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ЕВРОПЕЙСКА АСОЦИАЦИЯ НА СТАРШИТЕ БОЛНИЧНИ ЛЕКАРИ

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HealthCast 4 Highlights: Future Drivers & Emerging Trends
PRELIMINARY DRAFT FINDINGS

May 2009

*connectedthinking

P   w   C

Agenda: HealthCast 4 – Preliminary Highlights

- HealthCast background
- Key concepts of HC4
- Goals and Recommendations

The HealthCast series is a premier global health thought leadership publication

PwC has invested in a long term global research effort to look at the healthcare industry's future

HealthCast 2010: Smaller World, Bigger Expectations

1999

Global research -
- 50 Thought Leaders
- 390 Health Executives

- Three Forces of Change
- Four Future Trends
- Twelve Implications

HealthCast Tactics: A Blueprint for the Future

2002

Global research -
- 60 Thought Leaders
- 650 Health Executives

- Six Key Hospital Tactics
- Five Key Payer Tactics

HealthCast 2020: Creating a Sustainable Future

2005

Global research -
- 120+ Thought Leaders
- 580 Health Executives

- 7 Sustainability Features
- Transferable Lessons
- Solution Drivers

HealthCast 4

In progress

2009

Global research -
- 150+ Thought Leaders
- 600 Health Executives

In progress

HealthCast 4: The Individual – In HC2020 we stated that the current system is no longer sustainable. We now also believe its ability to improve health will lose effectiveness unless it is reoriented around the individual.

1 The traditional health system is losing effectiveness

Despite unprecedented levels of global health spending, the incidence of chronic disease is progressing.

2 A new health ecosystem is emerging

New entrants are expanding the boundaries, eroding old system pathways, and accelerating the dissemination of medical knowledge.

3 Rise of the individual

Individuals will design their own health ecosystems.

1 The traditional health system is losing effectiveness

• **Health status is declining** – in certain geographies and populations health indicators are declining. This includes high resource use countries such as the United States where average life expectancy has declined for specific populations as well as developing economies trying to reach WHO Millennium Development Goals.

• **More challenges on the horizon** – the increasing epidemic of obesity is resulting in greater incidence of diabetes and heart disease. Growth in ageing populations will further strain health systems.

• **Traditional resource allocations are not efficient** – WHO data indicates that higher per capita health expenditures do not always result in improved life expectancy and health indicators.

Tenuous connection between resource use and outcomes

Life expectancy and health expenditure

Legend:
- Life expectancy at birth
- Healthy life expectancy at birth
- Total expenditure on health per capita
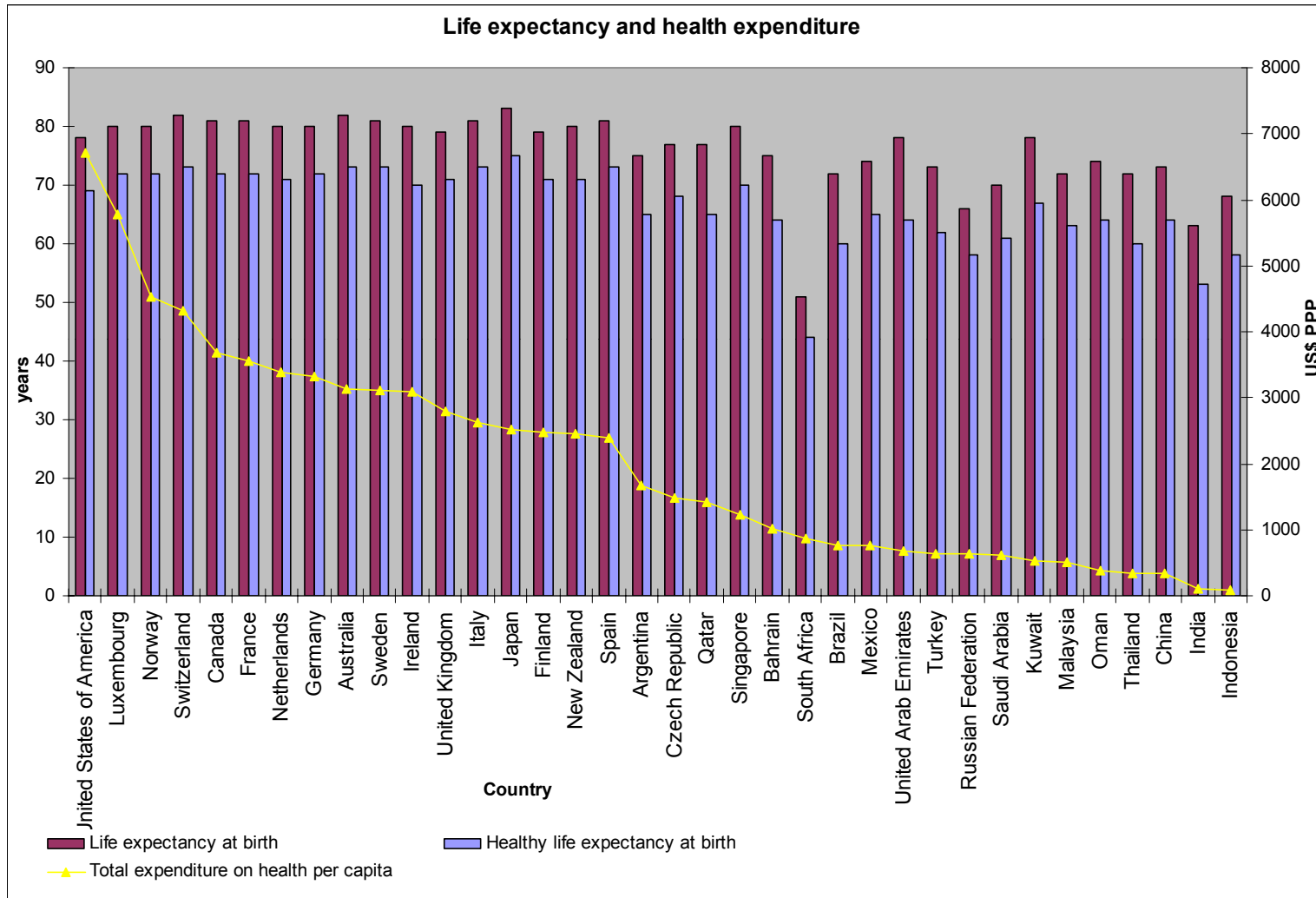
Source: World Health Organization, 2003 (HALE), 2006 (Life expectancy at birth)

Chronic conditions are the challenge

**Comparison of health expenditure to diabetes prevalence in the USA.**
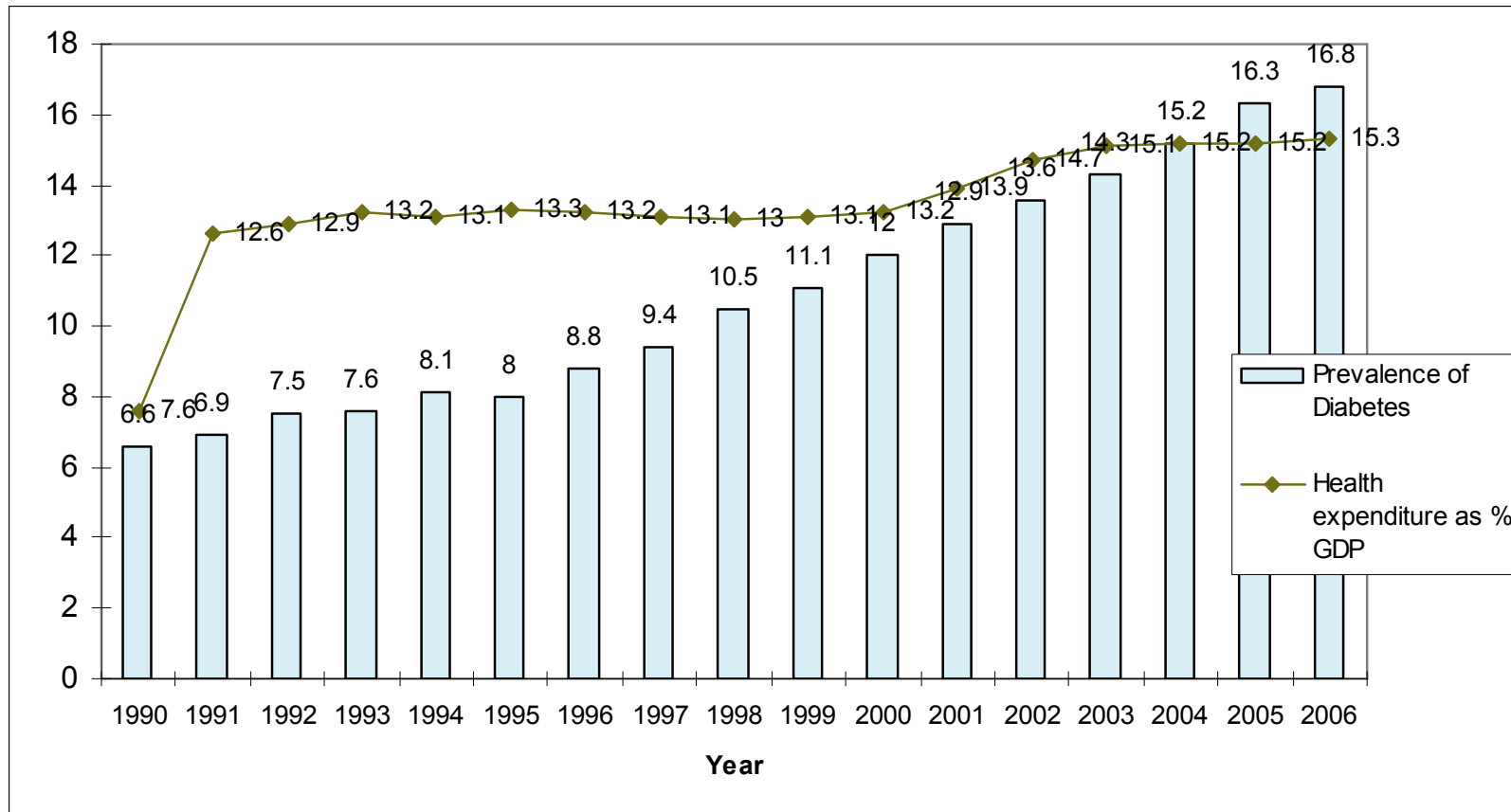
2 A new health ecosystem is emerging

New entrants from outside of traditional healthcare are emerging while connectors are now desegregating the whole system. The focus is shifting from the traditional acute care model to the promise of prevention and wellness through personal health communities.

Connectors
- Social networking
- Personal health technology
- Connected medical devices
- PHR/EMR

New Entrants
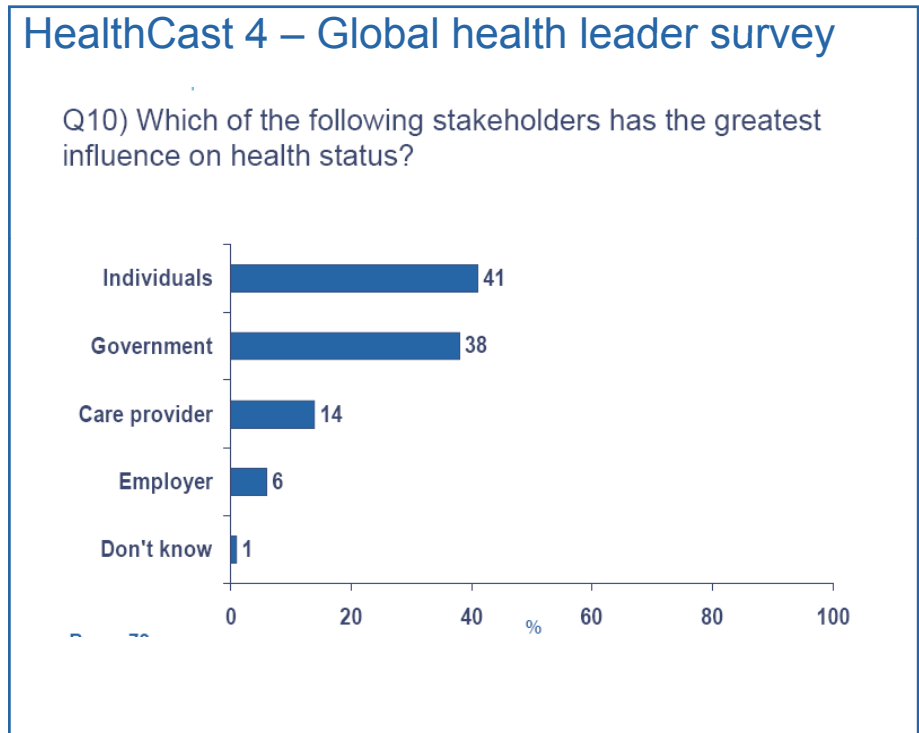- Technology
- Finance
- Retail
- Telecommunications
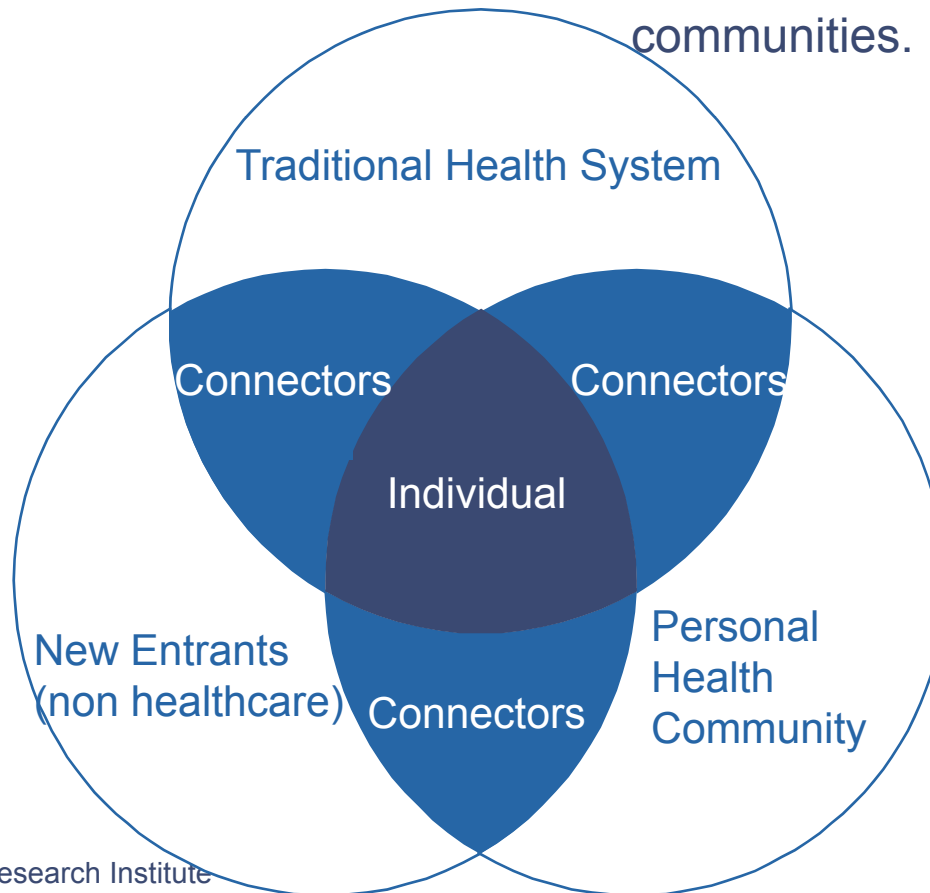
Traditional Health System
- Providers
- Payers
- Life sciences
- Government

Personal Health Community
- Family
- Community
- Schools
- Lifestyle (wellness and prevention)

Traditional Health System

Connectors

Connectors

Individual

New Entrants (non healthcare)

Connectors

Personal Health Community

April 2009

3 Rise of the individual

• The individual is the missing link in the new health ecosystem

• There is great demand for more personalised care, treatment and medicine resulting from scientific advancement

• The individual now has the capability to be the information hub of the health ecosystem through connector technologies

• Health organizations will reorient themselves based on a framework of consumer segmentation

• Individuals are the key to influencing groups (and vice versa) through the use of personal health communities

HealthCast 4 – Global health leader survey

Q10) Which of the following stakeholders has the greatest influence on health status?

Stakeholder	%
Individuals	41
Government	38
Care provider	14
Employer	6
Don't know	1

Our report has developed 4 concepts around the individual

1 The individual is now enabled to be the health information hub through connector technologies

2 Personalized care, and new targeted treatments and medicines will determine how resources are prioritized

3 Health organizations will reorient themselves based on a framework of consumer segmentation

4 Individuals participate more in self-care, relying on new types of "connectors" through personal health communities.

Our report has developed 4 concepts around the individual

1 The individual is now enabled to be the health information hub through connector technologies
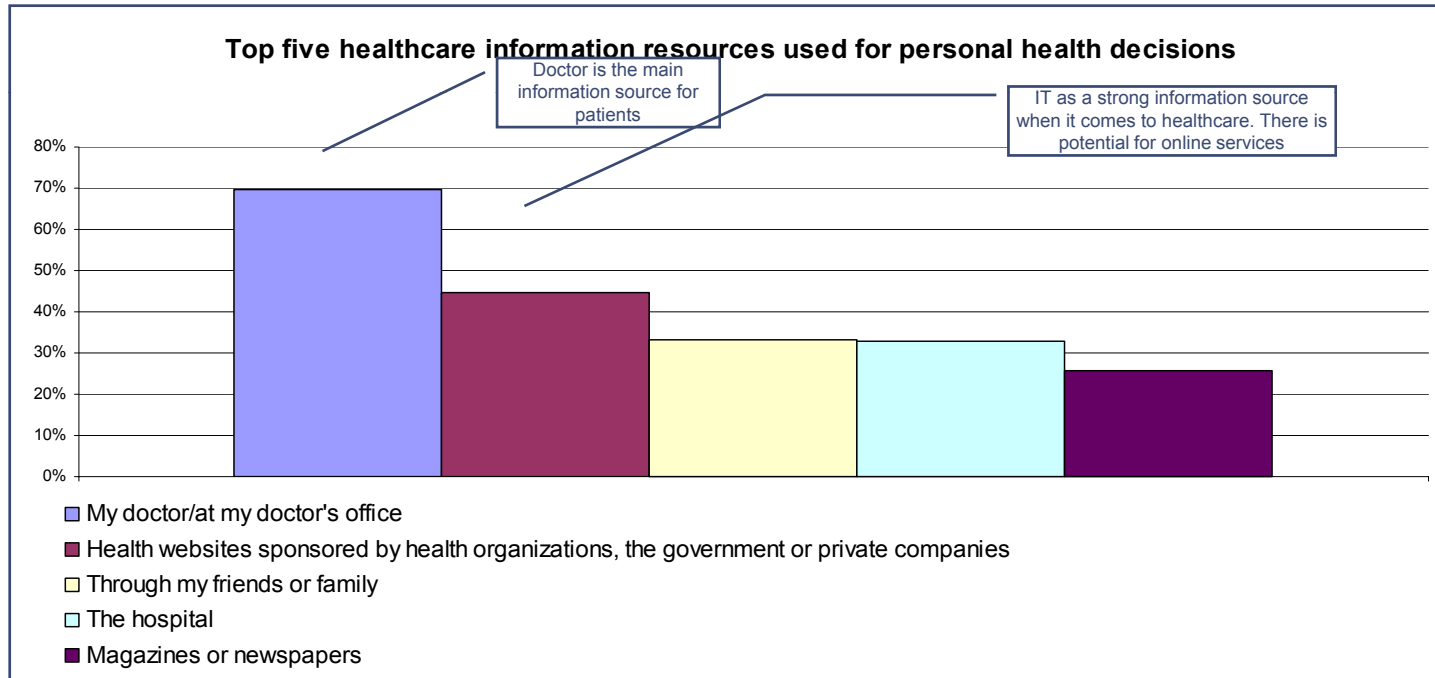
Access is creating a shift in information asymmetry

"In our public health system (universal and free), one of the technologies that has changed the current role of players in the health sector has been the access to information and communication technology through the widespread use of the Internet" (HealthCast 4 Interview with President of a Spanish Pharmaceutical Company)

Consumer Survey

Where do you currently go to find information to make decisions about your personal health?

Top five healthcare information resources used for personal health decisions

> Doctor is the main information source for patients

> IT as a strong information source when it comes to healthcare. There is potential for online services

- My doctor/at my doctor's office
- Health websites sponsored by health organizations, the government or private companies
- Through my friends or family
- The hospital
- Magazines or newspapers

• All countries reported that the doctor or doctor's office was their main information resource used for decision making, with the exception of China, who reported that the hospital was their number one resource.

Source: PricewaterhouseCoopers Health Research Institute Consumer Survey

In your opinion, what is the most effective strategy to engage individuals in their own health?

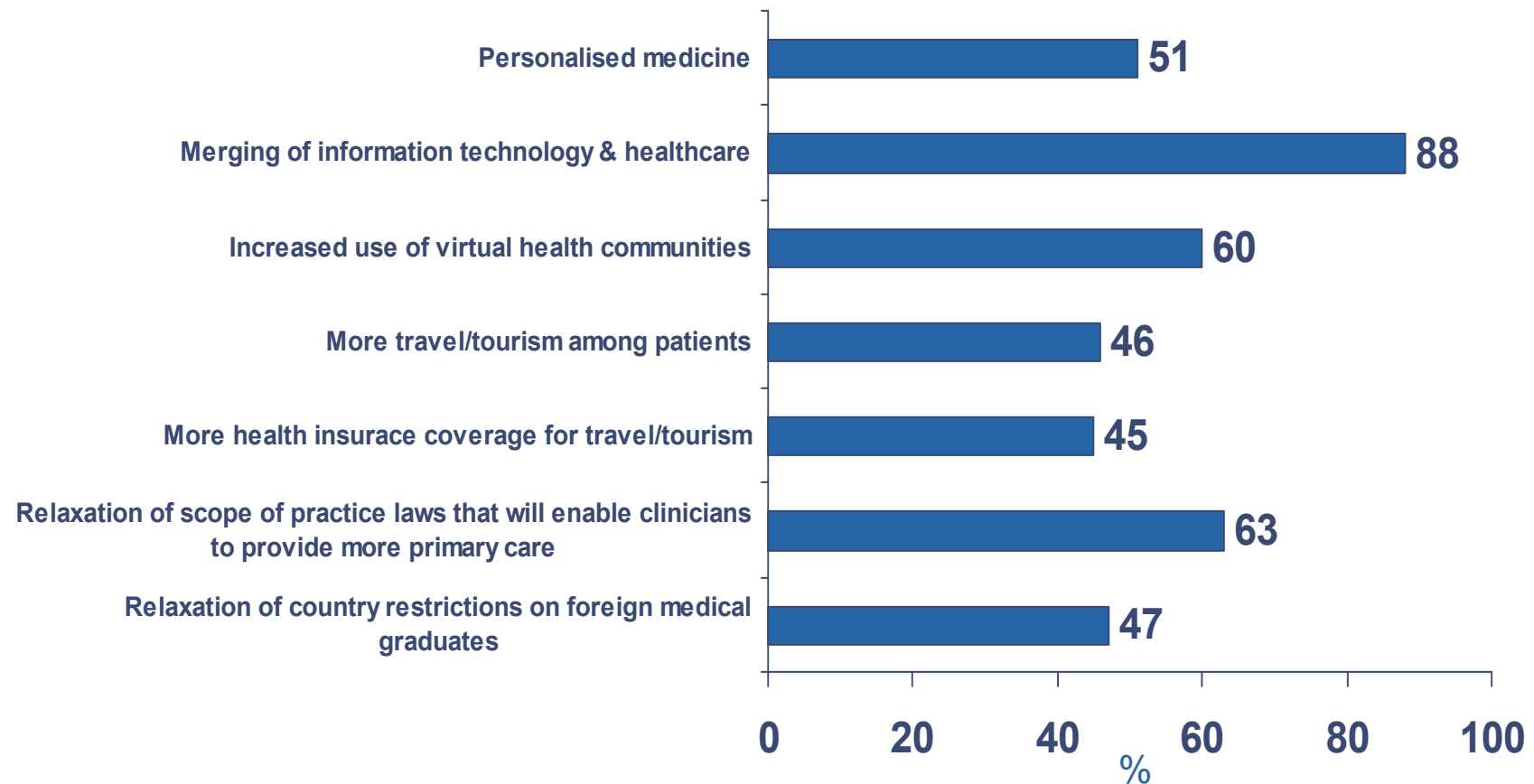Source: HealthCast 4 Global Health Leader Survey

Most effective strategy	Why?
Education (44%)	• Because knowledge is power • People are not sufficiently informed at present
Knowledge (25%)	• Knowledge of what to do and when to do it • People need to own their individual health
Communications (18%)	• It is what works and is well recognised • Talking can resolve this problem
Patient responsibility (11%)	• To have them feel responsible for the cost
Government responsibility (9%)	• There needs to be a fiduciary relationship between patient and doctor
Financial incentives / consequences (5%)	• Provides a motivation to change

In the next five years, which of the following changes, if any, are most likely to affect your health system? (multiple response question)

Source: HealthCast 4 Global Health Leader Survey

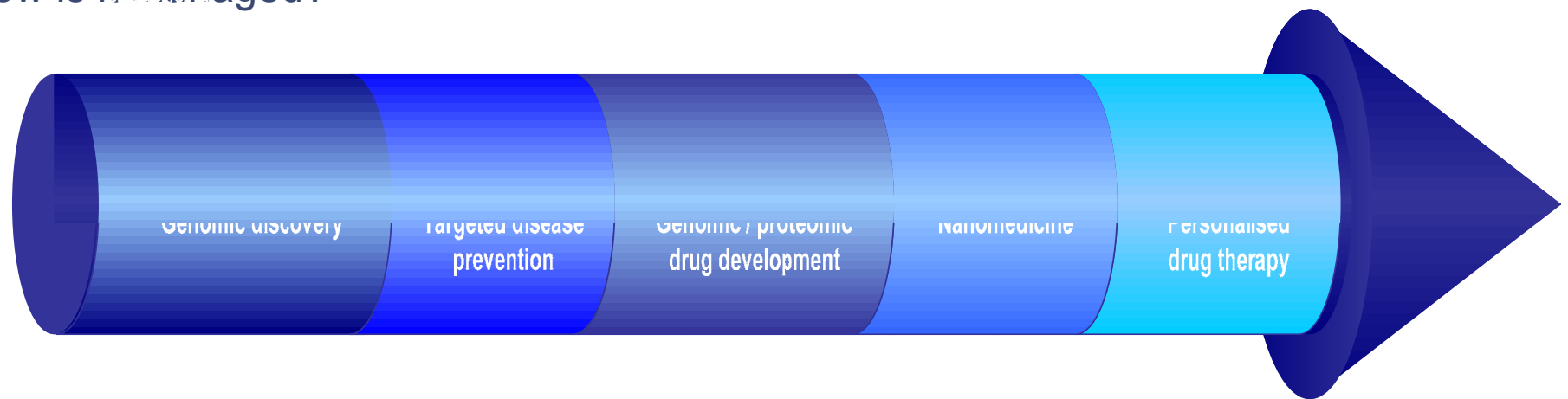| Category	%
Personalised medicine	51
Merging of information technology & healthcare	88
Increased use of virtual health communities	60
More travel/tourism among patients	46
More health insurace coverage for travel/tourism	45
Relaxation of scope of practice laws that will enable clinicians to provide more primary care	63
Relaxation of country restrictions on foreign medical graduates	47

%

Our report has developed 4 concepts around the individual

2 Personalized care, and new targeted treatments and medicines will determine how resources are prioritized

The "-omics" revolution — on the continuum toward personalised medicine

Genomics, proteomics, and metabolomics discovery is happening right now and is getting closer to the individual than ever before. The next phase, though, is to better understand and use this information to prevent disease in individuals. With respect to the role of the individual, how is this information disseminated? How is it accessed? How is it managed?

Genomic discovery / Targeted disease prevention / Genomic / proteomic drug development / Nanomedicine / Personalised drug therapy

• Genomic analysis becoming affordable to the public

• Improvements in faster and inexpensive DNA sequencing

• Human genome sequencing becomes affordable

• Improved correlation between genetic markers and preventable diseases

• Genomic research helps elucidate pathophysiological basis for certain diseases with identification of potential drug targets

• Nanomedicine begins to deliver novel delivery systems for targeted drug therapy in vivo

• New drug discovery and development based on genetic markers commences

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Developing the public-private partnership model

"Most of the Medical Research Institutes say there has never been so much promise than on the back of the Human Genome project, e.g. biomarkers and targeted products; which potentially will be the biggest cost saver to the industry," notes an executive with an Australian private equity firm, in a Health Cast 4 interview.

Since the Human Genome project, the costs for genome sequencing have gone down considerably and it is expected that they will continue to go down.

Partnership Example: Scripps Genomic Health Initiative
• Collaboration between Scripps Translational Science Institute, Navigenics, Affymetrix, and Microsoft.
• The Scripps Initiative will look at behaviors people take after learning more about their genetic susceptibility to disease.
• It will assess risk for over 20 health conditions, including celiac disease, Crohn's disease, Type 2 diabetes, and several types of cancer.

Our report has developed 4 concepts around the individual

3 Health organizations will reorient themselves based on a framework of consumer segmentation

Health organizations will reorient themselves based on a framework of consumer segmentation

Based on our global consumer survey and other research, we believe consumers can be categorized into the following interest areas:

- **Effectiveness** - individuals in this segment value getting their health issue taken care of, a short wait time, and a coordinated team of clinicians.

- **Brand** - individuals in this segment value patient satisfaction ratings, education on overall wellness, and clinicians that are recognized as best in the field.

- **Convenience** - individuals in this segment value a short wait time, a short travel distance, and a coordinated team of clinicians.

- **Price** - individuals in this category value not having to worry about financial considerations and understanding out of pocket costs.

- **Knowledge** - individuals in this category value the knowledge of medical professionals and getting the best brand name prescriptions.

Moving from acute care to wellness

Slide from PwC Advisory Services, "AT&T Consumer-centric Healthcare."
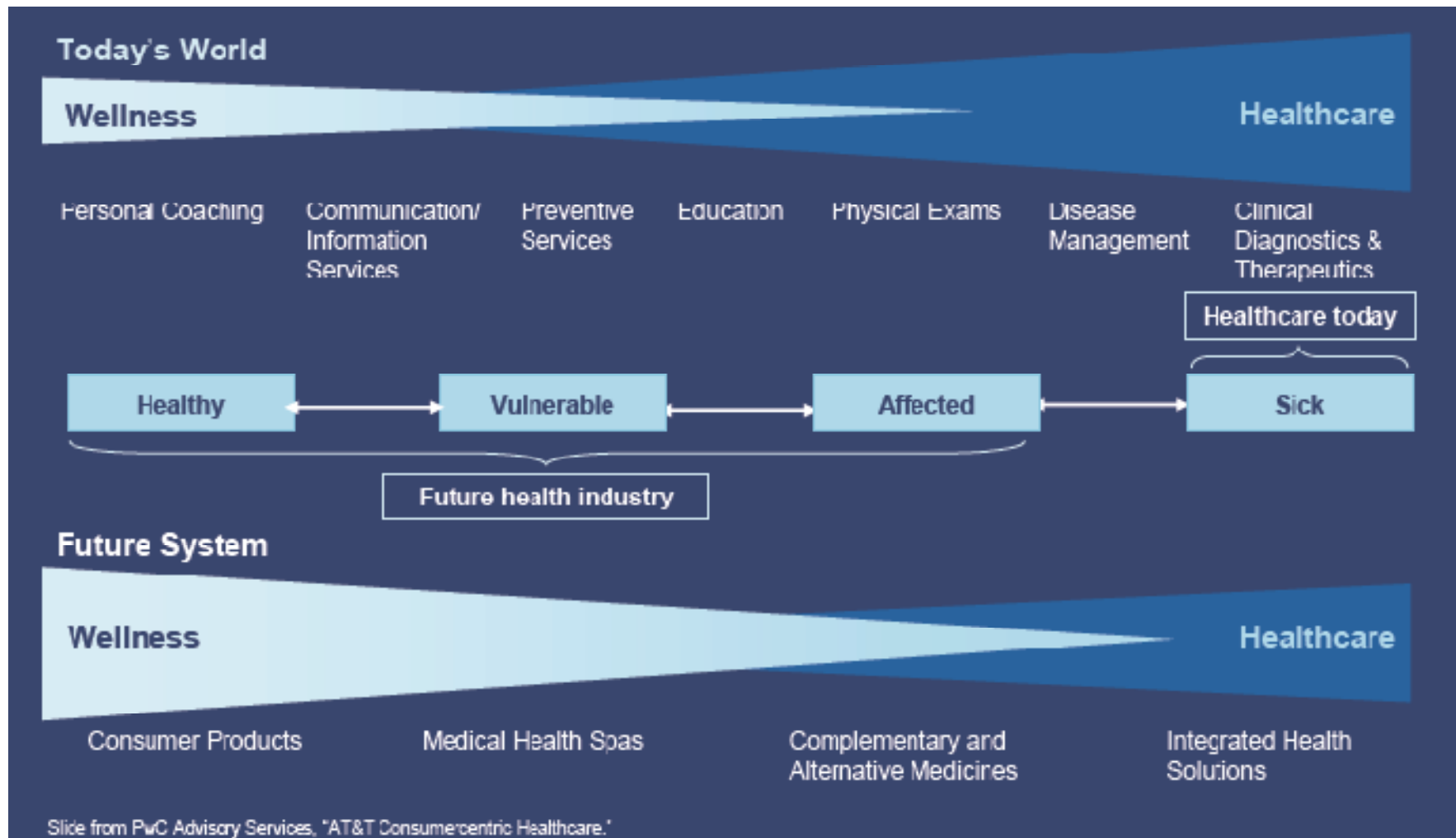
Expanding and changing of roles → enhance value

Pharmacies also have a role to play in this changing ecosystem, in collaboration with primary care. Visits to the pharmacy by patients are numerous, as our consumer survey demonstrated.
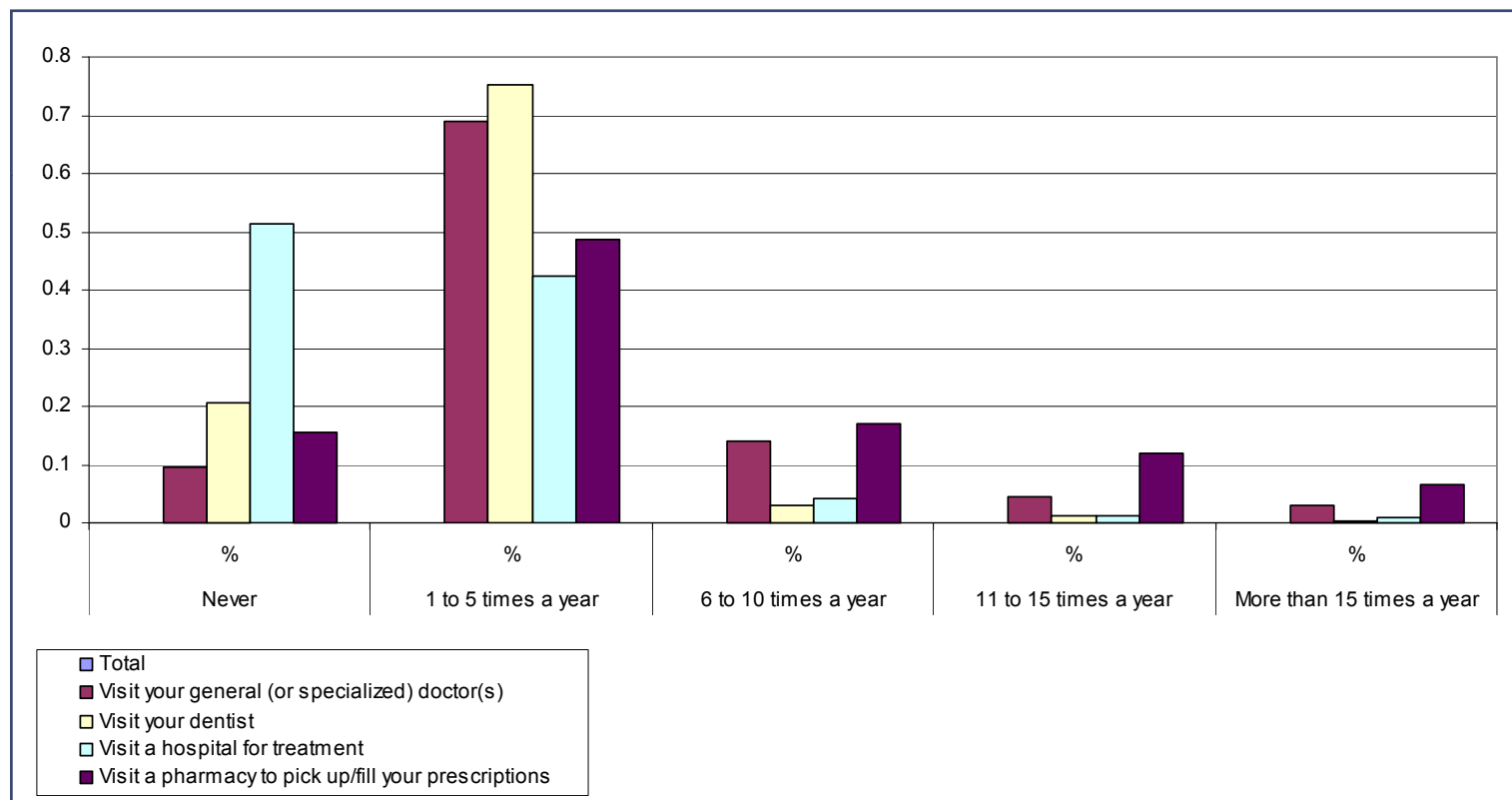
- Total
- Visit your general (or specialized) doctor(s)
- Visit your dentist
- Visit a hospital for treatment
- Visit a pharmacy to pick up/fill your prescriptions

Source: PricewaterhouseCoopers Health Research Institute Consumer Survey

How influential, if at all, are the following stakeholders on an individual's health behaviour?

Source: HealthCast 4 Global Health Leader Survey

	Neither / Nor (%)	Don't know (%)	Mean Score
Co-workers	34	0	3.26
Doctors	12	0	4.15
Nurses	27	0	3.59
Pharmacists	35	0	3.14
Family	17	1	4.11
Friends	26	0	3.62
Media	28	0	3.48

Chart values:

- Co-workers: -5, -16, 37, 8
- Doctors: -1, -3, 48, 36
- Nurses: -4, -12, 36, 21
- Pharmacists: -4, -24, 27, 9
- Family: -1, -4, 38, 39
- Friends: -3, -11, 41, 19
- Media: -4, -17, 30, 21

%

Legend: ■ Not at all influential ■ Not very influential ■ Quite influential ■ Very influential
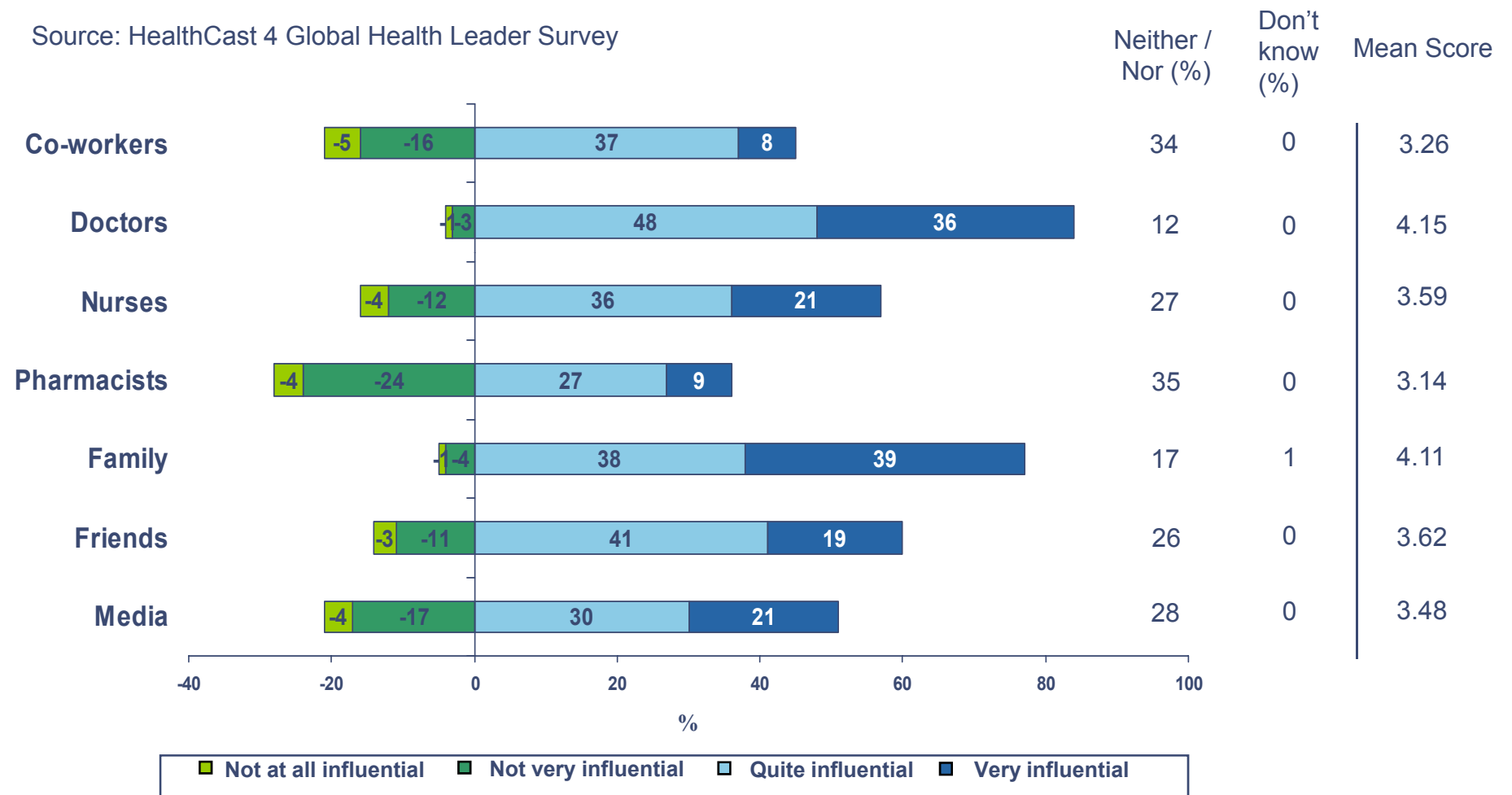
How do you rate the impact of the following group's on the health status of the population?

Source: HealthCast 4 Global Health Leader Survey

	Neither / nor (%)	Don't know (%)	Mean Score
Education / school systems	25	0	3.67
Grocery store / supermarkets	27	0	2.18
The internet	31	0	3.39
Government	30	1	3.48
Primary / community care services	21	0	3.95
Hospitals	26	0	3.66
Health insurance companies	32	1	2.99
Pharmaceutical companies	33	0	2.87
Media	25	0	3.38

Chart values (Not at all positive, Not very positive, Positive, Very positive):
- Education / school systems: -4, -12, 29, 30
- Grocery store / supermarkets: -28, -36, 8, 1
- The internet: -4, -15, 39, 11
- Government: -2, -15, 37, 15
- Primary / community care services: -1, -5, 45, 28
- Hospitals: -13, 42, 19
- Health insurance companies: -8, -26, 25, 8
- Pharmaceutical companies: -11, -25, 25, 5
- Media: -6, -19, 33, 18

Axis: -60, -40, -20, 0, 20, 40, 60, 80, 100 %

Legend: ■ Not at all positive ■ Not very positive ■ Positive ■ Very positive

Which of the following ways, if any, is your healthcare system adapting to deliver more personalised patient care?

Source: HealthCast 4 Global Health Leader Survey

Category	%
Using customer service and hospitality approaches	47
Increasing number of co-located healthcare services	60
Coordinating care across practice settings	66
Investing in targeted drug therapies and genomics	48
Increasing usage in technology	84
Increasing access to care in the home	53
Increasing emphasis on primary health care services	78
Providing more health information / education	71
None of the above	0
Other	12

%

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Our report has developed 4 concepts around the individual

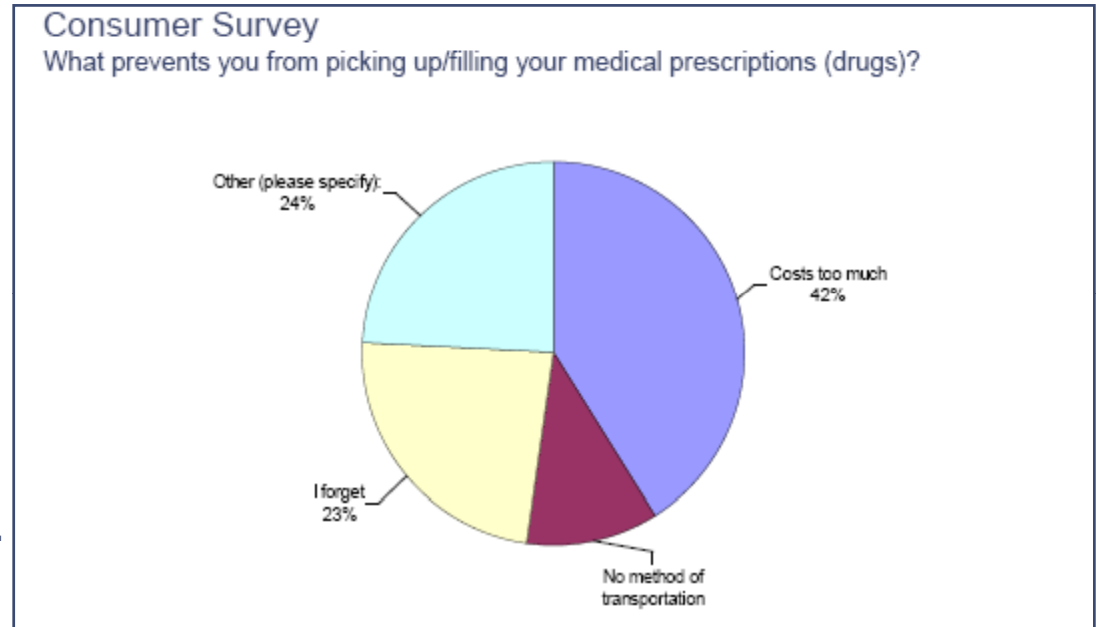**4** Individuals participate more in self-care, relying on new types of "connectors" through personal health communities.

Individuals increasingly are foregoing care because of cost

• **A recent Wolters Kluwer Health study found from looking at U.S. commercial plan claims for 2008 that "prescription abandonment increased by 34 percent nationally compared to 2006—jumping from an average of 5.15 percent in 2006 to 6.8 percent in 2008.**

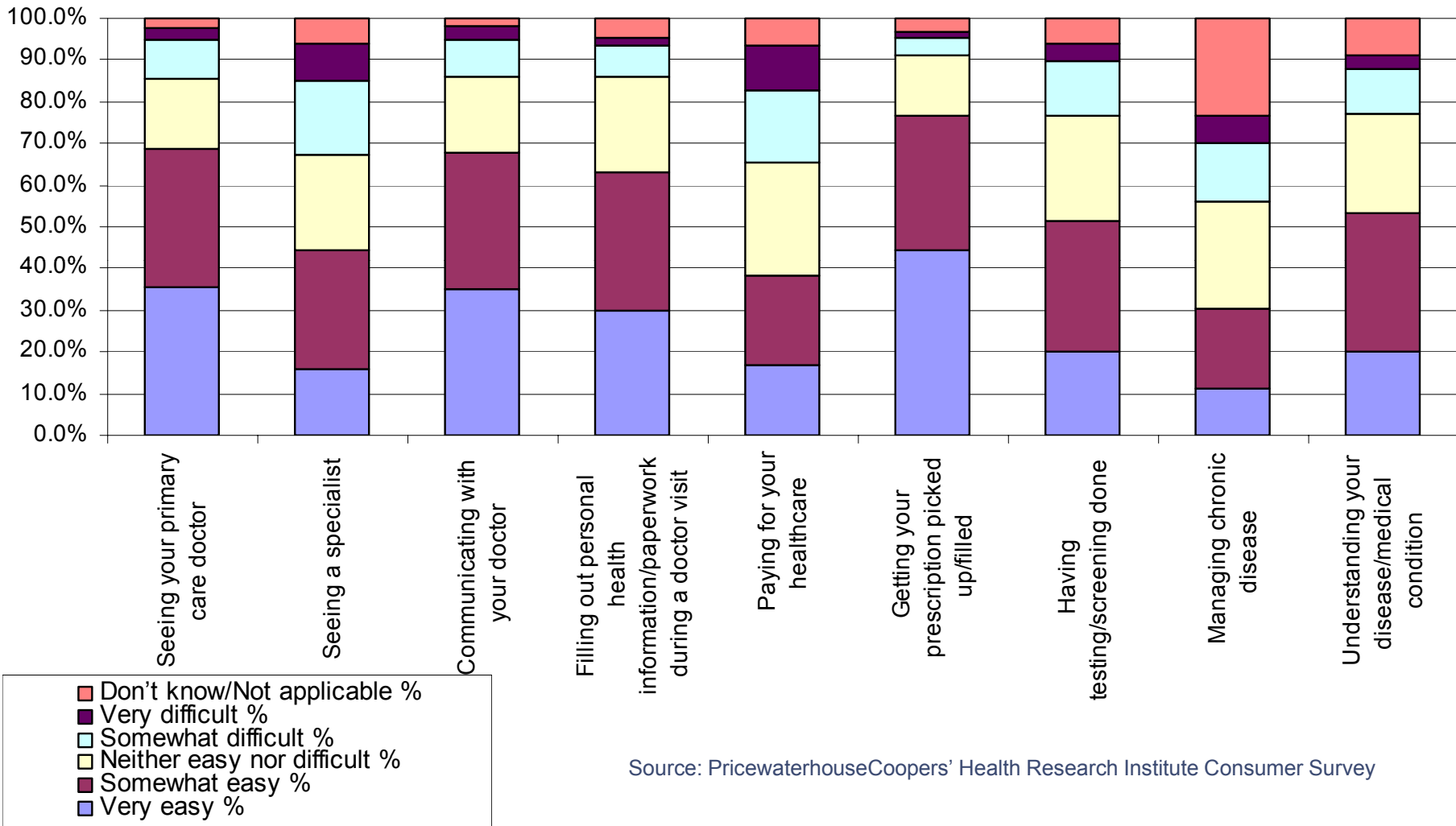• **It also found that "abandonment increased as the amount of the co-pay increased, especially for new prescriptions."**

Source: "2008 Sees Significant Rise in Prescription Abandonment and Uptake of Generics", Wolters Kluwer Health Study

Consumer Survey
What prevents you from picking up/filling your medical prescriptions (drugs)?

Other (please specify): 24%
Costs too much 42%
I forget 23%
No method of transportation

Source: PricewaterhouseCoopers' Health Research Institute Consumer Survey

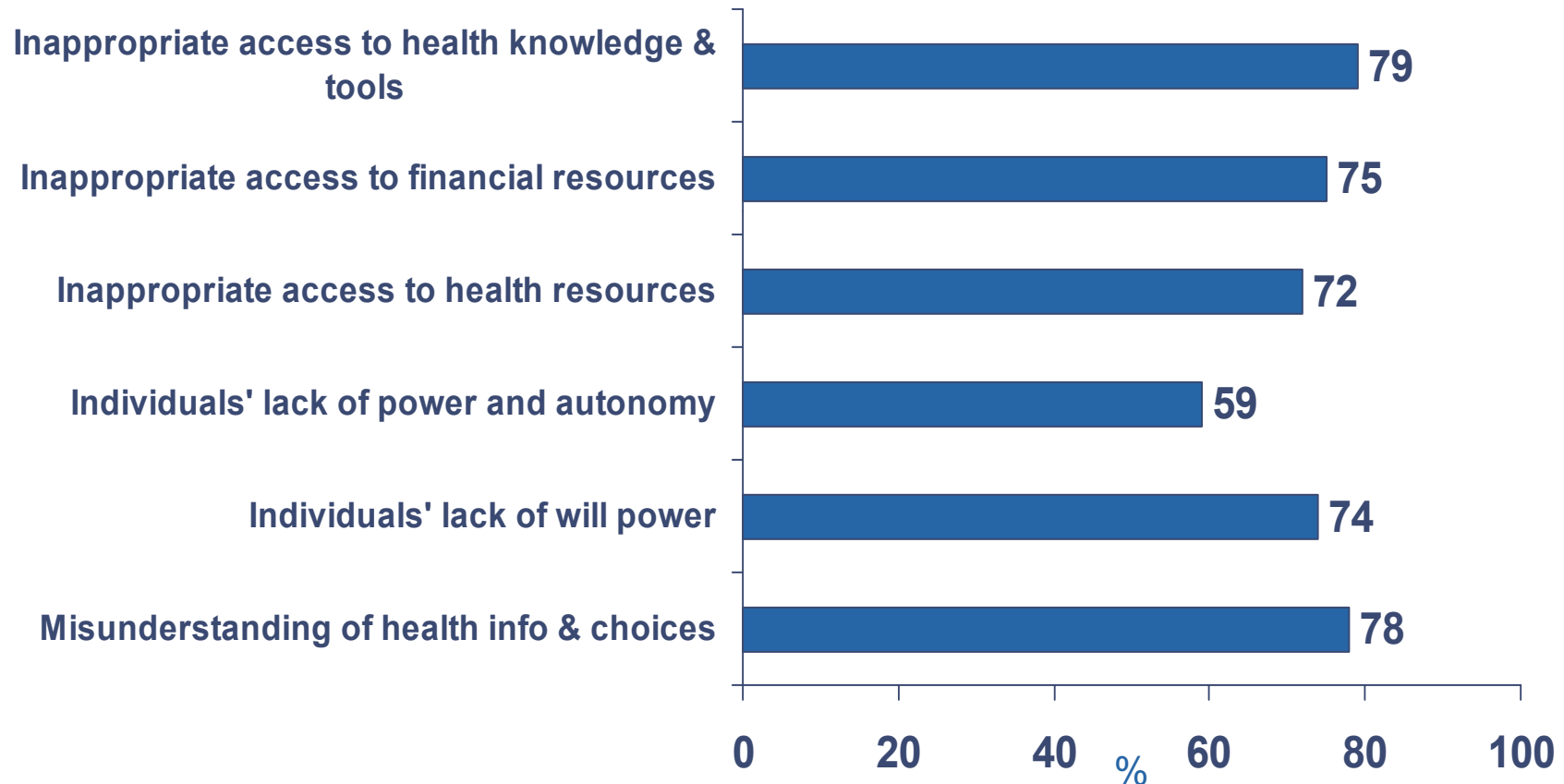# Please rate the following activities based on how easy or difficult they are for you to do:

Legend:
- Don't know/Not applicable %
- Very difficult %
- Somewhat difficult %
- Neither easy nor difficult %
- Somewhat easy %
- Very easy %

Source: PricewaterhouseCoopers' Health Research Institute Consumer Survey

Categories:
- Seeing your primary care doctor
- Seeing a specialist
- Communicating with your doctor
- Filling out personal health information/paperwork during a doctor visit
- Paying for your healthcare
- Getting your prescription picked up/filled
- Having testing/screening done
- Managing chronic disease
- Understanding your disease/medical condition

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In order to make your health system more efficient, would you say that the following need to increase or decrease?

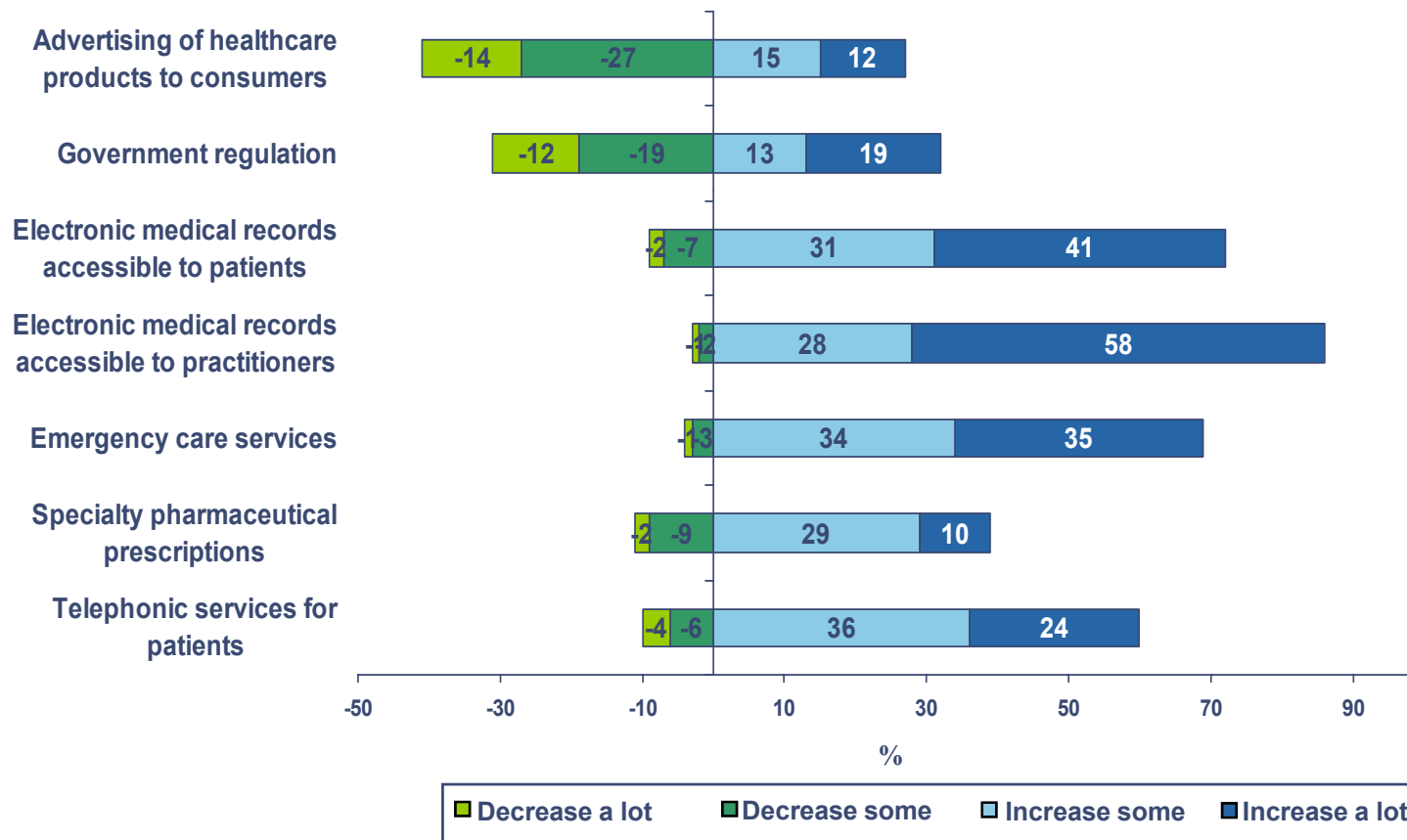Source: HealthCast 4 Global Health Leader Survey

	Decrease a lot	Decrease some	Increase some	Increase a lot

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In order to make your health system more efficient, would you say that the following need to increase or decrease?

Source: HealthCast 4 Global Health Leader Survey

Our report has developed 3 goals and 12 recommendations

1 Individuals have access to a host of support tools to make them the information hub for their own health

Recommendation: Empower your population

Outcome: An informed population that is health literate and confident enough to both drive decision-making and self-manage their own health

Recommendation: Identify enablers

Outcome: Individuals have a host of enablers to support better health and health decision making

Recommendation: Transfer ownership of health information from doctors to individuals

Outcome: Well-connected and interoperable health information technology systems that support electronic health records

Recommendation: Build individual accountability into health transactions

Outcome: An engaged, compliant population, where individuals are able to close the feedback loop

Our report has developed 3 goals and 12 recommendations

2 Personalised care is mainstreamed across health economies

Recommendation: Use new entrants, disruptors and other new innovations to bring personalised care to the masses

Outcome: Personalised care accessible and affordable to both developed and emerging economies

Recommendation: Build partnerships between industries to offer integrated healthcare solutions for individuals

Outcome: A fully networked health ecosystem based on partnership, transparency and transferrable learning

Recommendation: Provide strong central leadership to support the personalised care agenda

Outcome: Personalised care becomes a cornerstone of health policy

Our report has developed 3 goals and 12 recommendations

3 Health systems reorient themselves around the individual

Recommendation: : Conduct a health needs assessment

Outcome: : A comprehensive understanding of different consumer segments, including their health needs, desires, and barriers to care

Recommendation: Build your knowledge base to enable informed decision-making across the care continuum

Outcome: A currency for demonstrating value and value for money

Recommendation: Incentivise prevention

Outcome: Aligned incentives between key stakeholders to ensure that everyone is working towards the same goal

Recommendation: Move chronic disease out of the hospital and into the home

Outcome: Strengthened primary care workforce and infrastructure that can support the increasing burden of chronic disease in the community

Recommendation: Leverage the employer

Outcome: Workplace wellness to become the expectation, not the exception

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Which of the following services should be included in a 'basic package' of healthcare that government should provide?

Source: HealthCast 4 Global Health Leader Survey

Service	%
Immunizations	19
Health education	9
Prevention management	22
Low cost (minor) surgical procedures	2
Medium priced (moderate) surgical procedures	2
Expensive (major) surgical procedures	8
Dental care	3
Cancer treatment	10
Emergency services	17
Some form of infertility diagnosis and treatment	0
Other	3
Don't know / N/A	5

%

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