

How to ensure quality and patient safety in a healthcare system under economic constraints?

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Healthcare is transforming rapidly

- A series of technical innovations (day surgery is only one example) all leading to a drastic and rapid reduction of the average length of stay.
- A series of sociological changes (new professions such as interventionists, more female doctors, migration of surgery into physician offices, emergence of sophisticated medical homes, etc.) with a significant impact on the reorganisation of medical services and the need for reinforced co-ordination between primary and secondary care.
- A continuous push toward more public transparency and more supervision by the authorities via administrative and medical databases inducing a growing impact on the payment scheme of doctors and professionals.
- An incredible financial crisis, especially in Europe. All Western nations are reconsidering urgently how to better allocate the money for best results, considering that the part of expenditures and GDP that is allocated to healthcare will remain at best stable in the near future, although the demand will necessarily grow with the arrival of new techniques and the aging population.

Quality and safety doubly impacted by changes

- Investments in Quality and Safety in Healthcare may suffer from arbitrations and reallocations of resources and money and new priorities
- In the mean time, a need for greater Quality and safety may occurred because of the hard transition times putting healthcare at greater risks : rapid reorganization of services, hospital downsizing or even closing, social reluctance of workers to engage in new schemas, delicate transfer of charge to primary care, etc.

Quality and Safety in Healthcare have had contrasted successes in the past decade

- Global and continuous improvement at the nation level
 - Longer life, longer healthy life
 - Less complications, survival rate significantly extended in majors diseases (cancer, MI, AIDs, etc)
- But role of Q & S in these successes debatable (competition with roles of innovation, new organizations, and other social factors)
- Many, or even most Q&S interventions, have not proven efficiency especially for patient safety (*Ovretveit, 2005; Vincent , BMJ2008; Watcher Healthaff 2009; Leape, QSHC2009, Landrigan, NEJM2010; Shekelle, AnnMedInt 2011*)
- Medical spending is in most cases not associated with better health outcomes at a regional level and that high spending in hospitals is not associated with better process quality (*Chen, ArchMedInt2010; Romley, AnnMedInt2011, Rothberg, Healthaff2010*)

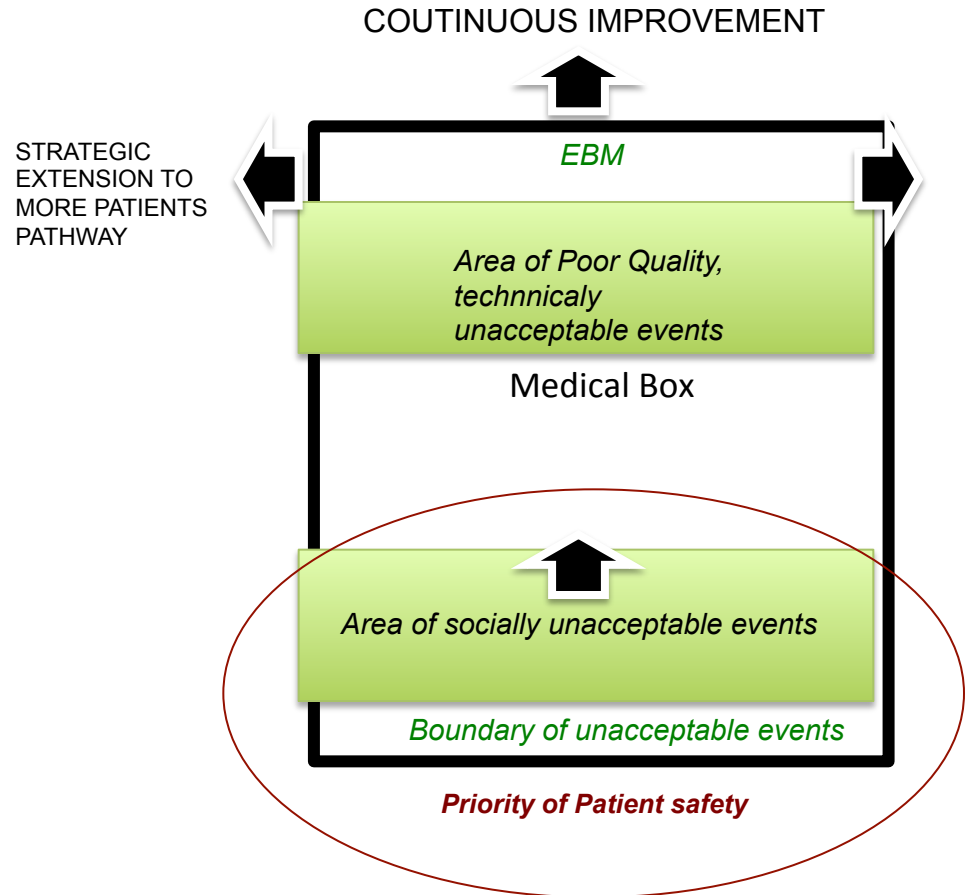
Confusions on patient safety perimeter

Patient safety= Surprises in the care

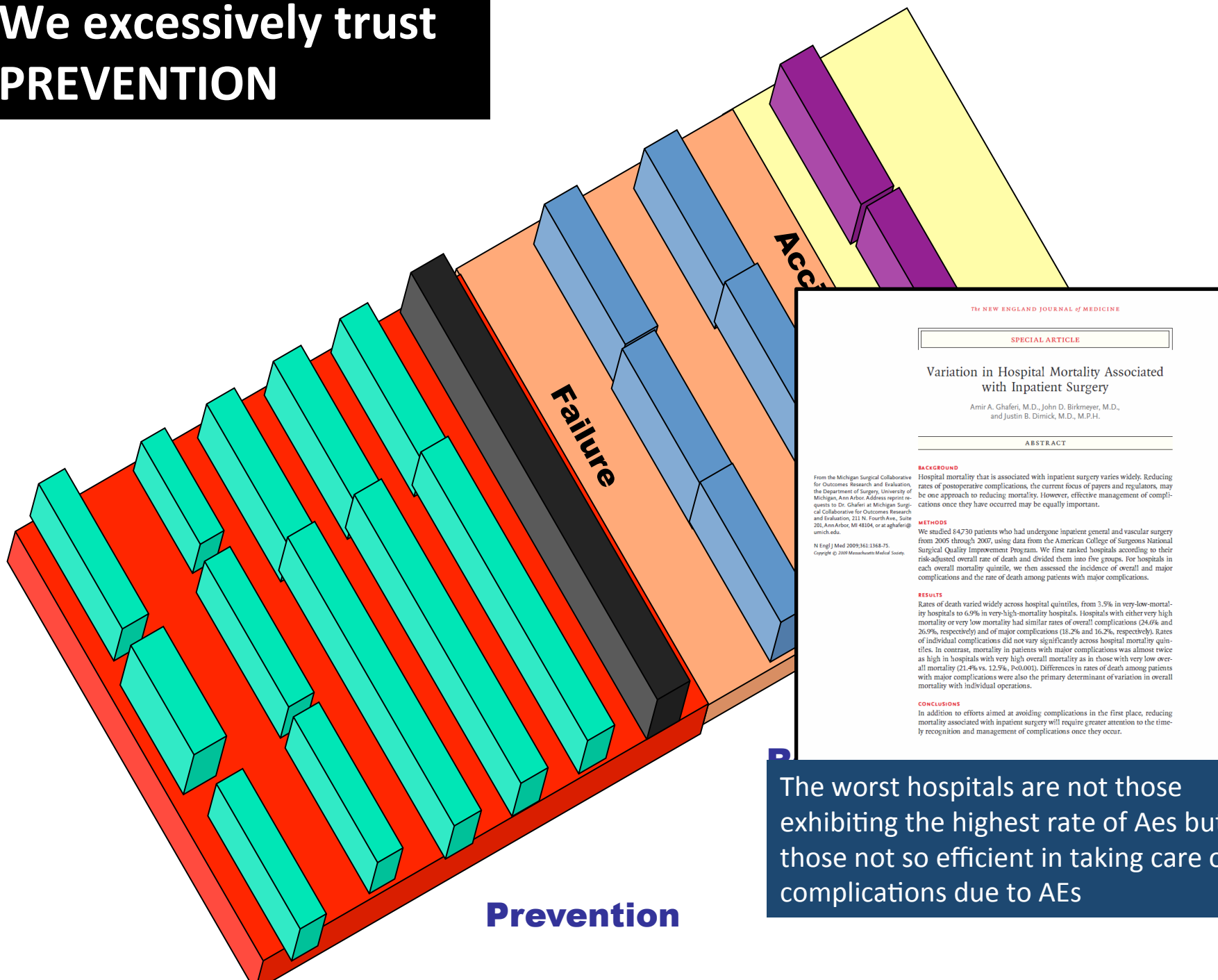
- **Medical complications as listed and known by scientific Colleges**

- **Unthinkable problems (by Colleges)**

- Wrong patient, wrong side, wrong doctor, fall in the operating room, etc.



We excessively trust PREVENTION



THE NEW ENGLAND JOURNAL OF MEDICINE

SPECIAL ARTICLE

Variation in Hospital Mortality Associated with Inpatient Surgery

Amir A. Ghaferi, M.D., John D. Birkmeyer, M.D., and Justin B. Dimick, M.D., M.P.H.

ABSTRACT

BACKGROUND
Hospital mortality that is associated with inpatient surgery varies widely. Reducing rates of postoperative complications, the current focus of payers and regulators, may be one approach to reducing mortality. However, effective management of complications once they have occurred may be equally important.

METHODS
We studied 64730 patients who had undergone inpatient general and vascular surgery from 2005 through 2007, using data from the American College of Surgeons National Surgical Quality Improvement Program. We first ranked hospitals according to their risk-adjusted overall rate of death and divided them into five groups. For hospitals in each overall mortality quintile, we then assessed the incidence of overall and major complications and the rate of death among patients with major complications.

RESULTS
Rates of death varied widely across hospital quintiles, from 3.5% in very-low-mortality hospitals to 6.9% in very-high-mortality hospitals. Hospitals with either very high mortality or very low mortality had similar rates of overall complications (24.6% and 26.9%, respectively) and of major complications (18.2% and 16.2%, respectively). Rates of individual complications did not vary significantly across hospital mortality quintiles. In contrast, mortality in patients with major complications was almost twice as high in hospitals with very high overall mortality as in those with very low overall mortality (21.4% vs. 12.5%, $P<0.001$). Differences in rates of death among patients with major complications were also the primary determinant of variation in overall mortality with individual operations.

CONCLUSIONS
In addition to efforts aimed at avoiding complications in the first place, reducing mortality associated with inpatient surgery will require greater attention to the timely recognition and management of complications once they occur.

The worst hospitals are not those exhibiting the highest rate of Aes but those not so efficient in taking care of complications due to AEs

Prevention

The 'Tuesday' paradigm

- **Design Principle: Staff's highest bid (*best effort*) in thinking safety**
 - Design ideal policy based of best conditions, full staff, best competences ('the Tuesday morning when all staff is present').
 - Process oriented interventions, nice to do
- ... Not working at nights, week-ends, holidays periods...

We tend to write too many guidelines

- The move to evidence based medicine has led to a proliferation of guidelines.
- Guideline development is time consuming and expensive (more than £400 000 for a NICE guideline).
- The investments may be worth while if guidelines are clinically relevant and have a wide impact on health care. However, the cost effectiveness of guideline development compared with other methods for improving patient care is unknown.
- Failure to follow-up test results is a critical safety issue.

The 'power of innovation'

Of 100 systematic reviews
Median time to a change that
would effect clinical decisions
was 5.5 years.

ARTICLE

Annals of Internal Medicine

How Quickly Do Systematic Reviews Go Out of Date? A Survival Analysis

Kaveh G. Shojania, MD; Margaret Sampson, MLIS; Mohammed T. Ansari, MBBS, MMedSc, MPhil; Jun Ji, MD, MHA; Steve Doucette, MSc; and David Moher, PhD

Background: Systematic reviews are often advocated as the best source of evidence to guide clinical decisions and health care policy, yet we know little about the extent to which they require updating.

Objective: To estimate the average time to changes in evidence that are sufficiently important to warrant updating systematic reviews.

Design: Survival analysis of 100 quantitative systematic reviews.

Sample: Systematic reviews published from 1995 to 2005 and indexed in *ACP Journal Club*. Eligible reviews evaluated a specific drug or class of drug, device, or procedure and included only randomized or quasi-randomized, controlled trials.

Measurements: Quantitative signals for updating were changes in statistical significance or relative changes in effect magnitude of at least 50% involving 1 of the primary outcomes of the original systematic review or any mortality outcome. Qualitative signals included substantial differences in characterizations of effectiveness, new information about harm, and caveats about the previously reported findings that would affect clinical decision making.

Results: The cohort of 100 systematic reviews included a median of 13 studies and 2663 participants per review. A qualitative or quantitative signal for updating occurred for 57% of reviews (95% CI, 47% to 67%). Median duration of survival free of a signal for updating was 5.5 years (CI, 4.6 to 7.6 years). However, a signal occurred within 2 years for 23% of reviews and within 1 year for 15%. In 7%, a signal had already occurred at the time of publication. Only 4% of reviews had a signal within 1 year of the end of the reported search period; 11% had a signal within 2 years of the search. Shorter survival was associated with cardiovascular topics (hazard ratio, 2.70 [CI, 1.36 to 5.34]) and heterogeneity in the original review (hazard ratio, 2.15 [CI, 1.12 to 4.11]).

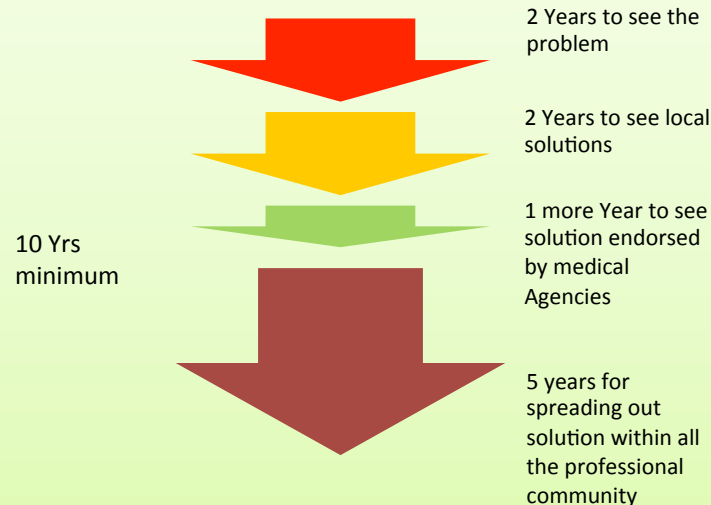
Limitation: Judgments of the need for updating were made without involving content experts.

Conclusion: In a cohort of high-quality systematic reviews directly relevant to clinical practice, signals for updating occurred frequently and within a relatively short time.

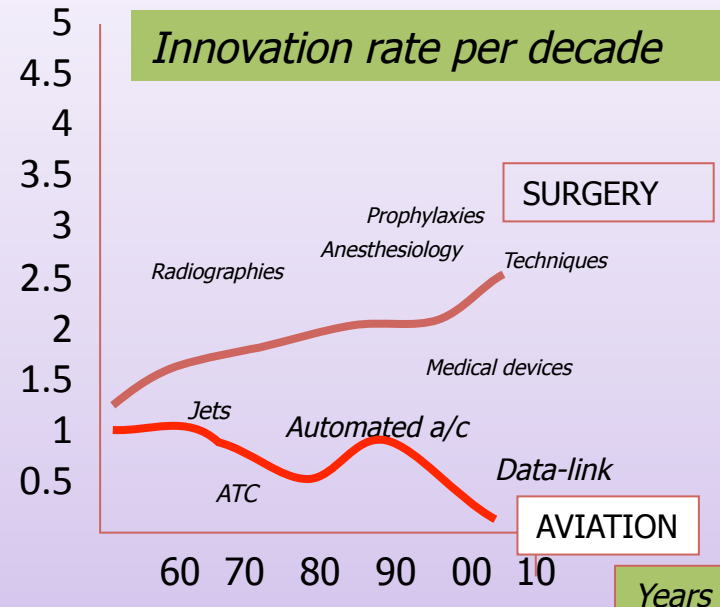
Ann Intern Med 2007;147:224-233.
For author affiliations, see end of text.

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Average cycle of Quality interventions in complex systems

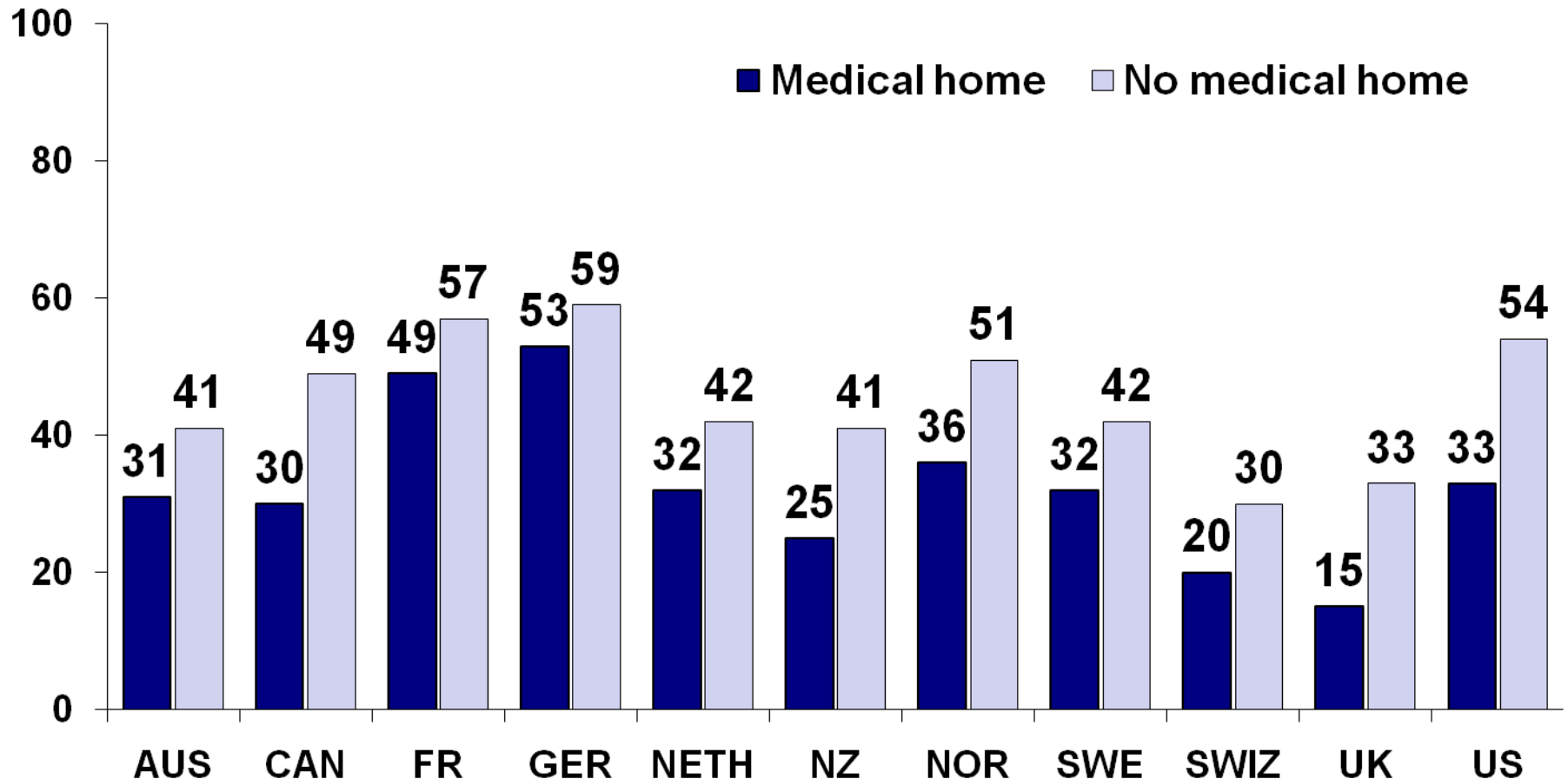


Innovation rate per decade



Experienced Coordination Gaps in Past Two Years, by Medical Home

Percent*

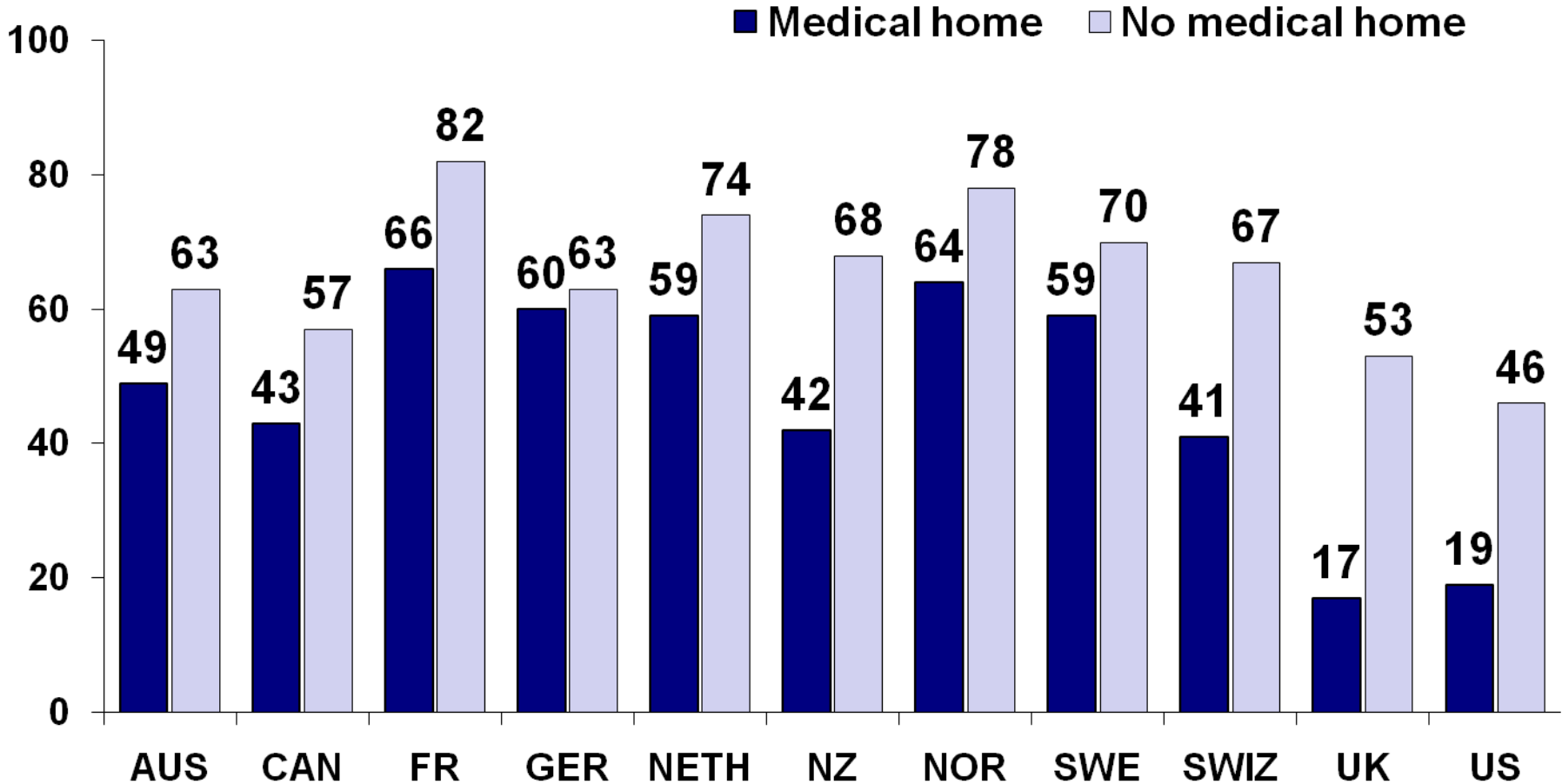


* Test results/records not available at time of appointment, doctors ordered test that had already been done, providers failed to share important information with each other, specialist did not have information about medical history, and/or regular doctor not informed about specialist care.

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Hospital or Surgery Discharge Gap in Past Two Years, by Medical Home

Percent*



* Last time hospitalized or had surgery, did NOT: 1) receive instructions about symptoms and when to seek further care; 2) know who to contact for questions about condition or treatment; 3) receive written plan for care after discharge; 4) have arrangements made for follow-up visits; and/or 5) receive very clear instructions about what medicines you should be taking.

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Patient Engagement in Care Management for Chronic Condition

Percent reported professional in past year has:	AUS	CAN	FR	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US
Discussed your main goals/priorities	63	67	42	59	67	62	51	36	81	78	76
Helped make treatment plan you could carry out in daily life	61	63	53	49	52	58	41	40	74	80	71
Given clear instructions on symptoms and when to seek care	66	66	56	64	64	63	44	49	84	80	75
<i>Yes to all three</i>	48	49	30	41	42	45	23	22	67	69	58

Base: Has chronic condition.

Source: 2011 Commonwealth Fund International Health Policy Survey of Sicker Adults in Eleven Countries.

Why interventions in Q&S so debatable?

Summary

- Two many additive actions, Little follow up and measurement for each
- Process driven more often than outcome driven
- Betting on tools imported from safer environment without consideration for the context: Checklist is a good example
- Poor Consistency with theoretical frameworks, especially for Human science areas
- Last but not least, slowness of the process, out of the tempo of the pace of field changes and demands

What have we learnt from previous experiences ?

To avoid	To promote
Administrative indicators: no commitment of concerned actors	Commitment of health professionals and patient environment actors
Consequences of single indicator : unexpected effects (P4P and gaming...)	Bundles indicators & context analysis
Process: no clinical outcome relationships	Clinical outcomes (or process with evidence of clinical outcome relevance)
Segment of care, structures (HCO) assessed separately	Pathway/care cycle, multidisciplinary approach
Safety & industrial approach of Q	Combining Safety Efficacy and Access

Three key changes expected for Q&S in the future

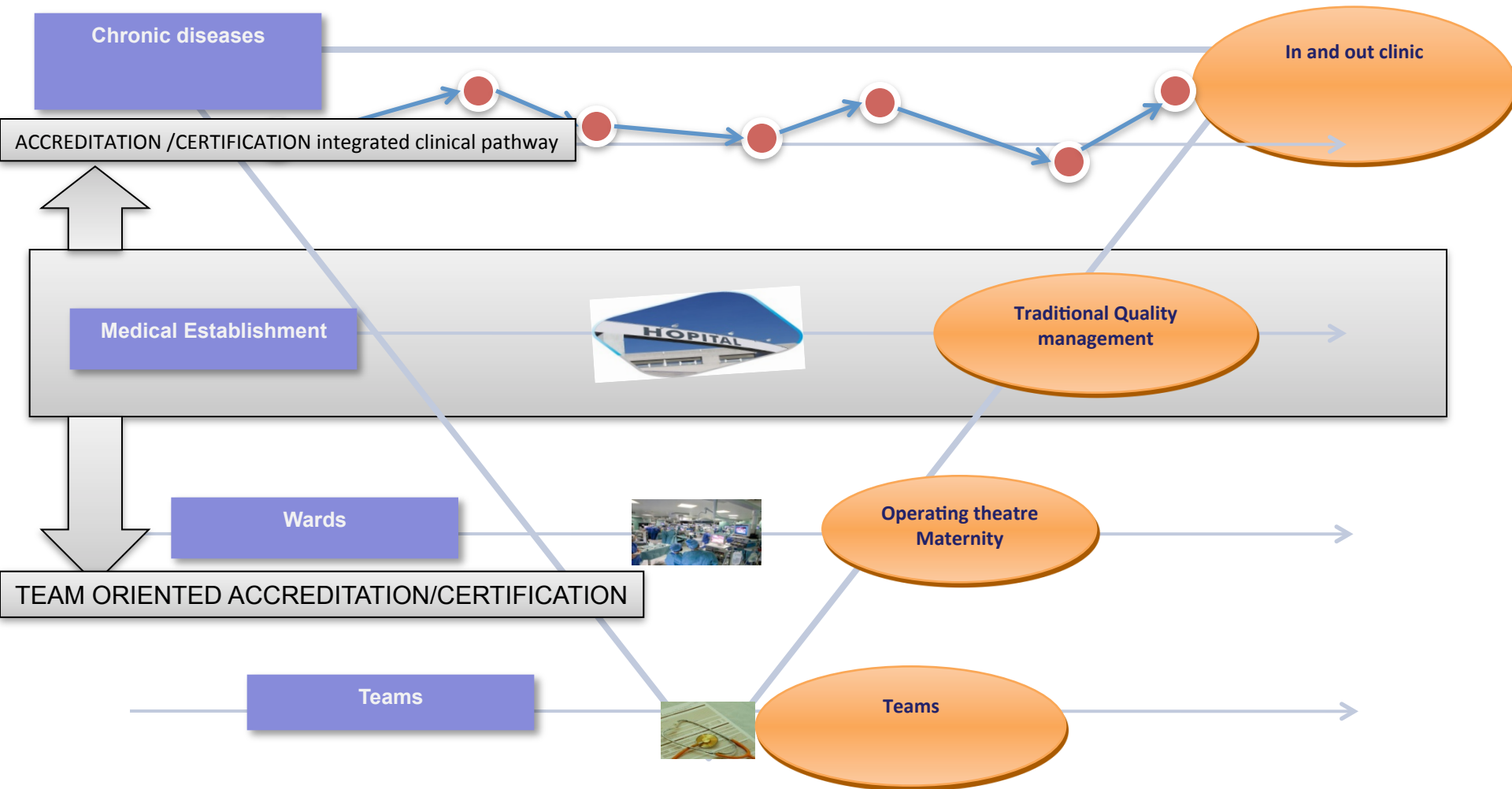
- Shifting from a local perspective, consultation-driven, hospital-centred vision to a model of Quality & Safety addressing the patient journey through the entire system,
- Shifting from a culture of autonomy to a team culture at all stages of the system,
- Shifting from process-driven results to outcome-driven results, including a fair cost-benefit analysis of Quality & Safety interventions, possibly abandoning some of the (numerous) interventions that have not proven efficient.

The crisis may channel and accelerate Quality & Safety professionals to transition towards these three objectives, giving opportunity to clean Quality & Safety actions that have proven to be little effective, revisiting the certification process, revising professional standards of persons dealing with Quality & Safety in healthcare, in sum, making a significant evolution for the benefit of the patients.

Revisiting certification

- Adopting a more clinical-centered approach
 - Team oriented process
 - Outcome driven
- Priority on Patient clinical pathway and interface controls (admission, discharge)
- Significant cleaning of Q&S protocols that no longer make sense for shorter length of hospitalization
- Maintenance of classic knowledge on Q&S via self surveillance tools : e.g. patients Tracer methodology
- Evolution of priorities: expansion of certification to home care support and primary care
- Surveillance of the system performance via data base, feedback on end users and professionnals
- Should save money and not be cost additive

New targets



New priorities

Developing a consistent Quality approach at home

- Development of home care Q & S
- Revision of Quality values
 - Greater consideration for the economic values of medicine
 - Reduction of defensive medicine
- Revision of the payment scheme
 - Payment on the basis of clinical pathway

Home care : a new domain for Quality and Safety

- Patients continue to enter home health care (HHC) “sicker and quicker,” often with complex health problems that require extensive intervention. Research on patient safety has focused on institutional settings.
- Home care had a special meaning for the clients and their families.
- By virtue of the unique characteristics of individuals and their homes, there cannot be one standard of home care safety for all.
- The status of the home care client, like that of the hospital patient, can change rapidly, and the accompanying resources needed to manage must be sensitive to and focused on the client, family and caregiver.
- These resources must be flexible, responsive and available as needed to support home care recipients in order to effectively manage the client at home, maintain and promote the client’s health and mitigate the risk for everyone involved.
- New organization and new Quality scheme required

Need for a considerable effort for Getting Safer home care

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Parts of this study have been reported previously [Axelsson J, Elmståhl S. Unqualified home care aides put the patient at risk: Better knowledge concerning drug administration must be required (in Swedish with English summary). *Läkarsången* 2002; **99**:1178-1183].

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- **Stratified sample of personnel within the social services in nine of Malmö's (Sweden) 10 administrative districts,**
- **Questionnaire answered individually.**
- **Employees (341) of whom 313 were HCAs and 28 were supervisors, at a total of 36 workplaces.**
- **In an open-ended question, a case was described where a patient shows typical symptoms of hypoglycaemia. When asked how to act, 81% of the HCAs say they would contact a nurse or a doctor, or at least give the patient some form of carbohydrates. However, 6% say they would give the patient insulin, which could easily be fatal.**

Going forward

- Registries based on “real time data”
- Communication of high risk score to all care providers
- Coordination b/w inpatient to outpatient (care teams, public health, social services, home health)
- Web based plan of care for patients based on real time data, interactive, dynamic and accessible to all
- Shared decision making b/w patient and providers for chronic conditions, wellness, social needs and end of life care. Awareness of “goals” for every provider at every encounter
- Population management systems for continuity of care, chronic conditions,
- Reporting and analytic tools to monitor progress and identify opportunities for improvement

Conclusion

Preparing for the future

- Developing more inter professionalism and connectivity
 - New Doctor-Nurses-Social workers cooperation schemes
- Developing new payment scheme
- Embarking the patient in the control of Quality and Safety in healthcare
- Managing hard transition time, accompanying changes must become a priority

- We don't need more money
- We need to reallocate the money on new priorities
- We can use the financial crisis to accelerate the reallocation