Possible e-health contribution to the web of care

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EPP eHealth

- European Procurers Platform – E-Health – Transforming the Market for E-Health Solutions (EPP-eHealth)

- The goal: to **transform the market for eHealth solutions through dialogue and innovation procurement** (understanding the opportunities that e-Health offers, promotion of new approaches to collaborative procurement of eHealth).

- Timeframe: 2015-2016

- Participating countries:
  - Denmark
  - Poland
  - Spain
  - The UK

- Funded by the EC: Grant Agreement 644461

http://innovationithospitals.com/index.html

About the project & research

Introductory study

Methodology
- Secondary data analysis including legal regulations, national plans for development as well as barriers and opportunities of development

Desk research

Aim
- Meaning of eHealth
- Barriers
- Opportunities for further development
- National plans

Qualitative research

Methodology
- Structured interviews (12 buyers, 11 suppliers, 12 experts, 2 end users). Gathered data underwent thematic analysis
- Analysis was conducted on semantic level with latent level involved in cases of reoccurring themes

Quantitative research

Methodology
- A sample of 321 surveys completed by stakeholders representing buyers perspective (and 63 representing suppliers)
- Analysis was conducted to verify findings of qualitative research

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e-health

refers to tools and services using information and communication technologies (ICTs) that can improve prevention, diagnosis, treatment, monitoring and management
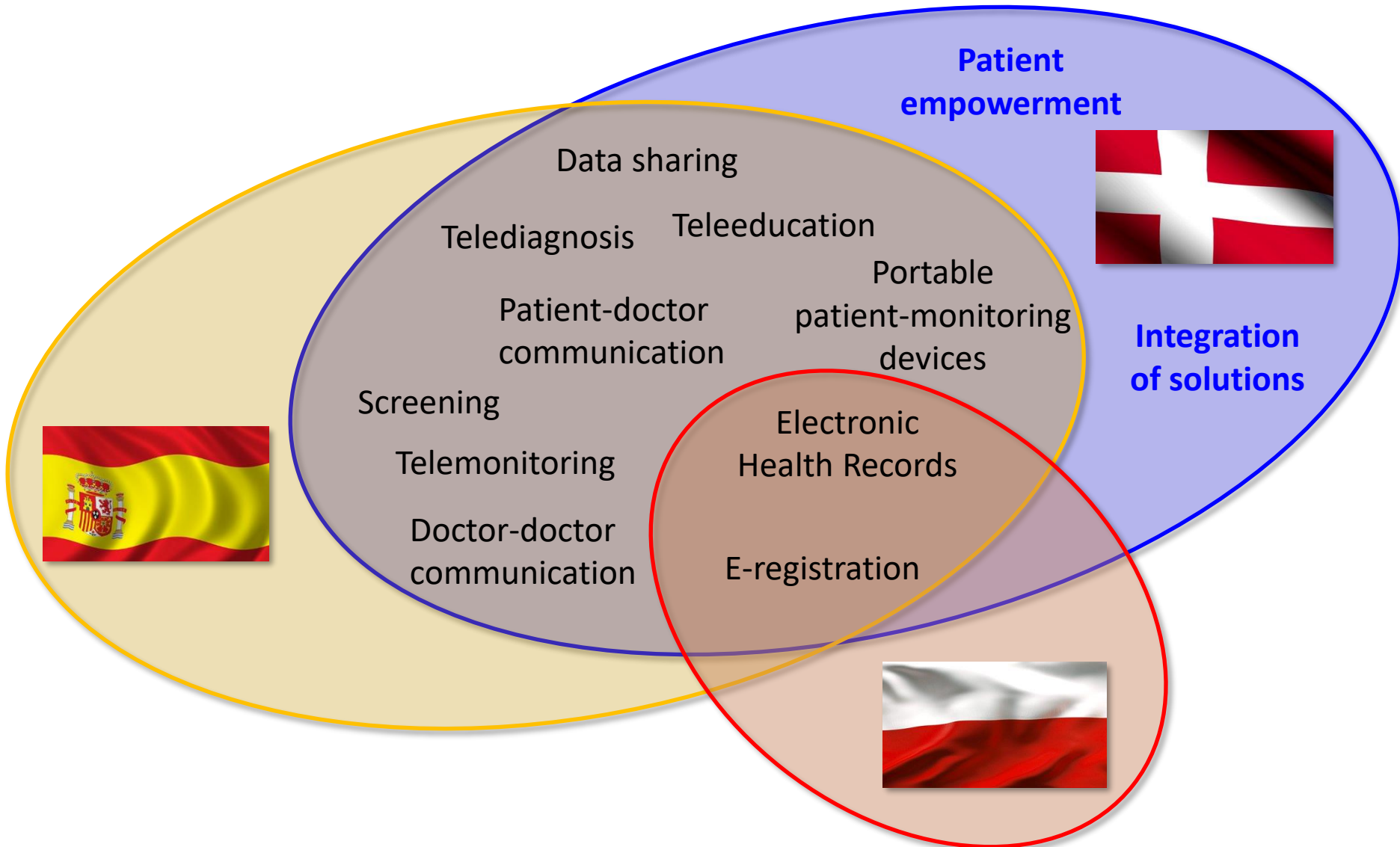
can benefit the entire community by improving access to care and quality of care and by making the health sector more efficient

includes **information and data sharing** between patients and health service providers, hospitals, health professionals and health information networks; **electronic health records**; **telemedicine services**; **portable** patient-monitoring **devices**, operating room scheduling **software**, **robotized surgery** and **blue-sky research** on the virtual physiological human

Commission

e-health

Patient empowerment

Integration of solutions

Data sharing

Telediagnosis

Teleeducation

Patient-doctor communication

Portable patient-monitoring devices

Screening

Telemonitoring

Electronic Health Records

Doctor-doctor communication

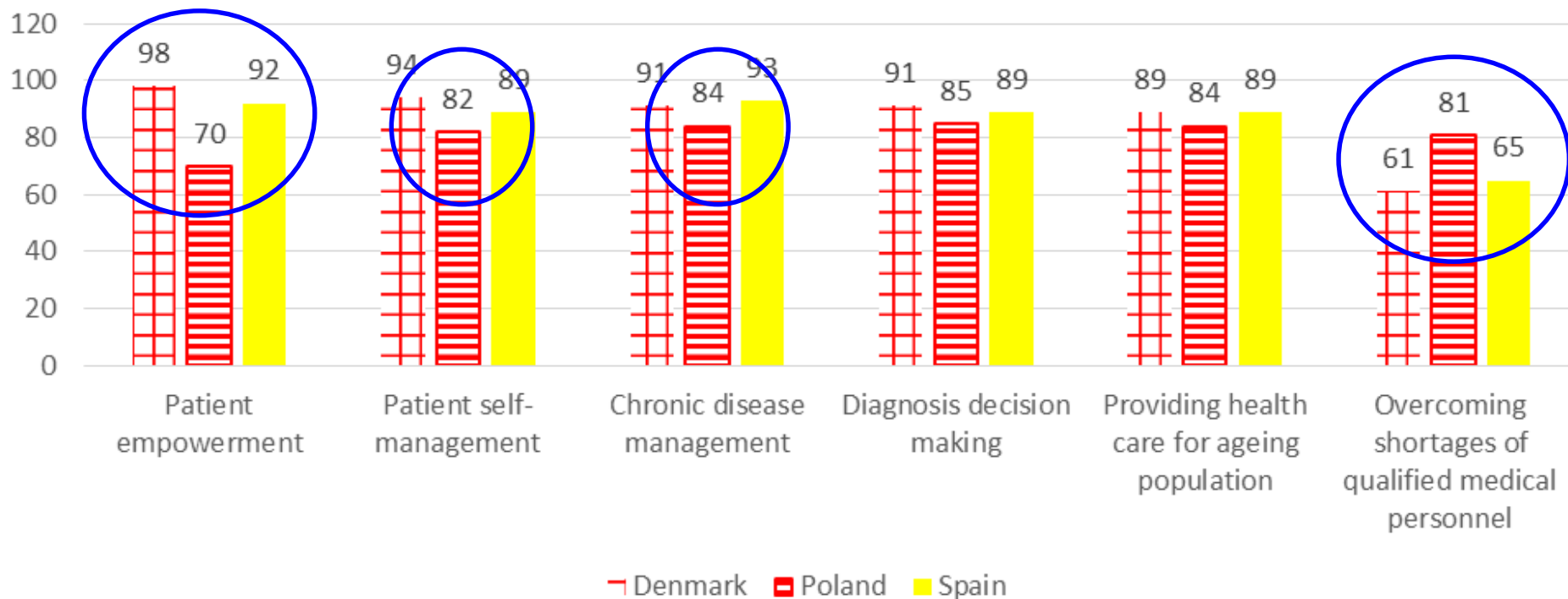E-registration

Quantitative research results

- A **sample** of stakeholders representing: **buyers (321)** and **suppliers (63)**.

- Data shown in per cents

- Most questions started with: „Level of agreement that…."

- In the overwhelming majority of cases countries / professional groups representatives agreed with the theses being tested. So **in most cases** <u>**it's just the level of this agreement**</u> **that could be analysed and differences understood**.

- <u>**There are, however tremendous differences in perception between purchasers and suppliers.**</u>

- **Results show how** <u>**healthcare needs and potential of ICT solutions to meet these needs**</u> **are** <u>**perceived**</u> **in different countries and by different groups.**

- **This could help understanding what is needed to bridge two worlds: suppliers and purchasers of ICT solutions.**

These are **important health care needs**

Legend: Denmark, Poland, Spain

Denmark bars: 98, 94, 91, 91, 89, 61
Poland bars: 70, 82, 84, 85, 84, 81
Spain bars: 92, 89, 93, 89, 89, 65

Categories: Patient empowerment, Patient self-management, Chronic disease management, Diagnosis decision making, Providing health care for ageing population, Overcoming shortages of qualified medical personnel
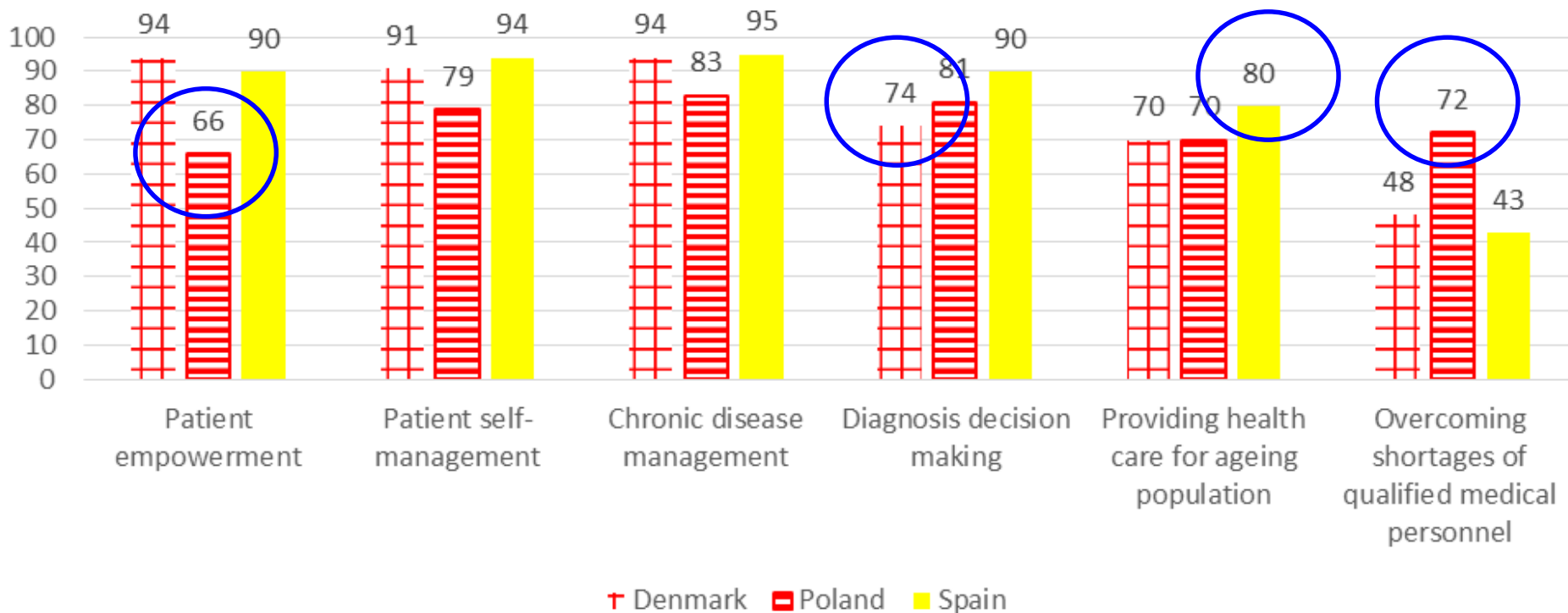
Danes seem to be the ones that agree that the mentioned issues are needs/problems – except the last one.

Poles do not recognise patient empowerment, however they perceive staff shortages as an important issue.
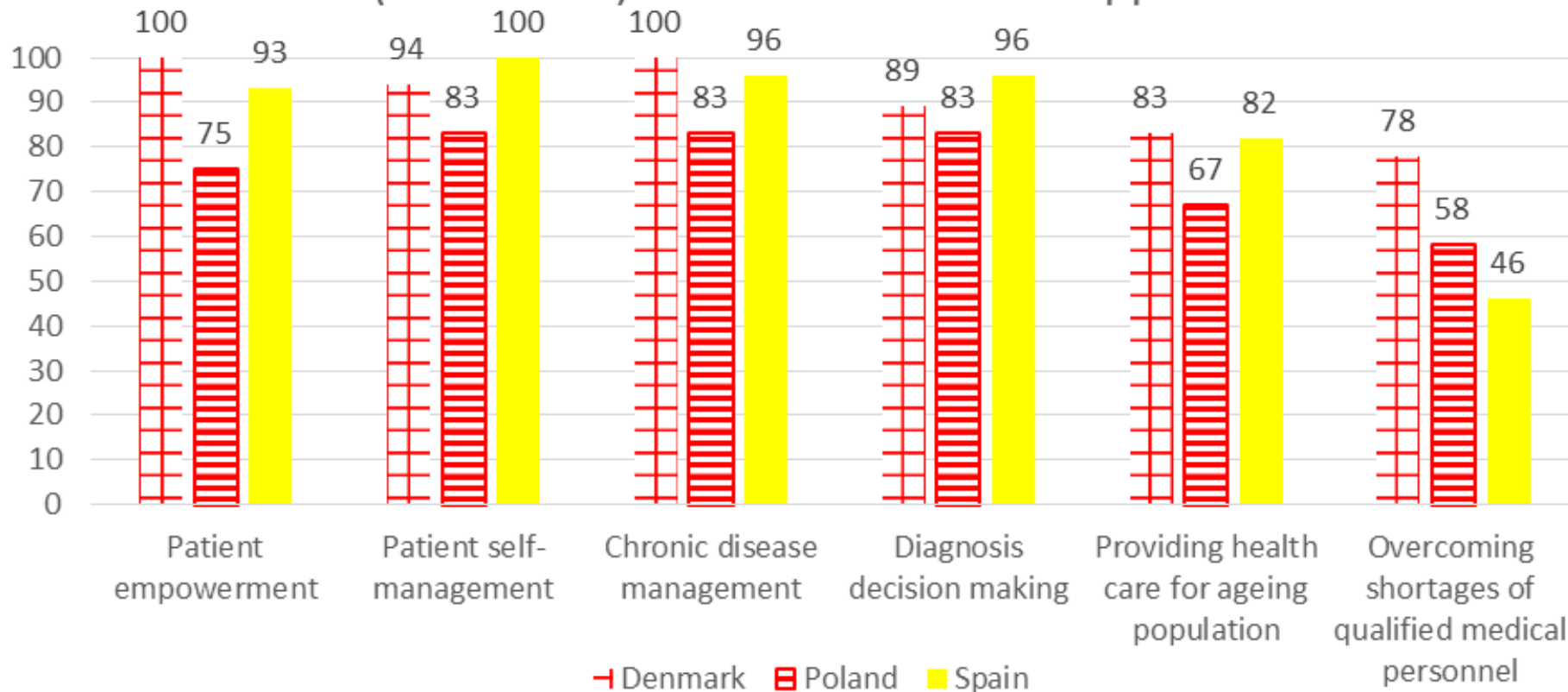
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ICT solutions could **support health care needs**

Legend: † Denmark ▭ Poland ■ Spain

Danes have little faith that ICT could contribute to better diagnosis decision making.
They and the Spanish also don't think that ICT could overcome staff shortages (<50%).
Poles have little faith in ICT use for patients empowerment (??) and still strongly believe in ICT support in overcoming staff shortages.
The Spanish hope the most that ICT will provide care for aging population.

Quantitative research results

(SUPPLIERS) ICT solutions could support:

Bar chart showing percentages for Denmark, Poland, and Spain across categories:

- Patient empowerment: Denmark 100, Poland 75, Spain 93
- Patient self-management: Denmark 94, Poland 83, Spain 100
- Chronic disease management: Denmark 100, Poland 83, Spain 96
- Diagnosis decision making: Denmark 89, Poland 83, Spain 96
- Providing health care for ageing population: Denmark 83, Poland 67, Spain 82
- Overcoming shortages of qualified medical personnel: Denmark 78, Poland 58, Spain 46
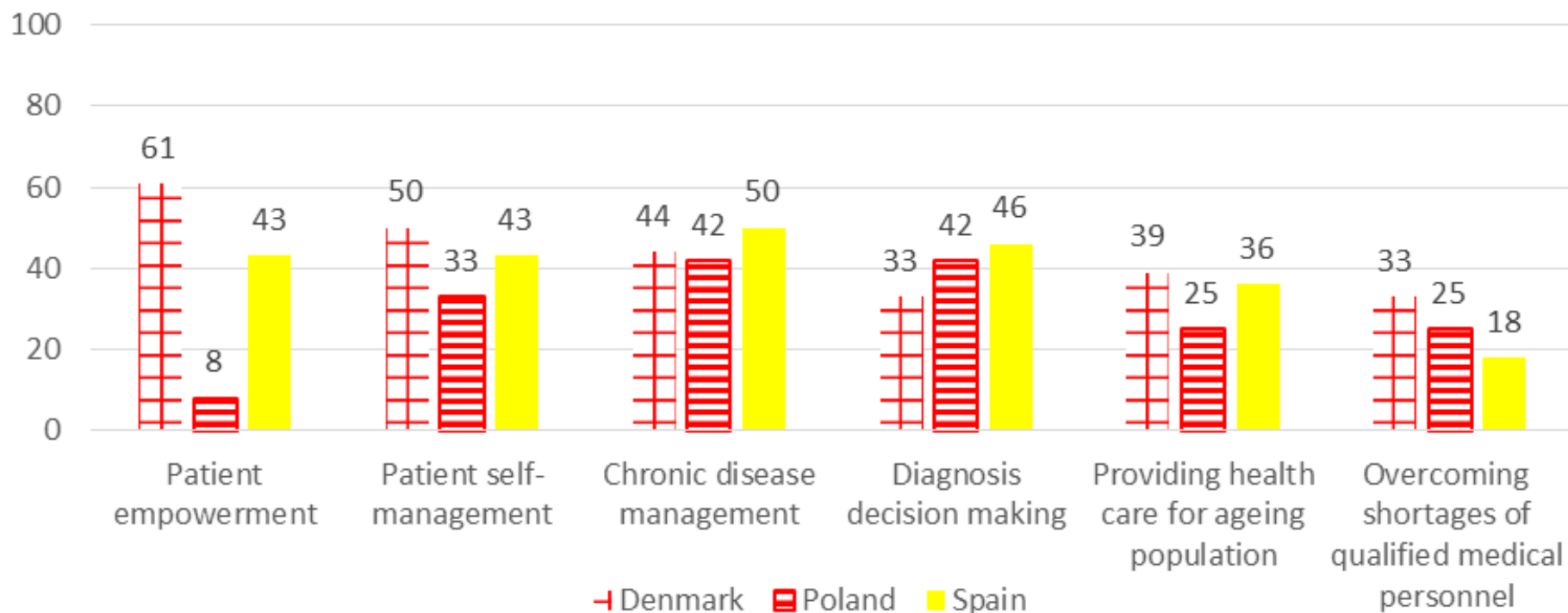
Legend: Denmark, Poland, Spain

On average:

- **Denmark: 91%**
- **Poland: 75%**
- **Spain: 86%**

In all cases, suppliers have higher or much higher (than buyers) belief that ICT could support unmet needs of health care systems….

Quantitative research results

(SUPPLIERS) ICT solutions are actually used to support:

Patient empowerment — Denmark: 61, Poland: 8, Spain: 43

Patient self-management — Denmark: 50, Poland: 33, Spain: 43

Chronic disease management — Denmark: 44, Poland: 42, Spain: 50

Diagnosis decision making — Denmark: 33, Poland: 42, Spain: 46

Providing health care for ageing population — Denmark: 39, Poland: 25, Spain: 36

Overcoming shortages of qualified medical personnel — Denmark: 33, Poland: 25, Spain: 18

Legend: Denmark, Poland, Spain

On average:
- **Denmark: 43%**   •   **Poland: 29%**   •   **Spain: 39%**

…. However, they don't see it happening (except from Denmark in regard to two first questions).

These are **important health care needs**
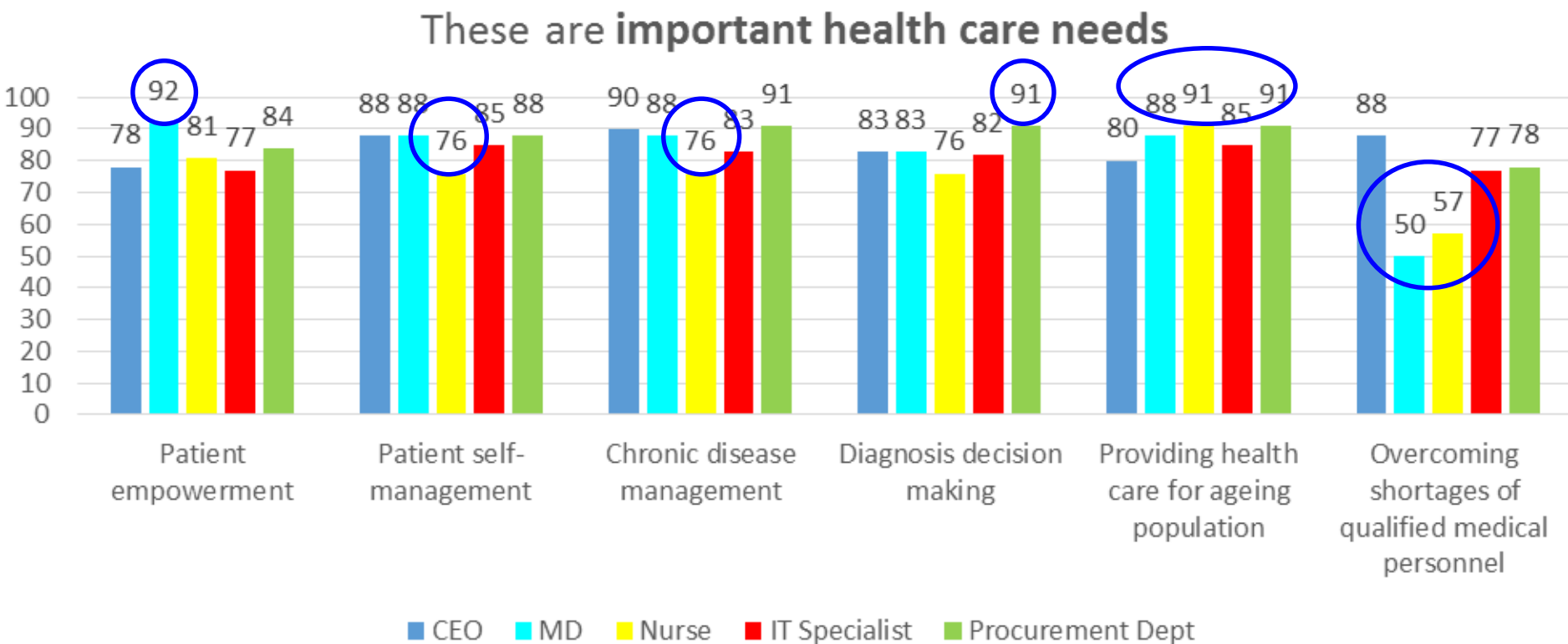
Compared to other groups, clinicians (MDs, nurses) agree to lower degree that shortages of medical personnel is a problem / a need.

The nurses – although they think that providing health care for aging population is a problem, they don't agree (to the same degree) that patient self-management and chronic disease management is a problem.

ICT solutions can support **health care needs**
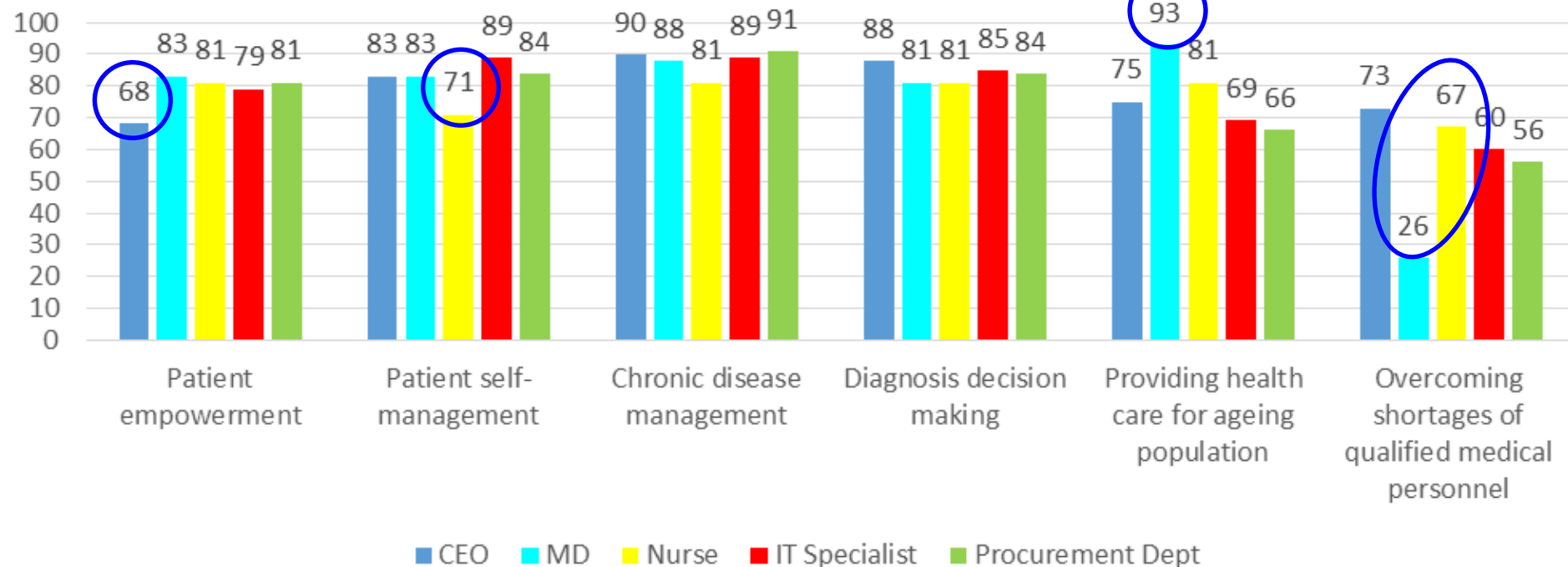
The nurses – again has the less faith in employing ICT solutions in areas, which are/should be of their interest.

MDs don't think that ICT can contribute to overcoming problems with shortages of staff (**26%!!!**), in the same time believing that in general ICT will support providing care for aging population.

Quantitative research results

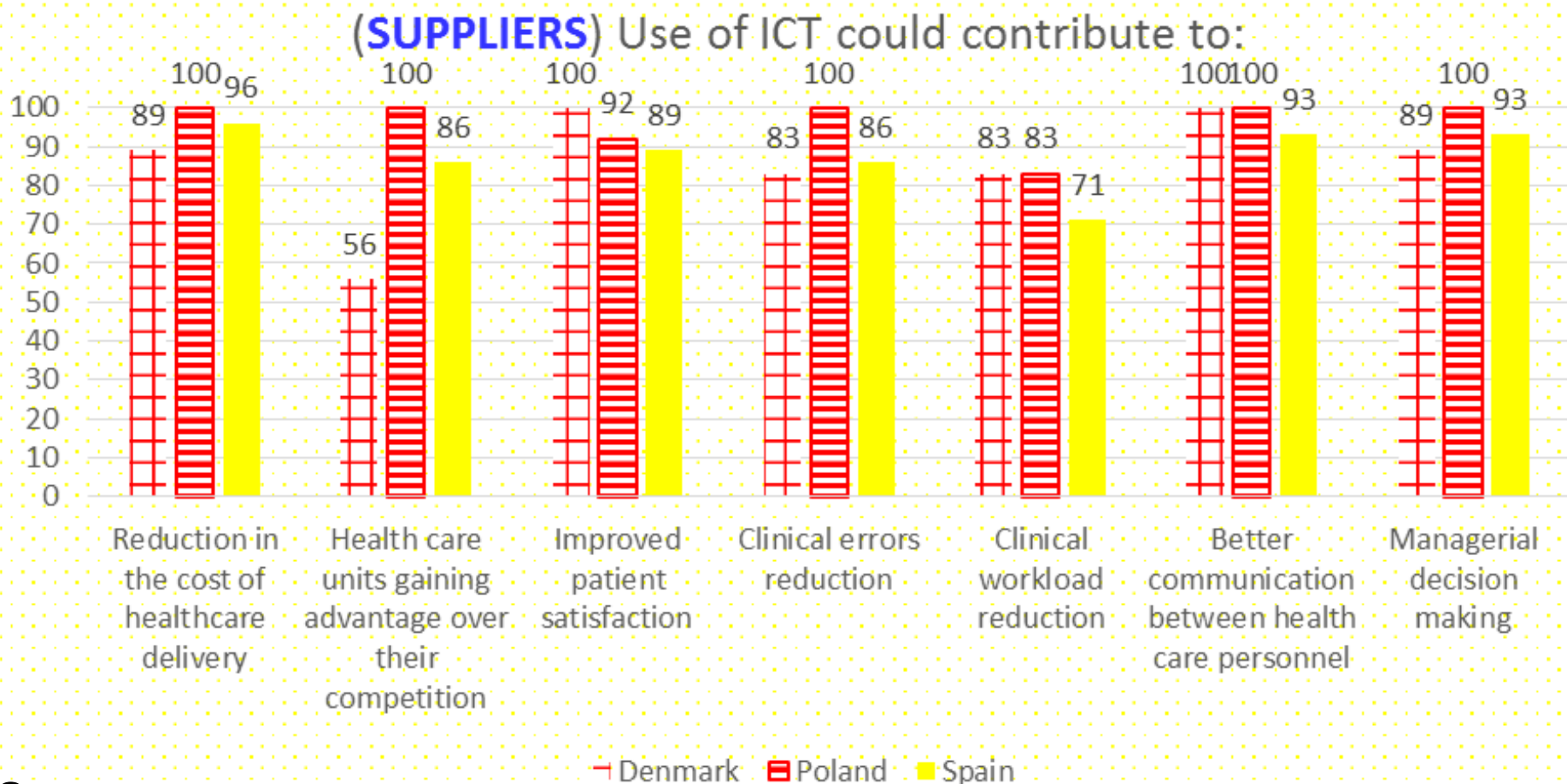## Use of ICT within health care should contribute to:
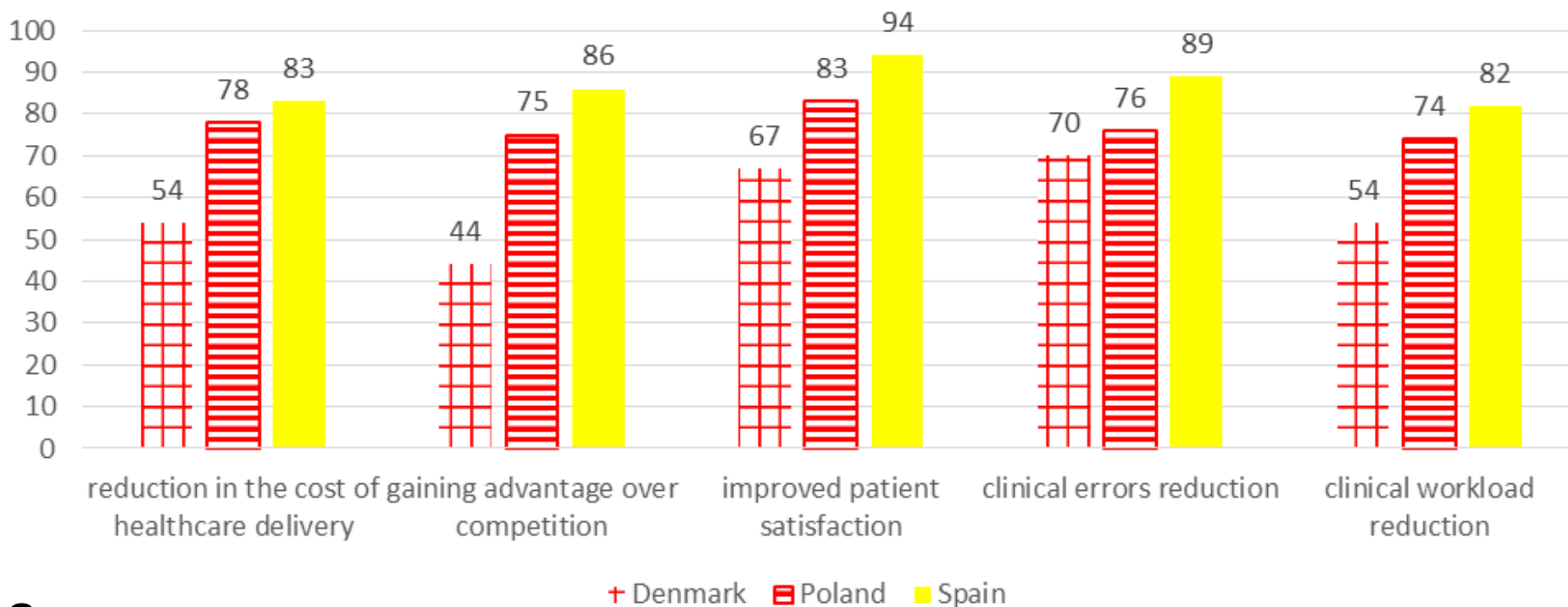
On average:

- **Denmark: 58%** • **Poland: 77%** • **Spain: 87%**

The Danes are the most sceptical, the Spanish – the most optimistic about what ICT can contribute to.
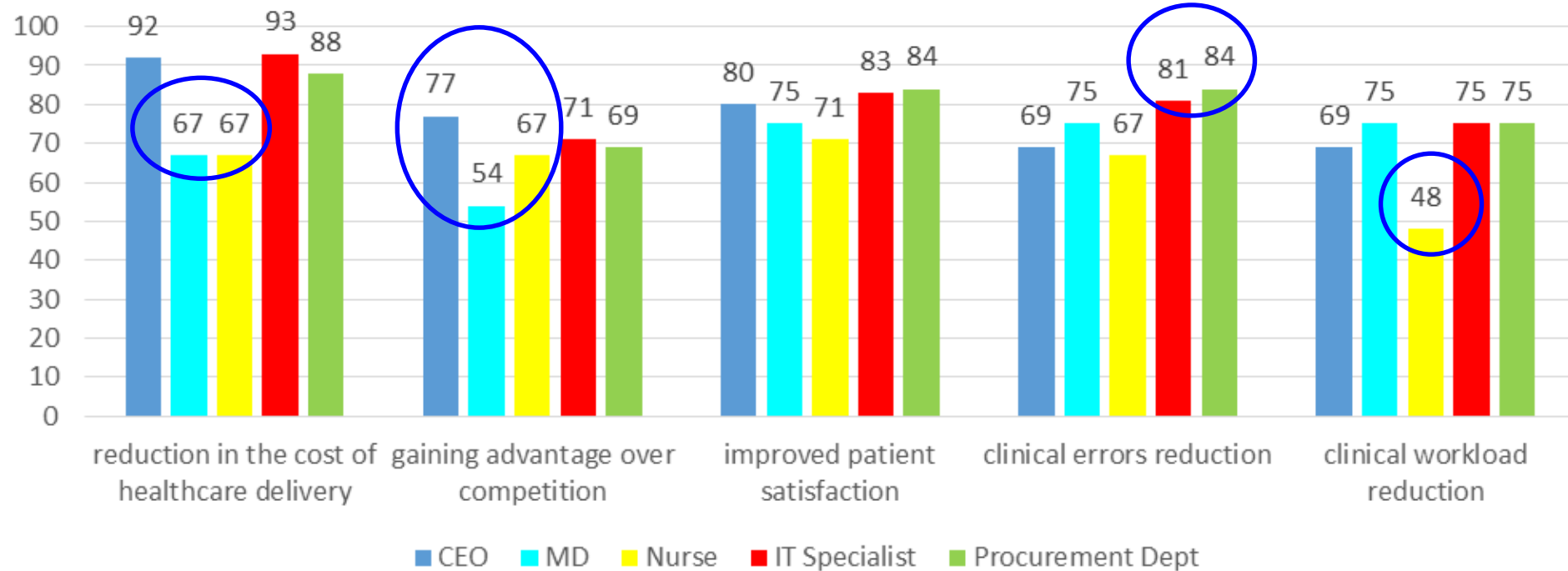(Which probably can be explained by differences in the healthcare systems in these countries.)

(**SUPPLIERS**) Use of ICT could contribute to:

On average:

- **Denmark: 86%**
- **Poland: 96%**
- **Spain: 88%**

The suppliers have stronger faith in ICT contribution to improving efficiency of health care than buyers. The Polish ones are especially optimistic.

Use of ICT within health care should contribute to:

Legend: CEO, MD, Nurse, IT Specialist, Procurement Dept

Categories: reduction in the cost of healthcare delivery; gaining advantage over competition; improved patient satisfaction; clinical errors reduction; clinical workload reduction

The clinicians have the least faith that ICT should reduce the cost of care delivery, while other groups believe in it. These groups (especially physicians don't think that ICT could give competitive advantage.

The IT/Procurers believe that ICT could contribute to clinical errors reduction.

The nurses don't think that ICT will reduce their workload (others have relatively high hopes.)

Quantitative research results

Barriers hindering use of ICT in health care
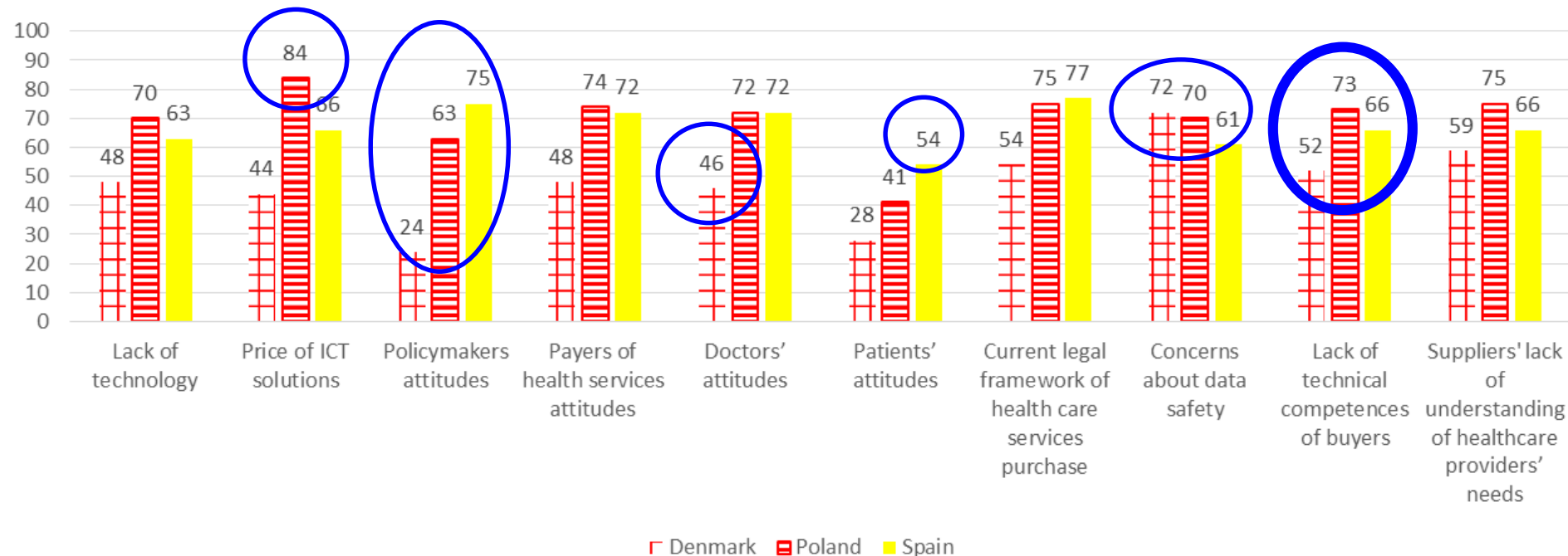
Barriers on average:
- **Denmark: 48%**
- **Poland: 70%**
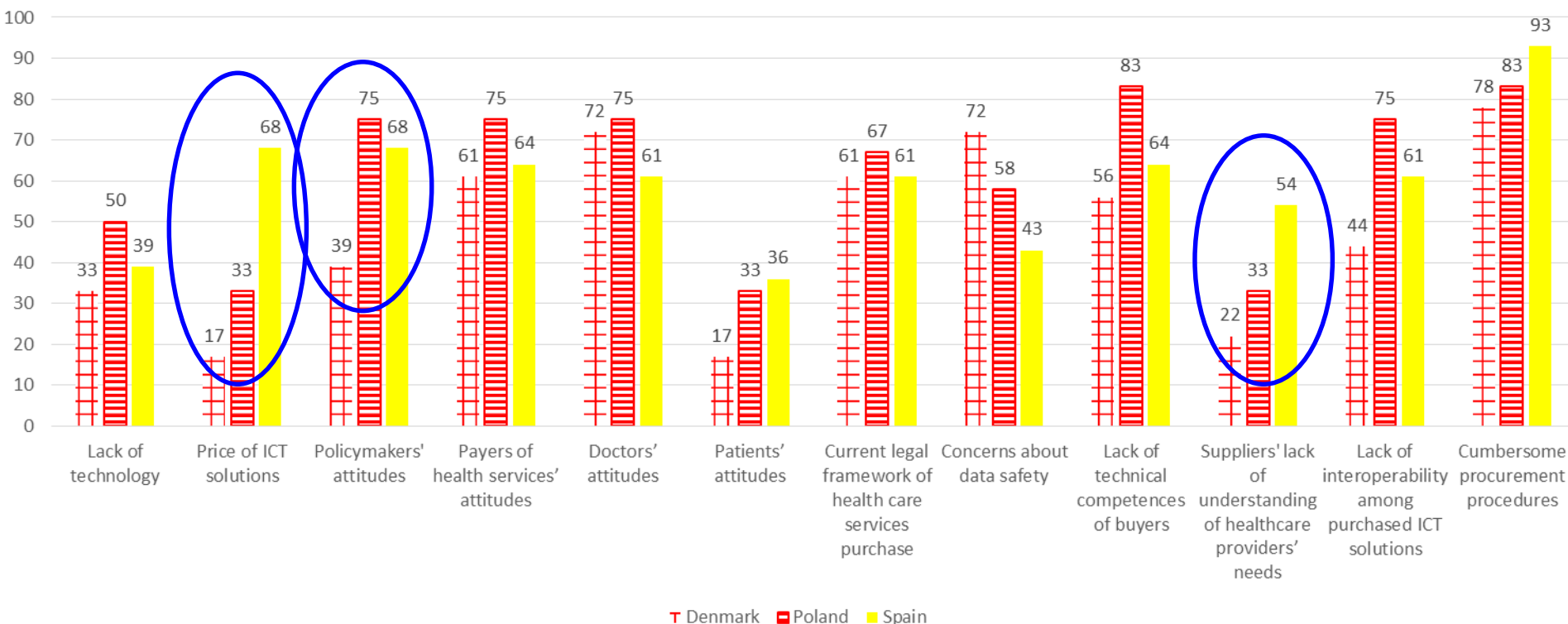- **Spain: 67%**

Top 3 barriers :
- **Legal framework: 69%**
- **Data safety: 68%**
- **Lack of understanding of needs: 67%**

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(**SUPPLIERS**) Following barriers are likely to hinder the use of ICT in health care:

Legend: ⊤ Denmark ▤ Poland ■ Spain

Barriers on average:

- **Denmark: 48%**
- **Poland: 62%**
- **Spain: 59%**

Top 4 barriers :

- **Cumbersome procurement procedures: 85% !!!**
- **Doctor's attitude: 69%**
- **Lack of technical competences of buyers: 68%**
- **Payers of health services' attitudes: 67%**

Resources (money) (qualitative research)

Hardly mentioned in Denmark

In Spain it was regarded as an fundamental challenge, but was also – by many stakeholders – perceived as an opportunity for development, and motivation for pursuing new cost-effective solutions
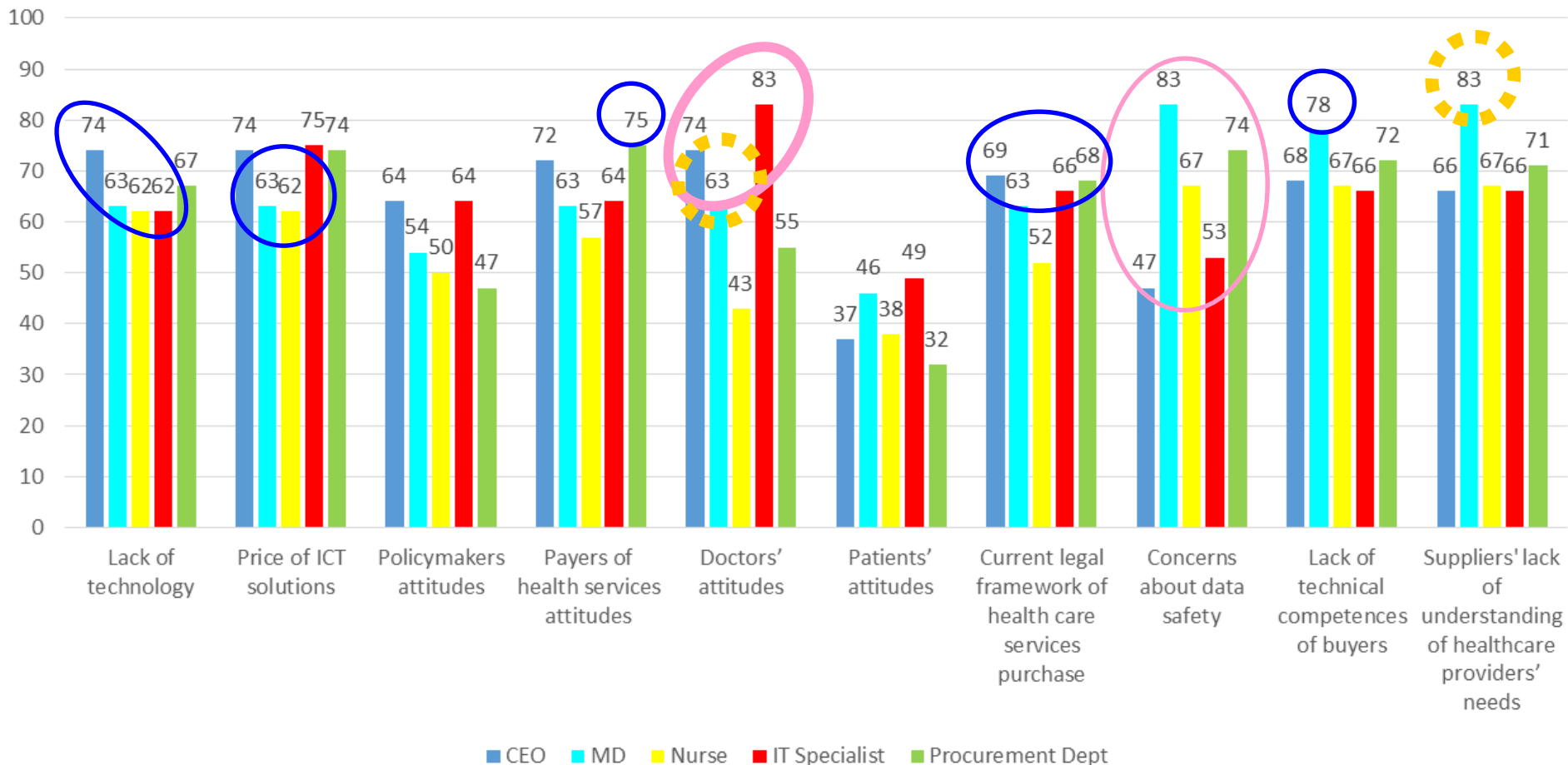
In Poland it was described only as a problem.
Lack of money was considered an argument against investing in e-health solutions and lack of e-health financing by public payer, as a barrier for development of the field
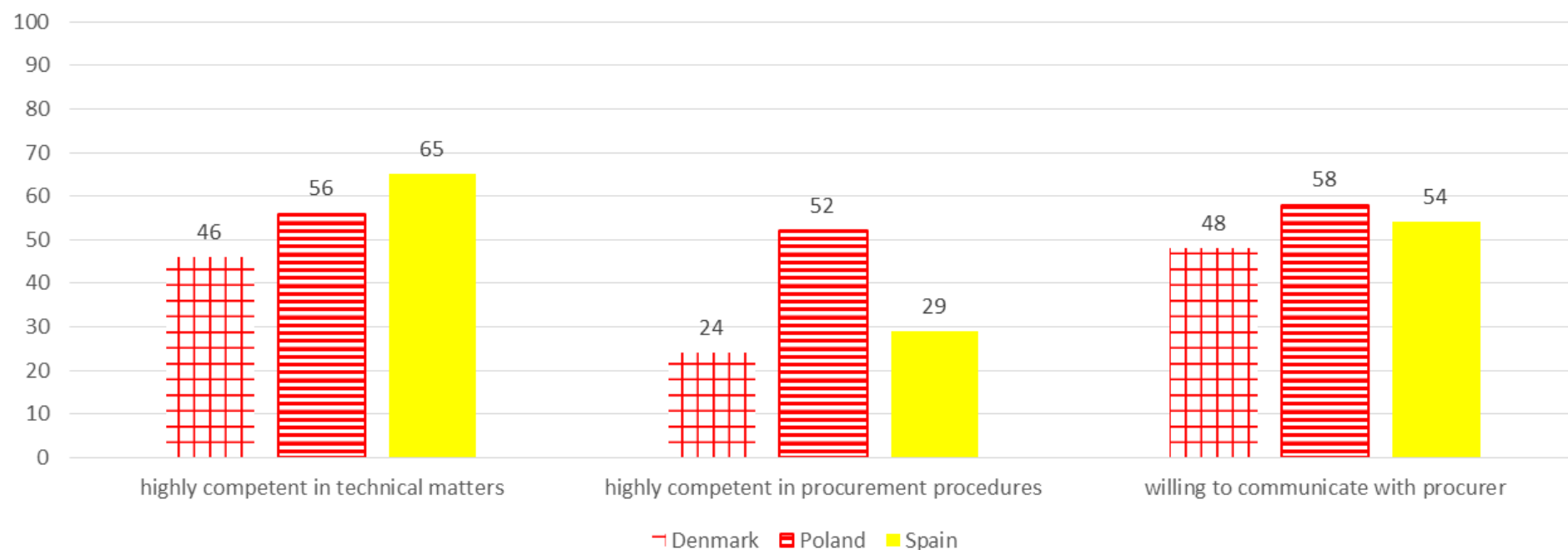
Quantitative research results

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Barriers hindering use of ICT in health care

Quantitative research results
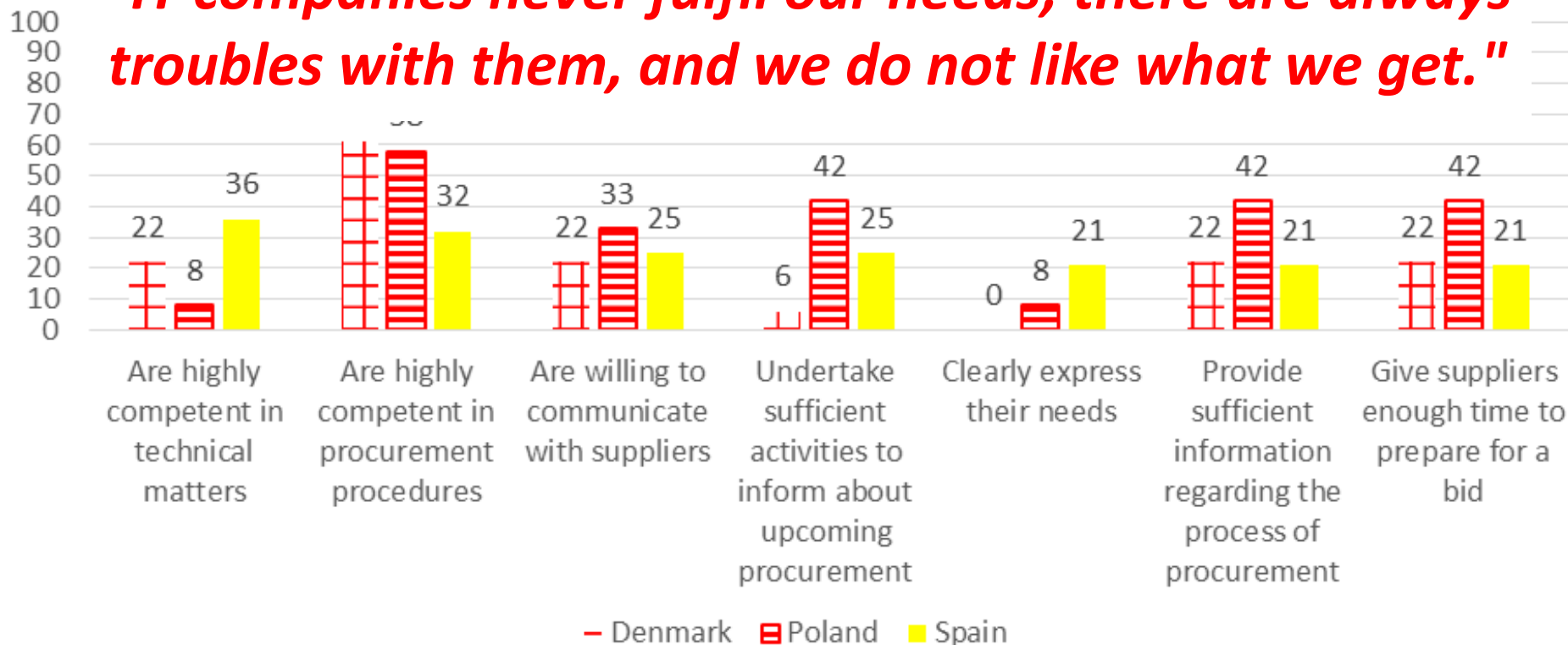
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Suppliers of ICT solutions for health care are:

These results are significantly different to the other ones.

Level of satisfaction from collaboration with suppliers is (relatively) low.

Danes seem to be the least satisfied, especially with suppliers' competences in public procurement. (Why is it so? – taking into account that the Danish healthcare system is and has been public, why don't suppliers know how to operate on that market?)

"IT companies never fulfil our needs; there are always troubles with them, and we do not like what we get."

	Are highly competent in technical matters	Are highly competent in procurement procedures	Are willing to communicate with suppliers	Undertake sufficient activities to inform about upcoming procurement	Clearly express their needs	Provide sufficient information regarding the process of procurement	Give suppliers enough time to prepare for a bid
Denmark	22	(cut off)	22	6	0	22	22
Poland	8	58	33	42	8	42	42
Spain	36	32	25	25	21	21	21

— Denmark ⊟ Poland ■ Spain

Overall assessment:

- **Denmark: 22%**
- **Poland: 33%**
- **Spain: 26%**

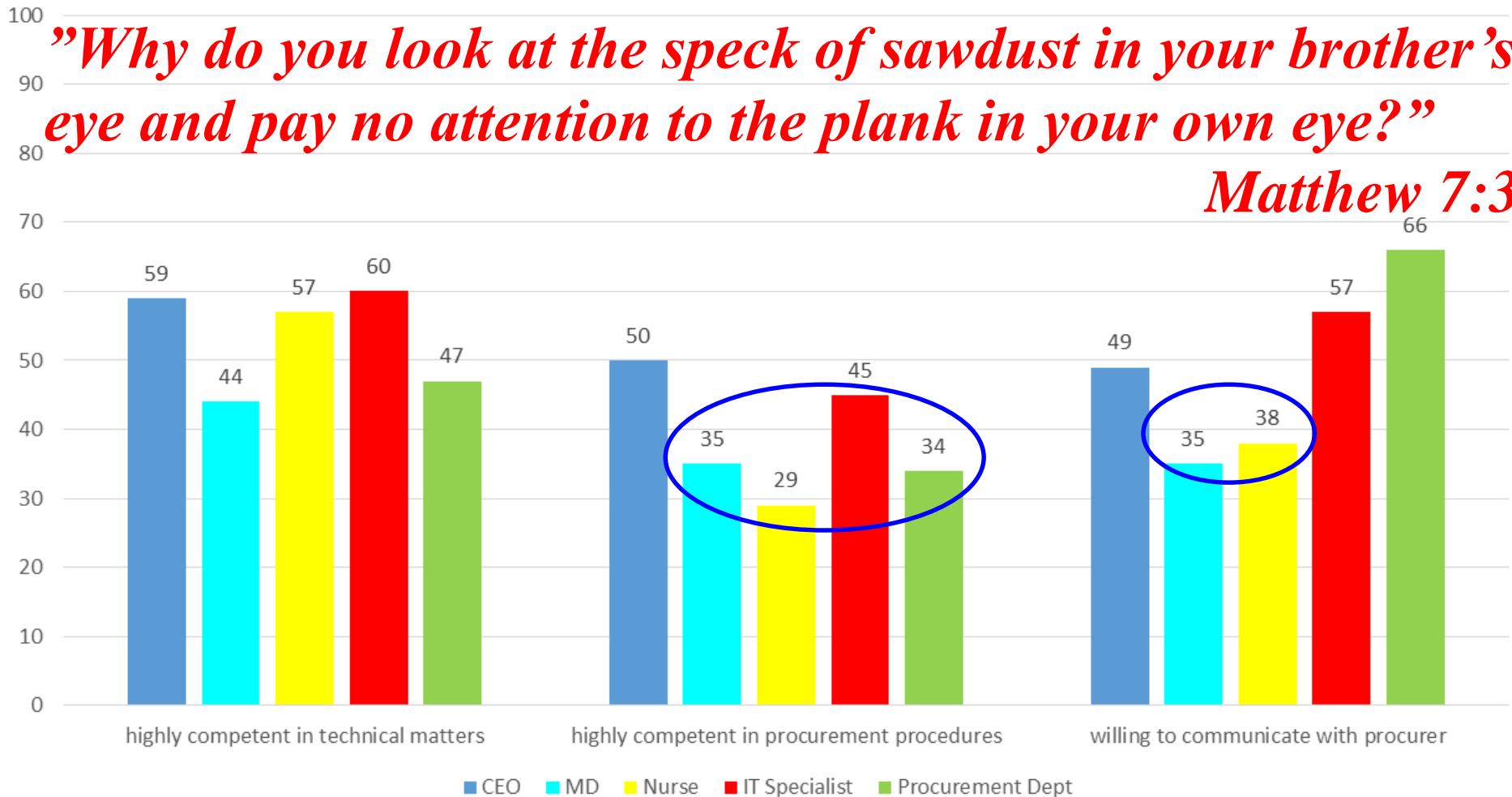**Procurers are the worst at:**

- **Clearly expressing their needs: 10% !!!**
- **Being highly competent in technical matters: 22%**
- **Undertaking sufficient activities to inform about upcoming procurement: 24%**

Suppliers of ICT solutions for health care are:

"Why do you look at the speck of sawdust in your brother's eye and pay no attention to the plank in your own eye?"
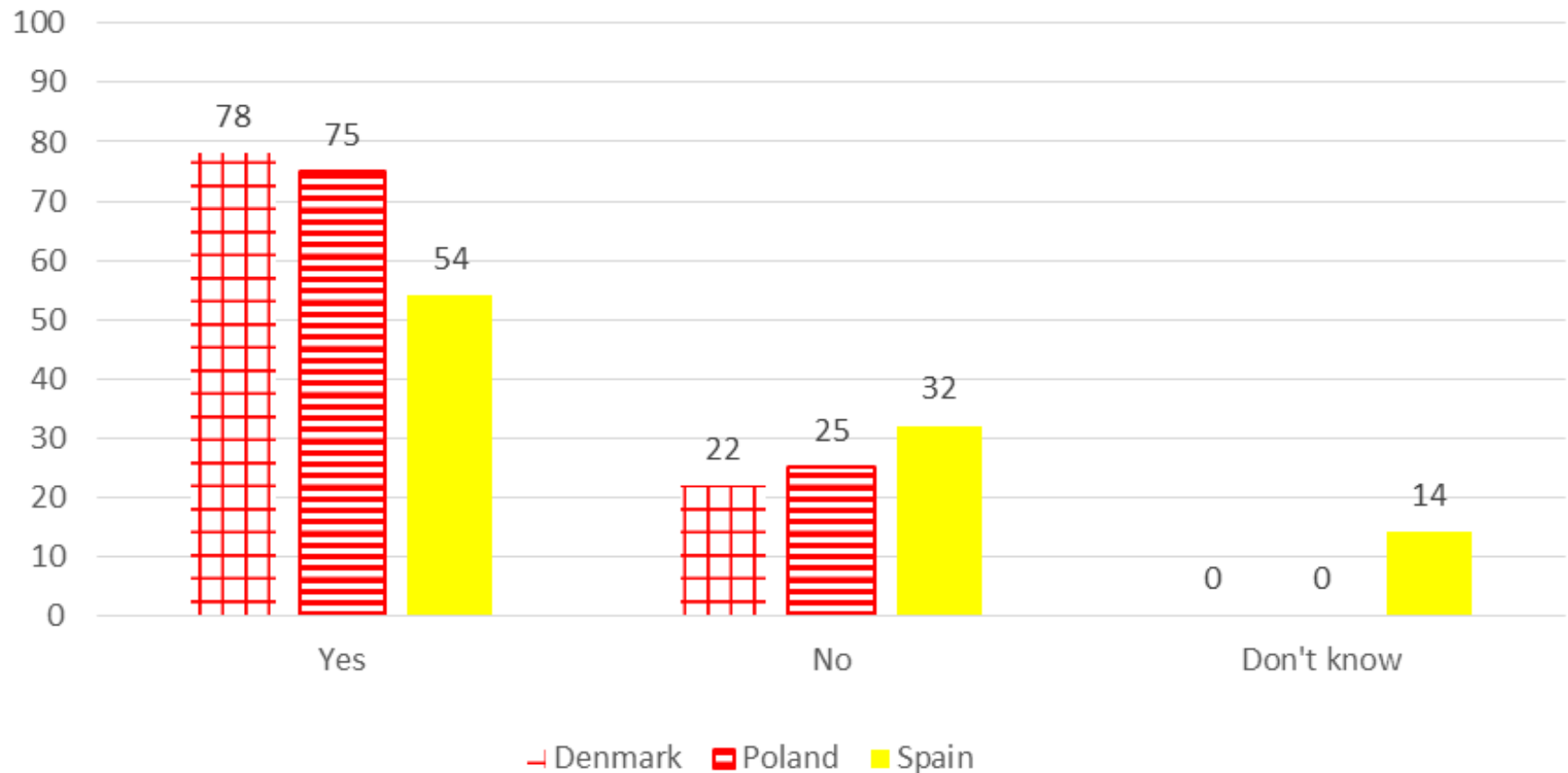
Matthew 7:3

highly competent in technical matters: CEO 59, MD 44, Nurse 57, IT Specialist 60, Procurement Dept 47

highly competent in procurement procedures: CEO 50, MD 35, Nurse 29, IT Specialist 45, Procurement Dept 34

willing to communicate with procurer: CEO 49, MD 35, Nurse 38, IT Specialist 57, Procurement Dept 66

■ CEO   ■ MD   ■ Nurse   ■ IT Specialist   ■ Procurement Dept

The clinicians have the lowest faith in ICT suppliers qualifications. This belief is supported by the procurers as far as procurement procedures are concerned.

Quantitative research results

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(**SUPPLIERS**) Level of participation in innovation procurement:

Denmark — Poland — Spain

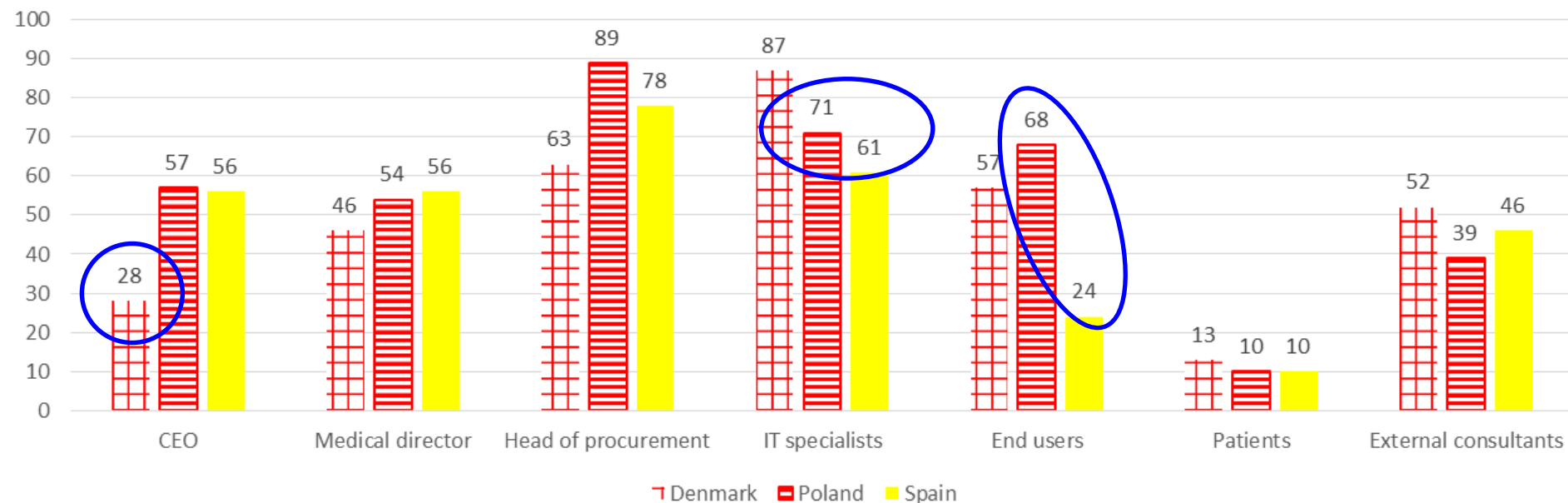|	Yes	No	Don't know
Denmark	78	22	0
Poland	75	25	0
Spain	54	32	14

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The following healthcare stakeholders are **involved in the process of developing procurement specification(s) / Terms of Reference**

The Danish CEO's probably have much more confidence and trust in their employees, so they don't get involved in purchasing process.

In surprisingly low percentage, Poles and especially the Spanish involve their IT specialists in developing specification for IT solutions (?).

The Spanish also don't involve final users of the solution in work on the specification… and later are surprised that end users complain about the solution? ;)

Final thoughts

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- Results shown in this presentation **need more in-depth analysis**. All comments are welcome (**mxkautsc@wp.pl**).

- **Most of the results are not surprising**, though the **differences** between countries and professional groups – **are**.

- There are differences in expectations concerning ICT use and beliefs what these solutions could bring.

- **There are tremendous differences between purchasers and suppliers of ICT solutions.**

- **Still many questions need to be answered (and maybe even asked).**

- **Surely, there is a need to build a bridge between suppliers and procurers.**

We know that in health care we lag at least 10 years behind virtually every other area in the implementation of IT solutions.

We know from a wide range of other services that information technology applications can radically revolutionise and improve the way we do things.

Toomas Hendrik Ilves,
the president of eHealth Task Force
(European Commission, 2012, p. 5)

Questions / comments

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