic cholecystectomies and PCIs are standard interventions.

QA4: Percentage of institutions that use special protocols or guidelines outlining procedures for high-risk or complex processes	Removed in 2012 Rationale: this indicator, originally from the Dutch healthcare performance set of indicators, could only be estimated via the diffusion and use of clinical pathways in Belgian hospitals, and was furthermore based on non-validated results. No better data will be available in the near future.
QA6: Hysterectomy by social class	Removed in 2012 Rationale: the results for 2010 showed no differences in hysterectomies rates by social class, and hysterectomies rates have been declining steadily since the publications on which this indicator was originally based.
QC1: Number of people who are not registered with a GP	Modified in 2012 Rationale: as the concept of "registered with a GP" in Belgium refers to the GMD – DMG, this indicator was redefined more specifically as "percentage of population with a GMD – DMG". It was also changed into a positive indicator (higher percentage indicates better coverage).
QC2: Average length of stay (LOS) in acute care hospitals	Modified in 2012 Changed to more specific LOS for normal delivery Rationale: this indicator was previously seen as an indicator of the good continuity of care. However, experts were convinced that it was more indicative of how efficient the healthcare system is. Instead of all hospitalizations in acute care, a specific diagnosis was chosen: LOS for normal delivery, which is also an indicator used by the OECD.
QE03: Colorectal cancer screening **No data available in 2010**	Some data available in 2012, but data still too premature to perform evaluation
QE06: Acute care hospitalization rates for pneumonia and influenza	Modified in 2012 Rationale: this indicator is a measure of effectiveness of preventive care. Since the most effective prevention measure against influenza and pneumonia is vaccination, which is already an indicator for influenza, makes the indicator redundant. It was modified into "Acute care hospitalization rates for asthma", which is also an indicator used by the OECD.
QE07.3: Salt consumption	Removed in 2012 Rationale for exclusion: the results for this indicator were based on a Belgian study published in 2008, which will not be repeated.

QE08: Breast feeding at 6 months of age	Removed in 2012 Rationale: a new set of indicators to assess performance of health promotion was proposed, and experts did not retain this indicator, mainly because six months of exclusive breast feeding is hardly compatible with the length of the maternity leave in Belgium. Moreover, the previous report showed that data from Kind and Gezin and ONE were not comparable, due to different time frames used (KG: 3 months, ONE: 24 weeks).
QE09: Annual check-up at the dentist for children	Removed in 2012 After a thorough examination of the nomenclature codes, it appears that it is not possible to isolate preventive care at the dentist for children.
QE10: Decayed, missing, filled teeth at age 12 **No data available in 2010**	Some data available in 2012
QE11: Cardiovascular screening in individuals aged 45-75 **No data available in 2010**	This indicator was removed. Rationale: this indicator was not measurable in the 2010 report because of lack of specific nomenclature codes. Since 2011 cardiovascular prevention is part of the new GMD – DMG+, which will be monitored.
QE12: Colon Cancer 5-year survival rate **No data available in 2010.**	Data available in 2012 Source: Belgian Cancer Registry
QE13.1: Premature mortality. **No data available in 2010**	Removed in 2012 Premature mortality, expressed as Potential Years of Life Lost (PYLL) is correlated with indicators already in the set (infant mortality, life expectancy) and has no potential for action, as it does not highlight the potential problems. Avoidable mortality would be a better indicator.
QE14: Breast Cancer 5-year survival rate **No data available in 2010**	Data available in 2012 Source: Belgian Cancer Registry
QE15: Cervical Cancer 5-year survival rate **No data available in 2010**	Data available in 2012 Source: Belgian Cancer Registry
QE16b: In-hospital mortality after community-acquired pneumonia (CAP)	Removed in 2012 Rationale: this indicator was linked to the indicator “QE16a: In-hospital mortality after hip fracture”, both being indicators included in feedback on quality of care

	sent by the FPS Public Health to Belgian hospitals. During the review process, the team decided that the latter indicator, mortality after hip fracture, was a better indicator than mortality after CAP, to assess safety of care (and not efficacy, as in the 2010 report).
QS1: Incidence of serious adverse effects of blood transfusion	Removed in 2012 Extremely rare events, so difficult to interpret evolution over time.
QS2: Incidence of healthcare related infections	Removed in 2012 Changed to prevalence of HAI, currently no data. Rationale: this indicator is not measurable (no surveillance system can monitor the incidence of all healthcare related infections). This indicator has thus been redefined more specifically as "the incidence of hospital-acquired bloodstream infection", which is measurable.
QS4: Incidence of post-operative surgical site infections	Changed to post-operative sepsis Rationale: this indicator has low coverage, in terms of number of hospitals and of type of operations covered. It has been changed into "incidence of post-operative sepsis", which can be measured by administrative data, and hence includes national coverage and a wider range of interventions. It is also included in OECD indicators.
QS5: Incidence of pressure ulcers in long-term care facilities and individuals at risk **No data available in 2010**	Data not yet available in 2012 (but soon). Source: BelRAI
Sustainability	
S1.1: Amount reimbursed by the maximum billing system	Removed in 2012
S2: Qualification levels of healthcare providers	Modified in 2012.
S4: Yearly amount of the Special Solidarity Fund (SSF)	Removed in 2012 Rationale: the SSF acts as a safety net, besides the compulsory health insurance, and decisions to reimburse treatment are based on a case per case basis. It was included in the previous set as a sustainability indicator, showing the system's capacity to be responsive to emerging needs. However, treatments reimbursed by

	the SSF are usually those waiting for approval by European Medical Agency (EMA), and are reimbursed by compulsory health insurance after this approval. This is thus not a very relevant indicator of the sustainability of the healthcare system.
S6.1: Number of acute care beds (per 1000 population)	Removed in 2012 Rationale: this is a secondary indicator linked to the indicator “S6 acute care bed days, number per capita”. The latter was preferred because it also accounts for occupancy rate and length of stay.

APPENDIX 3. LIST OF INDICATORS MEASURABLE IN A NEAR FUTURE

This appendix lists the indicators that were selected as pertinent to evaluate the performance of the Belgian health system, and for which data will be available in a near future (i.e. in a 3-years time frame). The idea is to present those results in the next issue of this report.

For each indicator, a short rationale is provided, and (future) source of data are indicated.

Health Promotion

- **% of people (aged 45-75) with a global medical mecord+ (GMD – DMG+) (specific consultation on health promotion and preventive care)**
  The global medical record is a medical file centrally managed by the GP. The GMD – DMG+, introduced in April 2011, contains an additional component of prevention and health promotion. The GP can play a major role in health promotion. It is the right person to make a state of play of risk factors, organize preventive interventions (vaccination and screening), and counsel for healthy behaviours. The GMD – DMG+ is a tool to help the GP in this task. Monitoring the coverage of the GMD – DMG+ is thus an indicator of health promotion.
  Source of data: RIZIV – INAMI

Continuity of care

- **Percentage of patients registered in an ambulatory pathway for chronic care (diabetes/renal failure) and frequency of physician encounter for patients registered in an ambulatory pathway for chronic care (diabetes/renal failure)**
  Pathways for chronic care are set up in Belgium since 2009. The aim of these pathways is to improve follow-up and collaboration between patients with chronic disease, general practitioner, specialist physicians and other healthcare professionals. Because the registration in a pathway is voluntary, the percentage of patients registered in the pathways of care is a indicator of the patients' participation in this public investment. According to the RIZIV – INAMI, there were 20 176 registered pathways for diabetes and 15 428 for renal failure on 31 October 2011.[142] But the exact denominator is currently unknown. This item will be estimated by the ACHIL project which aims to evaluate the pathways for chronic care. Evaluation will be presented in May 2013.
  Source of data: ACHIL project

- **% of visits to the Emergency Rooms in general hospitals for mental health and/or substance-related problems**
  Although unforeseen and unavoidable emergencies do arise in mental health, mental health related emergency room use is used as an indicator of poor coordination of care and service failures.[149] The community treatment system to support services for people with mental health related problems is regarded as ineffective when utilization rates of emergency departments of general hospitals are high.[150] Highly accessible outpatient care is considered to help people to enter treatment before reaching the crisis stage and minimize the need for emergency room visits.[149] In addition, it is assumed that effective liaison between emergency rooms and mental health crisis resources reduces the use of emergency rooms for mental health services/clients. High rates of mental health related emergency room visits are not only a concern for members of the mental health community. It is also a concern that emergency department overcrowding results in decreased quality of care and increased likelihood of medical error.[150]
  In the US, it has been illustrated that mental health related emergency room visits are on the rise for more than one decade.[151] This stresses the importance of the availability of expertise in the field of mental health in emergency rooms to manage these crises. Depending on the number of visits for psychiatric problems, availability of a mental health specialist in every emergency room may not be practical. Still, there should be a minimum protocol by which mental health expertise is accessible for immediate care for every citizen.[152]
  Source of data: RHM – MZG since 2008 (information not available in RCM – MKG). Due to delays in accessing the data, this indicator could not be measured in this report.

Patient-centeredness

- **Patient experiences with ambulatory services**
  Patient-centered care is supported by good provider-patient communication so that patients' needs and wants are understood and addressed and patients understand and participate in their own care. A good communication is not easy as it requires several competencies (listening, explaining, courtesy…) In 2011 the OECD has edited a questionnaire on patient experiences with some questions related to the quality of the consultation.[15] The WIV – ISP decided to include in the Health Interview Survey (2013) the module of the OECD instrument dedicated to the patient experiences with ambulatory care.
  Source of data: next Health Interview Survey, WIV – ISP

Long-term Care

The majority of indicators will be based on the BelRAI project [x]

- **Evolution over time in utilization of BelRAI (home care and in institution)**
  Source: BelRAI
- **Prevalence of malnutrition by elderly (BMI <19)**
  Older persons are particularly vulnerable to malnutrition due to complications such as changes in appetite and energy level, chewing and swallowing problems, change in nutritional requirements, loss of cognitive function and deteriorating vision.[155] The data for this indicator will be available in the BelRAI database. This indicator belongs to the set of indicators in the OECD long-term care quality project.[45]
  Source of data: BelRAI

[x] The Resident Assessment Instrument (RAI)[44] was originally developed to assess the care needs of the elderly in institutions, but is later extended with instruments for different care settings and subgroups (post-acute care, institutional mental healthcare, ambulatory mental healthcare, palliative care, acute hospital care and persons with mental disabilities). The structured and standardized assessment aims to realize a high-quality care planning and quality monitoring. Different care providers can assess the different items, resulting in a multidisciplinary approach of the care needs of the elderly.

In Belgium a pilot project (the BelRAI) is ongoing and is not yet nationally implemented in all care settings. The assessment instruments for home care and for long-term care facilities, for acute care and for palliative care are adapted to the Belgian situation.

The interRAI for **long-term care facilities** (interRAI-LTCF)[153] is a standardized instrument to evaluate the needs, the competences and the preferences of the residents in a long-term care setting (care home or other institutional setting) and aims to stimulate the continuity of care via a consistent assessment system and a patient-focused approach. The assessment instrument gives a description of the most important aspects of the functional capacity, the mental and physical health, the needs and the use of care of the individual resident, whereby most items function as specific triggers for care planning. Next to the assessment instrument, analysis protocols are developed as guidance for the care planning. The interRAI-LTFC has been adapted to the Belgian situation and translated into Dutch and French (BelRAI-LTCF).

The InterRAI for **home care** (interRAI-HC)[154] is a person-centered assessment system to guide the home care planning for chronic care patients but also for patients with post-acute care needs (for example after hospitalisation). The evaluation of the needs, the strengths and the preferences of the client indicate the functioning and the quality of life of the client. The interRAI-HC consists of the assessment instrument (standardised scoring scheme) and the CAPs (clinical analysis protocols). Some items of the instrument function as triggers for specific problems or risks for functional deterioration and link the interRAI-HC to a series of CAPs. These CAPs contain general guidelines for the further assessment and for individualized care and services. The 30 CAPs cover different domains and each triggered CAP needs to be discussed during multidisciplinary consultation to determine the necessary care services and the priority of each CAP. The interRAI-HC has been adapted to the Belgian situation and translated into Dutch and French (BelRAI-HC).

- **Percentage of residents who were physically restrained during the last 7 days**
  Restraint-free care should be the aim of high quality nursing care. However, in reality, physical restraints are commonly used in geriatric long-term care.[156] This indicator belongs to the set of indicators in the OECD long-term care quality project.[45]
  Source of data: BelRAI
- **Percentage of residents who had a fall during the last 30 days**
  Fall incidents are a common cause of morbidity and mortality in elderly. Persons who fell once, have an increased risk on future fall incidents. The most recent Health Survey Interview reports that in the 12 months preceding the interview 7% of the Belgian population had an accident resulting in a medical consultation.[157] The most common cause of the accidents were falls (54%) and were common in children and in persons of 65 years and older. In more than 40% of the elderly, the fall caused a fracture. Within the domain of state of health of the BelRAI-LTCF and the BelRAI-HC, a subdomain on fall incidents determines the risk on future fall incidents. In the OECD long-term care quality project the indicator on the incidence of falls and fall-related fractures is proposed as example of a quality outcome on user safety.[45]
  Source of data: BelRAI
- **Incidence of pressure ulcers: a. in long-term care facilities b. in individuals at risk (home care)**
  The occurrence of a pressure ulcer in a hospitalised patient has a serious negative impact on the individual's health[57] and often leads to a much prolonged hospital stay. Pressure ulcers can be prevented with good quality nursing care.[58, 59] Currently no data are available, but it will be possible to evaluate this indicator using BelRAI data. This indicator is also included in the set of OECD indicators in quality of long-term care.[45]
  Source of data: BelRAI
- **Prevalence of MRSAs in nursing homes**
  The WIV – ISP is currently finalizing a study, of which the results will be available at the end of 2012 (http://www.nsih.be/nursing_homes/inleiding_fr.asp).
  Source: WIV – ISP

Efficiency

- **Chronic care: patients with home dialysis as a percentage of all patients with dialysis**
  There are different treatment options for patients whose kidneys fail. The patients can be dialysed, either with haemodialysis or with peritoneal dialysis. In both cases patients can also receive a kidney transplant, either from a deceased or a living donor. Ultimately, kidney transplantation is considered to be the most preferable option, whenever possible.
  Substitution of the more expensive haemodialysis in hospital by the less expensive alternatives such as low-care haemodialysis in satellite centres and peritoneal dialysis has been slower in Belgium than in many other countries. This is thought to be partly due to the financing mechanisms for dialysis. Since 1995 the Belgian government has modified the financing system a couple of times, with the explicit goal of introducing incentives for substitution. For this reason, the indicator is categorised in the performance dimension efficiency. Since home dialysis is not indicated for all patients with end-stage renal disease, it is also considered an indicator of appropriateness.
  Source of data: IMA. Preliminary analyses for this report were run on the EPS, but the sample of patients under dialysis was too small to draw any conclusion. Analyses will have to be done on the total IMA database.

REFERENCES

1. Vlayen J, Vanthomme K, Camberlin C, Piérart J, Walckiers D, Kohn L, et al. A first step towards measuring the performance of the Belgian healthcare system. Brussels: Belgian Health Care Knowledge Centre (KCE); 2010. KCE Reports 128
2. WHO Regional Office for Europe. Health systems performance assessment, a tool for health governance in the 21st century. Copenhagen: World Health Organization, Regional office for Europe; 2012.
3. WHO Regional Office for Europe. The Tallin Charter: Health Systems for Health and Wealth. Copenhagen: World Health Organisation; 2008. Available from: http://www.euro.who.int/__data/assets/pdf_file/0008/88613/E91438.pdf
4. Arah OA, Westert GP, Hurst J, Klazinga NS. A conceptual framework for the OECD Health Care Quality Indicators Project. Int. J. Qual. Health Care. 2006;18(SUPPL. 1):5-13.
5. OECD. Health at a Glance 2011, OECD Indicators. Organisation for Economic Co-operation and Development; 2011.
6. Vlayen J, Van De Water G, Camberlin C, Paulus D, Leys M, Ramaekers D, et al. Indicateurs de qualité cliniques. Brussels: Belgian Health Care Knowledge Centre (KCE); 2006. KCE reports 41
7. Coppens ES, G. Van Audenhove, C. De evaluatie van het Vlaams actieplan suïcidepreventie (2006-2010). Leuven: Lucas; 2011.
8. AHRQ Identifying, Categorizing, and Evaluating Health Care Efficiency Measures. AHRQ; 2008. AHRQ Publication No. 08-0030 Available from: http://www.ahrq.gov/qual/efficiency/efficiency.pdf
9. Smith PC, Papanicolas I. Health System Performance comparison: an agenda for policy, information and research. Brussels: WHO Europe and European Observatory on Health Systems and Policies; 2012. Policy Summary 4
10. WHO. World Health Report 2000. Health systems: improving performance. Geneva: World Health Organization; 2002.
11. OECD. Health at a Glance 2010 Europe. OECD Publishing; 2010.

12. OECD. Health at a Glance Europe. Organisation for Economic Co-operation and Development; 2012.
13. European Commission HEIDI data tool: health status indicators [2012. Available from: http://ec.europa.eu/health/indicators/indicators/index_en.htm
14. Björnberg A. Euro Health Consumer Index 2012. Health Consumer Powerhouse; 2012.
15. OECD. Health Care Quality Indicators. OECD pilot questions on patient experiences. Paris: Organisation for Economic Co-operation and Development; 2011.
16. Jacobs R., Smith PC, Street A. Measuring Efficiency in Health Care. Cambridge: Cambridge University Press; 2006.
17. Stahl T, Wismar M, Olilla E, Lahtinen E, Leppo K. Health in All Policies, Prospects and Potentials. European Observatory on Health Systems and Policies; 2006.
18. WHO regional Office for Europe. Interm report on the implementation of the Tallinn Charter (still in draft version). Copenhagen: World Health Organisation; 2012.
19. WHO regional Office for Europe. Developing the new European policy for health - Health 2020 (working paper). Copenhague: World Health Organisation; 2011 Available from: http://www.euro.who.int/__data/assets/pdf_file/0010/134299/07E_Health2020_110419_eng.pdf
20. Westert G, van den Berg M, Koolman X, Verkleij H. Dutch health care performance report 2008. Bilthoven. The Netherlands: National Institute for Public Health and the Environment; 2008.
21. CIHI. Health indicatiors 2010: definitions, data sources and rationale. Ottowa: Canadian Institute for Health Information; 2010.
22. National Health Performance Commitee (NHPC). National Health Performance Framework Report. Brisbane: 2001. Queensland Health
23. WHO. Ottawa Charter for Health Promotion. World Health Organization; 1986. Available from: http://www.euro.who.int/__data/assets/pdf_file/0004/129532/Ottawa_Charter.pdf
24. OECD, Eurostat, WHO. Conceptual framework and definition of longterm care expenditure. Organisation for Economic Co-operation and Development; 2088.
25. Van de Voorde C, Léonard C. Search for Evidence and Critical Appraisal, Health Services Research (HSR). Brussels: Belgian Health Care Knowledge Centre (KCE); 2007. KCE Process notes
26. Meeus P., Van Aubel X. Performance de la médecine générale, bilan de santé. Brussels: National Institute for Health and Disability Insurance (NIHDI); 2012.
27. DGSIE. Evolution de l'espérance de vie à la naissance, en années - Belgique et régions (1997-2010). Direction Générale Statistique et Information Economique; 2012.
28. European Commission - DG Health and Consumers. 2012.
29. Eurostat. Eurostat database. EUROSTAT; 2012. Available from: http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database
30. FPS Health Food Chain Safety and Environment - Cel Planning Aanbod Gezondheidsberoepen - Dienst Strategische Coördinatie Gezondheidszorgberoepen. Voorlopige resultaten PlanKAD Gegevenskoppeling Verpleegkunde 2004-2009, Federal public Service Public Health 2012.
31. Communauté française Programme de dépistage du cancer colorectal en Communauté française [Available from: http://www.cancerintestin.be/spip.php?rubrique35&mode=public&lang=fr
32. Candeur M., Carbonnelle S., Vandenbroucke A. Cancer colorectal: dépistage. Santé en Communauté française. Mars 2011;6.
33. Hoeck S., Van Roosbroek S., Van Hal G. Pilootproject bevolkingsonderzoek naar dikkedarmkanker. 2011. Available from: http://www.dikkedarmkanker.be
34. IMA-AIM. Programme de Dépistage du Cancer du Sein. Périodes 2002-2003 et 2004-2005. 2007 2007, September.

35. Hulstaert F, Ramaekers D, Puddu M, Vinck I, Huybrechts M, Arbyn M. Dépistage du cancer du col de l'utérus et recherche du Papillomavirus humain (HPV). Brussels: Belgian Health Care Knowledge Centre (KCE); 2006. KCE Reports 38
36. Arbyn M, Simoens C, Van Oyen H, Foidart J-M, Goffin F, Simon P, et al. Analysis of 13 million individual patient records pertaining to Pap smears, colposcopies, biopsies and surgery on the uterine cervix (Belgium, 1996–2000). Preventive Medicine. 2009;48(5):438-43.
37. Sabbe M, Hue D, Hutse V, Goubau P. Measles resurgence in Belgium from January to mid-April 2011: a preliminary report. Euro Surveill. 2011;16(16).
38. Superior Health Council. Vaccination contre la grippe saisonnière. Saison hivernale 2007 – 2008. In: Publication du Conseil Supérieur de la santé n° 8354.; 2007.
39. WHO. Prevention and Control of Influenza Pandemics and Annual Epidemics. World Health Organization; 2003. Resolution of the Fifty-Sixth World Health Assembly (WHA56.19) Available from: http://apps.who.int/gb/archive/pdf_files/WHA56/ea56r19.pdf
40. IMA-AIM. Vaccination contre la grippe au cours des hivers 2007-2008 et 2008-2009. 2011. Available from: http://www.nic-ima.be/library/documents/health_monitoring/Grippe%20FR%20Rapport%20hivers%202007-2008%202008-2009%20AIM.pdf
41. Van den Bosch K, Willemé P, Geerts J, Breda J, Peeters S, Van de Sande S, et al. Residential care for older persons in Belgium: Projections 2011-2025. Brussels: Belgian Health Care Knowledge Centre (KCE); 2011. KCE Reports 169
42. Gielen B, Remacle A, Mertens R. Patterns of health care use and expenditure during the last 6 months of life in Belgium: differences between age categories in cancer and non-cancer patients. Health Policy. 2010;97:53-61.
43. Gielen B, Remacle A, Mertens R. De CM neemt het levenseinde onder de loep: de cijfers. Christian Sickness Fund; 2008.
44. InterRAI An overview of the interRAI. Family of Assessment Systems [2012 [cited 30th of Mai]. Available from: http://www.interrai.org/section/view/?fnode=10
45. OECD. Long-term care quality project: proposed framework. Organisation for Economic Co-operation and Development; 2012.
46. Van Hoof E, Remue E, Lenaerts L, De Wandeler E, Mores B, Goolaerts J. Evaluatie van het Kankerplan 2008-2010. Brussel: Wetenschappelijk Instituut Volksgezondheid, Kankercentrum; 2012.
47. Reynders AV, B. Scheedrer, G. Declercq, A. Molenberghs, G., Van Audenhove, C. L'effet des facteurs sociocognitifs et de la recherche d'aide sur le comportement suicidaire différences régionales entre la Wallonie, La Flandre et Les Pays-Bas. Leuven: Lucas; 2011.
48. Mambourg F, Robays J, Camberlin C, Vlayen J, Gailly J. Dépistage du cancer du sein entre 40 et 49 ans. Brussels: Belgian Health Care Knowledge Centre (KCE); 2010. KCE Reports 129
49. Mambourg F, Robays J, Gerkens S. Dépistage du cancer du sein entre 70 et 74 ans. Brussels: Belgian Health Care Knowledge Centre (KCE); 2012. KCE Reports 176B
50. FPS Health Food Chain Safety and Environment. Feedback multidimensionnel. Federal Public Service Health, Food Chain Safety and Environment; 2008.
51. Jacques J, Gillain D, Fecher F, Van de Sande S, Vrijens F, Ramaekers D, et al. Etude des disparités de la chirurgie élective en Belgique. Brussels: Belgian Health Care Knowledge Centre (KCE); 2006. KCE Reports 42
52. Gordts B, Vrijens F, Hulstaert F, Devriese S, Van de Sande S. The 2007 Belgian national prevalence survey for hospital-acquired infections. The Journal of hospital infection. 2010;75(3):163-7.
53. Jans B, Denis O. Surveillance van MRSA in de Belgische acute ziekenhuizen: tweede semester 2010. 2010. Available from: http://www.nsih.be/surv_mrsa/download_fr.asp and http://www.nsih.be/surv_mrsa/download_nl.asp

54. OECD HCQI Patient Safety Indicators [Organisation of Economic Co-operation and Development;2009 [cited 21 Feb]. Available from: http://www.oecd.org/document/34/0,3343,en_2649_33929_37090539_1_1_1_1,00.html

55. AHRQ. Patient Safety Indicators Resources. Agency for Healthcare Research and Quality; 2011. 2012, 21 Feb Available from: http://www.qualityindicators.ahrq.gov/Modules/psi_resources.aspx

56. FPS Health Food Chain Safety and Environment. Feedback des Patient Safety Indicators: la Sécurité des Patients dans les Hôpitaux Belges.. FPS Health Food Chain Safety and Environment, ; 2011 April 2011.

57. Gorecki C, Brown JM, Nelson EA, Briggs M, Schoonhoven L, Dealey C, et al. Impact of pressure ulcers on quality of life in older patients: a systematic review. J Am Geriatr Soc. 2009;57(7):1175-83.

58. McInnes E, Jammali-Blasi A, Bell-Syer SE, Dumville JC, Cullum N. Support surfaces for pressure ulcer prevention. Cochrane Database Syst Rev. 2011(4):CD001735.

59. Reddy M, Gill SS, Rochon PA. Preventing pressure ulcers: a systematic review. JAMA. 2006;296(8):974-84.

60. Project PUMap. Studie van de decubitusprevalentie in de Belgische ziekenhuizen 2008. 2008. Available from: http://www.decubitus.be/downloads/PUMAP_NL.pdf

61. Hermann RC, Mattke S. Selecting indicators for the quality of mental health care at the health systems level in OECD countries. Paris: OECD; 2004. OECD Health Technical Papers 17 (17)

62. OECD. Health Care Quality Indicators: background paper to the mental health subgroup meeting. Paris: Organisation for Economic Co-operation and Development; 2011.

63. van Eijk ME, Avorn J, Porsius AJ, de Boer A. Reducing prescribing of highly anticholinergic antidepressants for elderly people: randomised trial of group versus individual academic detailing. BMJ. 2001;322(7287):654-7.

64. Mintzer J, Burns A. Anticholinergic side-effects of drugs in elderly people. J R Soc Med. 2000;93(9):457-62.

65. van Eijk ME, Bahri P, Dekker G, Herings RM, Porsius A, Avorn J, et al. Use of prevalence and incidence measures to describe age-related prescribing of antidepressants with and without anticholinergic effects. J Clin Epidemiol. 2000;53(6):645-51.

66. Vander Stichele RH, Van de Voorde C, Elseviers M, Verrue C, Soenen K, Smet M, et al. Medication use in rest and nursing homes in Belgium. Brussels: Belgian Health Care Knowledge Centre (KCE); 2006. KCE Reports 47C

67. Berendsen AJ, Groenier KH, de Jong GM, Meyboom-de Jong B, van der Veen WJ, Dekker J, et al. Assessment of patient's experiences across the interface between primary and secondary care: Consumer Quality Index Continuum of care. Patient Educ Couns. 2009;77(1):123-7.

68. Haggerty JL, Reid RJ, Freeman GK, Starfield BH, Adair CE, McKendry R. Continuity of care: a multidisciplinary review. BMJ. 2003;327(7425):1219-21.

69. Reid R, Haggerty J, McKendry R. Defusing the confusion: Concepts and measures of continuity of healthcare. March 2002. Final report. Canadian Health Services Research Foundation. 2002.

70. Salisbury C, Sampson F, Ridd M, Montgomery AA. How should continuity of care in primary health care be assessed? Br J Gen Pract. 2009;59(561):e134-41.

71. van Servellen G, Fongwa M, Mockus D'Errico E. Continuity of care and quality care outcomes for people experiencing chronic conditions: A literature review. Nurs Health Sci. 2006;8(3):185-95.

72. van Walraven C, Oake N, Jennings A, Forster AJ. The association between continuity of care and outcomes: a systematic and critical review. J Eval Clin Pract. 2010;16(5):947-56.

73. Commission on Dignity in Care for Older People. Delivering Dignity. Securing dignity in care for older people in hospitals and care homes. A report for consultation. NHS Confederation, the Local Government, Association and Age UK; 2012.

74. Cabana MD, Jee SH. Does continuity of care improve patient outcomes? Journal of Family Practice. 2004;53(12):974-80.
75. Patkar V, Acosta D, Davidson T, Jones A, Fox J, Keshtgar M. Cancer multidisciplinary team meetings: evidence, challenges, and the role of clinical decision support technology. International journal of breast cancer. 2011;2011:831605.
76. Abarshi E, Echteld MA, Van den Block L, Donker G, Bossuyt N, Meeussen K, et al. Use of palliative care services and general practitioner visits at the end-of-life in the Netherlands and Belgium. Journal of pain and symptom management. 2011;41(2):436-48.
77. Davis S, Byers S, Walsh F. Measuring person-centred care in a sub-acute health care setting. Aust Health Rev. 2008;32(3):496-504.
78. Redman RW, Lynn MR. Assessment of patient expectations for care. Res Theory Nurs Pract. 2005;19(3):275-85.
79. Aiken LH, Sermeus W, Van den Heede K, Sloane DM, Busse R, McKee M, et al. Patient safety, satisfaction, and quality of hospital care: cross sectional surveys of nurses and patients in 12 countries in Europe and the United States. BMJ. 2012;344:e1717.
80. Gomes B, Higginson IJ, Calanzani N, Cohen J, Deliens L, Daveson BA, et al. Preferences for place of death if faced with advances cancer: a population survey in England, Flanders, Germany, Italy, the Netherlands, Portugal and Spain. Annals of Oncology. 2012.
81. Houttekier D, Cohen J, Surkyn J, Deliens L. Study of recent and future trends in place of death in Belgium using death certificate data: a shift from hospitals to care homes. BMC Public Health. 2011;11:228-38.
82. OECD. Health Data 2010. Statistics and indicators for OECD countries. In: Organisation for Economic Co-operation and Development; 2010.
83. Nutbeam D. Evaluating Health Promotion - progress, problems and solutions. Health Promotion International. 1998;13(1):27-44.
84. Cellule Interuniversitaire d'Epidémiologie. Rapport final du projet « système d'enregistrement et de surveillance de la santé bucco-dentaire de la population belge 2008- 2010 ». 2012. Available from: http://www.inami.fgov.be/information/fr/studies/study53/index.htm
85. Vanobbergen J, Martens L, Declerk D. Caries prevalence in Belgian children: a review. Int J Paediatr Dent. 2001;11(3):164-70.
86. Sasse A, Verbrugge R, Van Beekchoven D. Epidémiologie du Sida et de l'infection à VIH en Belgique; situation au 31 décembre 2010. Brussels: IPH, surveillance of communicale diseases; 2011.
87. Ewing JA. Detecting alcoholism. The CAGE questionnaire. JAMA. 1984;252(14):1905-7.
88. VIGEZ De actieve voedingsdriehoek [Vlaams Instituut voor Gezondheidspromotie;2012. Available from: http://vig.kanker.be/content/category/categorycontent.aspx?CategoryGUID=025d941e-6a63-4540-a522-b3c208832529
89. WHO. WHO Global Strategy on Diet, Physical Activity and Health. Recommendations for Physical Activity for Health. Geneva: World Health Organization; 2004.
90. Ministère fédéral de la Santé Publique et Ministères des entités fédérées belges ayant la Santé publique dans leurs attributions. Plan national nutrition santé pour la Belgique, 2005 -2010. 2004.
91. Pate RR, Pratt M, Blair SN, Haskell WL, Macera CA, Bouchard C, et al. Physical activity and public health. A recommendation from the Centers for Disease Control and Prevention and the American College of Sports Medicine. JAMA. 1995;273(5):402-7.
92. Bouchard C, Shephard R, Stephens T, Sutton J, McPherson B. Exercise, Fitness, and Health. A Consensus of Current Knowledge. In: IL C, editor. Human Kinetics Books; 1990. p. 3-28.
93. Buytaert B, Moens O, Tambuyzer J, Wouters E, Vauhauwaert E. Verslag van de indicatorenmeting 2009 van het gezondheidsbeleid (tabak, voeding, beweging) in Vlaamse bedrijven, scholen en gemeenten. Vlaams Instituut voor Gezondheidspromotie en Ziektepreventie; 2010. Available from: http://www.vigez.be/uploads/documentenbank/f9c7c6490988b8b449de67cf9835b9a1.pdf

94. Godin I, Piette D. Etude écoles liées aux enquêtes HBSC Communauté française de Belgique, rapport à paraître. 2010.
95. Nutbeam D. Health promotion glossary. Health Promot. 1986;1(1):113-27.
96. Nutbeam D. The evolving concept of health literacy. Soc Sci Med. 2008;67(12):2072-8.
97. Consortium HLS-EU. The European Health Literacy Survey.
98. Joossens L, Raw M. The Tobacco Control Scale 2010 in Europe. Brussels: Association of the European Cancer Leagues; 2010. Available from: http://www.ensp.org/sites/default/files/TCS_2010_in_Europe_FINAL.pdf
99. Braveman P, Gruskin S. Defining equity in health. Journal of epidemiology and community health. 2003;57(4):254-8.
100. Braveman PA. Monitoring Equity in Health and Healthcare: A Conceptual Framework. Journal of Health Population and Nutrition. 2003;31(3):181-92.
101. Black D. Inequalities in health. London: Report of a research working group- Department of Health and Social Security; 1980.
102. Feinstein J. S. The relationship between socioeconomic status and health: A review of the literature. The Milkbank Quarterly. 1993;v71:p. 279-94.
103. WHO Commission on Social Determinants on Health. Closing the gap in a generation: health equity through action on the social determinants of health Geneva: World Health Organisation; 2008.
104. EU Executive Agency for Health and Consumer. Second Programme of Community Action in the Field of Health 2008-2013. European Commission; 2007.
105. Sondik EJ, Huang DT, Klein RJ, Satcher D. Progress toward the healthy people 2010 goals and objectives. Annu Rev Public Health. 2010;31:271-81 4 p folliwng 81.
106. Mackenbach JP, Kunst AE. Measuring the magnitude of socio-economic inequalities in health: an overview of available measures illustrated with two examples from Europe. Social science & medicine. 1997;44(6):757-71.
107. Harper S, King NB, Meersman C, Reichman ME, Breen N, Lynch J. Implicit Value Judgments in the Measurement of Health Inequalities. Milbank 2010;88(4-29).
108. Charafeddine R, Gadeyne S, Deboosere P, Berger N, Demarest S, Van Oyen H Social inequalities in healthy life expectancy. Alternative methods of estimation in the absence of the national census. Brussels: Direction Opérationnelle Santé publique et surveillance, Institut Scientifique de Santé Publique; 2011.
109. Deboosere P GS, Van Oyen H. The 1991-2004 evolution in Life Expectancy by educational level in Belgium based on linked census and population register data. Eur J Popul. 2009;25:175-96.
110. Van Oyen H CR, Deboosere P, Cox B, Lorant V, Nusselder W, Demarest S. Contribution of mortality and disability to the secular trend in health inequality at the turn of century in Belgium. Eur J Public Health. 2011;21:781-7.
111. Van Oyen H CR, Deboosere P, Cox B, Lorant V, Demarest S. De evolutie van sociale ongelijkheid in gezonde levensverwachting. In: Press A, editor. Sociale ongelijkheden in gezondheid in België. Gent: Federaal Wetenschapsbeleid; 2011. p. 27-43.
112. Deboosere P, Gadeyne S, Van Oyen H. L'évolution des inégalités sociales en espérance de vie. In: Van Oyen H. DP, Lorant V., Charafedinne R., editor. Les inégalités sociales de santé en Belgique. Brussels: Academia Press; 2010.
113. Van Oyen H, Charafeddine R, Deboosere P, Cox B, Lorant V, Demarest S. L'évolution des inégalités en espérance de vie en santé. In: Van Oyen H. DP, Lorant V., Charafedinne R., editor. Les inégalités sociales de santé en Belgique. Brussels: Academia Press; 2010.
114. Haelterman E, De Spiegelaere M, Masuy-Stroobant E. Les indicateurs de santé périnatale en Région de Bruxelles capitale 1998-2004. Brussels: Observatoire de la santé et du Social de Bruxelles-Capitale; 2007.

115. Léonard C. La responsabilisation capacitante: un nouveau paradigme pour refonder l'Etat-providence? Éthique et économique/Ethics and Economics. 2012;9(2):45-65.
116. Dworkin R. What is Equality? Part 2: Equality of Resources. Philosophy and Public Affairs. 1981;10(4):283-345.
117. Dworkin R. Sovereign Virtue Revisited. Ethics. 2002;113(October):106-43.
118. Dworkin R. Equality, Luck and Hierarchy. Philosophy and Public Affairs. 2003;31(2):190-8.
119. Roemer J. Egalitarianism, responsibility, and information. Economics and Philosophy. 1987;3:215-44.
120. Roemer J. Equality and responsibility. Boston Review. 1995;XX(2 (April/May)).
121. Roemer JE. Equality of Opportunity. Cambridge: Harvard University Press; 1998.
122. van Doorslaer E, Masseria C, Koolman X. Inequalities in access to medical care by income in developed countries. Canadian Medical Association Journal. 2006;174(2):177-83.
123. van Doorslaer E, Wagstaff A. Equity in the delivery of health care: Some international comparisons. Journal of Health Economics. 1992(11):389-411.
124. van Doorslaer E, Wagstaff A, van der Burg H, Christiansen T, Citoni G, Di Biase R, et al. The redistributive effect of health care finance in twelve OECD countries. Journal of Health Economics. 1999;18(3):291-313.
125. Wagstaff A. Measuring Equity in Health Care Financing. reflections on (and Alternatives to) the World Health Organization's Fairness of Financing Index. In: Policy Research Working Paper. Washington: World Bank; 2001.
126. Wagstaff A, Van Doorslaer E. Equity in the finance of health care: Some international comparisons. Journal of Health Economics. 1992;11(4):361-7.
127. Wagstaff A, Van Doorslaer E. Equity in Health Care Finance and Delivery. In: Culyer AJ, Newhouse JP, editors. Handbook of health Economics: North-Holland; 2000. p. 1804-62.
128. Wagstaff A, van Doorslaer E, van der Burg H, Calonge S, Christiansen T, Citoni G, et al. Equity in the finance of health care: some further international comparisons. Journal of Health Economics. 1999;18(3):263-90.
129. Daniels N. Just Health. Meeting Health Needs Fairly. Cambridge: Cambridge University Press; 2008.
130. Jackson T. Prospérité sans croissance. La transition vers une économie durable. Bruxelles; 2010.
131. Van Oyen H CB, Nusselder W, Jagger C, Cambois E, Robine JM. Gender gaps in life expectancy and expected years with activity limitations at age 50 in the European Union: Associations with macro-level structural factors. Eur J Ageing. 2010;7:229-39.
132. WHO. Developing indicators for the health 2020 targets. First meeting of the expert group (18-19 June). Utrecht: World Health Organization; 2012.
133. Plug I, Hoffmann R, Mackenbach J. Avoidable mortality in the European Union: Towards better indicators for the effectiveness of health systems. In: AMIEHS (Amenable Mortality in the European Union, towards better Indicators for the Effectiveness of Health Systems); 2011.
134. Schokkaert E, Guillaume J, Lecluyse A, Avalosse H, Cornelis K, De Graeve D, et al. [Effects of the Maximum Billing system on health care consumption and financial access to health care]. Brussels: Belgian Health Care Knowledge Centre (KCE); 2008. KCE reports 80
135. De Graeve D, Lecluyse A, Schokkaert E, Van Ourti T, Van de Voorde C. [Personal contribution for health care in Belgium. Impact of supplements]. Brussels: Belgian Health Care Knowledge Centre (KCE); 2006. KCE reports 50
136. Van de Voorde C, Kohn L, Vinck I. [Entitlement to a hospital insurance for persons with a chronic illness or handicap]. Brussels:

Belgian Health Care Knowledge Centre (KCE); 2011. KCE reports 166

137. Simoens S, Villeneuve, M., Hurst, J. Tackling Nurse Shortages in OECD Countries Paris: OECD; 2005.

138. Van den Heede K, Florquin M, Bruyneel L, Aiken L, Diya L, Lesaffre E, et al. Effective strategies for nurse retention in acute hospitals: A mixed method study. Int J Nurs Stud. 2011.

139. WHO. Policies and practices for mental health in Europe: meeting the challenges. Copenhagen: World Health Organization; 2008.

140. Eyssen M, Leys M, Desomer A, Arnaud S, Léonard C. Organisatie van geestelijke gezondheidszorg voor mensen met een ernstige en persisterende mentale aandoening. Wat is de wetenschappelijke basis? Brussel: Belgian Health Care Knowledge Centre (KCE); 2010. KCE Reports 144

141. Garcia-Armesto S, Medeiros H, Wei L. Information Availibility for measuring and comparing quality of mental health care across OECD countries. Paris: OECD; 2008. OECD Health Technical Papers

142. NIHDI. Evaluer les trajets de soins: accord sur la façon de récolter et d'évaluer les données. Bruxelles: National Institute for Health and Disability Insurance; 2012. Communiqué de presse

143. Schoen C, Osborn R, How SK, Doty MM, Peugh J. In chronic condition: experiences of patients with complex health care needs, in eight countries, 2008. Health Aff (Millwood). 2009;28(1):w1-16.

144. Mead N, Bower P. Patient-centredness: a conceptual framework and review of the empirical literature. Soc Sci Med. 2000;51(7):1087-110.

145. Davies E, Shaller D, Edgman-Levitan S, Safran DG, Oftedahl G, Sakowski J, et al. Evaluating the use of a modified CAHPS survey to support improvements in patient-centred care: lessons from a quality improvement collaborative. Health Expect. 2008;11(2):160-76.

146. European Practice Assessment - EPA. Easy to use and scientifically developed quality management for general practice. 2008.

147. The Royal Australian College of GPs Standards for General Practices, 4th Edition - 2010, [2011 [cited November]. Available from: http://www.racgp.org.au/Content/NavigationMenu/PracticeSupport/StandardsforGeneralPractices/Standards4thEdition.pdf

148. The Royal New Zealand College of General Practitioners Aiming for Excellence – RNZCGP Standard for New Zealand General Practice 2011-2014 [2011 [cited November]. Available from: http://www.rnzcgp.org.nz/quality-standards

149. Merrick EL, Hodgkin D, Horgan CM, Garnick DW, McLaughlin TJ. Changing mental health gatekeeping: effects on performance indicators. J Behav Health Serv Res. 2007;35(1):3-19.

150. Owens PL, Mutter R, Stocks C. Mental Health and Substance Abuse-Related Emergency Department Visits among Adults. AHRQ, HEALTHCARE COST AND UTILIZATION PROJECT; 2010. Statistical Briefs

151. Larkin G, Claassen C, Emond J, al. e. Trends in US emergency department visits for mental health conditions, 1992 to 2001. Psychiatric Services. 2005;56(6):671-7.

152. McEwan KL, Goldner E. Accountability and Performance Indicators for Mental Health Services and Supports. Ottawa (ON): Health Canada; 2001.

153. Morris J, Berg K, Fries B, Hawes C, Phillips CM, Mor V, et al. Gebruikshandboek voor de InterRAI-LTCF (BelRAI-LTCF). Washington, D.C.: InterRAI; 2006.

154. Morris J, Fries B, Bernabei R, Steel K, Ikegami N, Carpenter I, et al. Gebruikshandboek voor de interRAI-HC (BelRAI-HC). Washington, D.C.: InterRAI; 2006.

155. WHO Nutrition for older persons [World Health Organization;2012 [cited 30th of Mai].

156. Mohler R, Richter T, Kopke S, Meyer G. Interventions for preventing and reducing the use of physical restraints in long-term geriatric care. Cochrane Database of Systematic Reviews. 2011(2):CD007546.

157. Van der Heyden J, Gisle L, Demarest S, Drieskens S, Hesse E, Tafforeau J. Enquête de santé, 2008. Rapport I - Etat de santé. Direction Opérationnelle Santé publique et surveillance, 2010; Bruxelles, Institut Scientifique de Santé Publique; 2010.