HAI NATIONAL TARGETS AND PENALTIES: CON (KEEP IT LOCAL!)

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Duke Center for Antimicrobial Stewardship and Infection Prevention

Disclosures

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Royalties – UpToDate

Rationale

1. No evidence that improves quality of care or outcomes
2. Undesirable consequences
   - Causes additional burden on infection prevention staff
   - Unvalidated data or worse (CHEATING!)
3. No risk adjustment
   - Methods matter
4. Not used by consumers (patients)
5. May actually cause harm

No Evidence – Show Me the Data!

There have never been published reports suggesting that national reporting of rates of HAI leads to improved patient outcomes

HICPAC performed a systematic review of 450 published reports on public reporting and use of national standards and concluded:

- "published studies do not provide strong support for the effectiveness of public reporting of HAI as a means to improve HAI prevention and control practices or to prevent the occurrence of HAI."

McKibbon AJIC 2006;34:142-9

Undesirable Consequences

Already limited resources will be shifted from prevention of infection to reporting of infection

- Already wear too many hats
- All efforts focus on the reportable infections

Dishonesty and cheating will occur as physicians and hospitals try to "game the system"

- The most accurate, complete, and honest physicians and hospitals will suffer the most

Distorted Data

Campbell's law: *The more any quantitative social indicator is used for social decision-making, the more subject it will be to corruption pressures and the more apt it will be to distort and corrupt the social processes it is intended to monitor.*

Donald Campbell, 1979

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Donald Campbell, 1979

Casablance Redux - CLABSI

Many hospitals do not accurately report their true rates of CLABSI, using current NHSN definitions.

- Unwillingness of local staff to accept these definitions as accurate or fair
- Unconscious desire to hedge or reduce their rate of CLABSI to avoid criticism and negative consequences from their local supervisors in the press, clinicians, or the general public who review their publicly reported data

Simply put: no culture equals no infection, using standard definitions of CLABSI

Sexton et al. ICHE 2012

Surveillance Data = Unvalidated Data

Statewide review of CLABSI surveillance data in Connecticut

Trained reviewers from DPH acted as “gold standard”

- Reviewed positive blood cultures from 30 hospitals

Results: >50% underreporting of CLABSI

	CT hospital reports to the National Healthcare Safety Network		
CT DPH reviewers	**CLABSI**	**No-CLASBI**	**Total**
CLABSI	23	25	48
No-CLABSI	4	424	428
Total	27	449	476

Backman et al. AJIC 2010;38:832-8.

Validity Varies by Hospital Type

Similar study in Oregon

Largely same results, but variation across hospitals

Change in CLABSI incidence after validation	No. (%)[a] of hospitals
Decreased by 0.70	1 (2)
No change	33 (75)[b]
Increased by 0.01–0.50	2 (5)
Increased by 0.51–1.00	2 (5)
Increased by more than 1.00	6 (14)[c]
Total	44 (100)

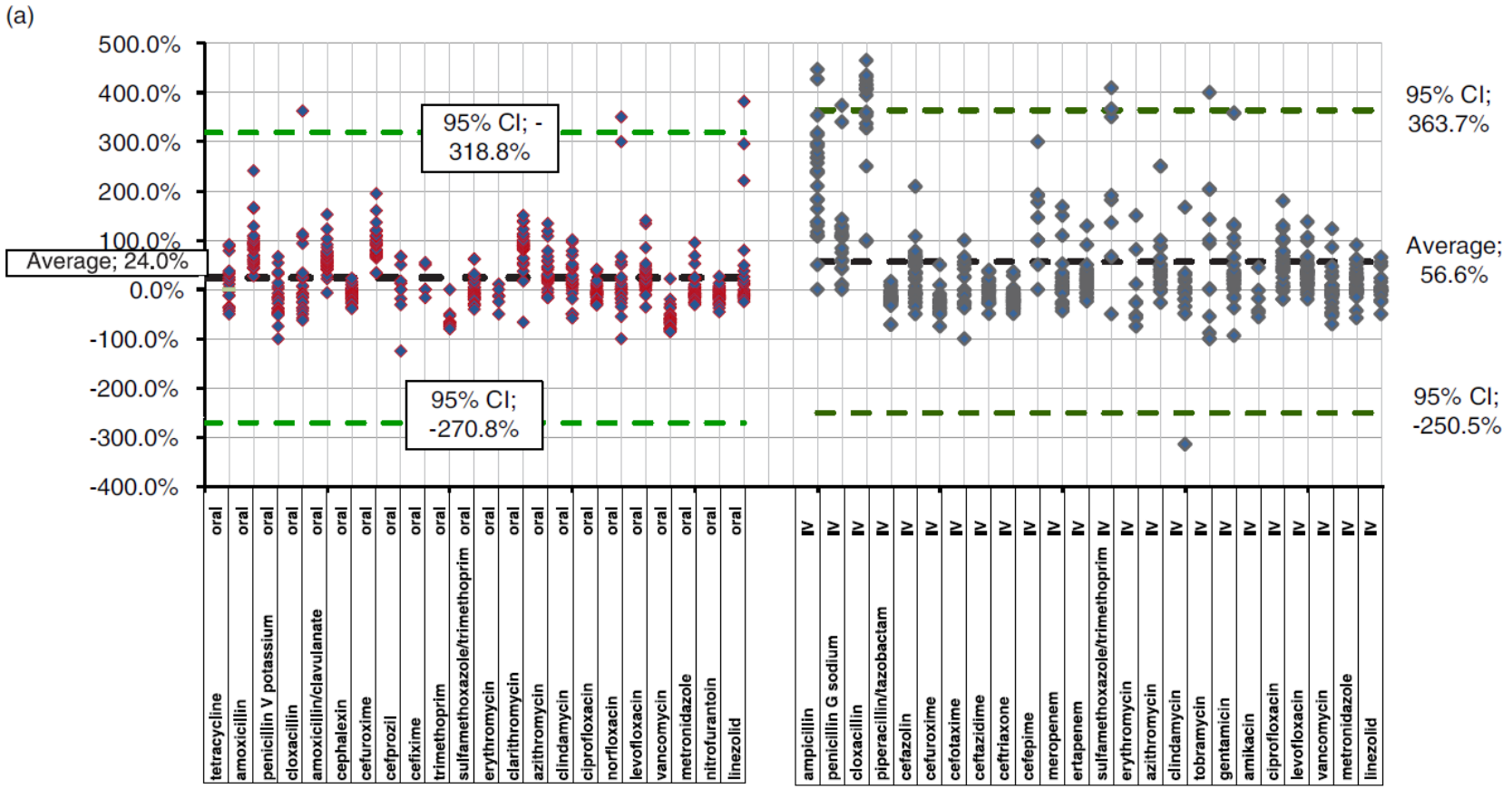
Oh et al. ICHE 2012;33:439.

Administrative vs. eMAR

Average differences:

24% for PO abx

57% for IV abx



Dalton et al. ICHE 2015;36(6):688-94.

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Methods Matter – No Risk Adjustment

A facility's site-specific infection rates are subject to a wide variety of factors that are unique to a specific institution, such as:

- Patient population:
  - Age distribution of the population (pediatrics, adults, elderly),
  - Underlying medical conditions (diabetes, HIV-infection, cancer, trauma or burns)
  - Presence of community differences for poor or immigrant populations
- The types and complexity of treatments and procedures performed by a healthcare institution.
  - Immune-suppressed patients or a
  - Hospital that performs transplant surgeries

Currently, no existing risk adjustment system accounts for all of these factors

Risk Adjustment

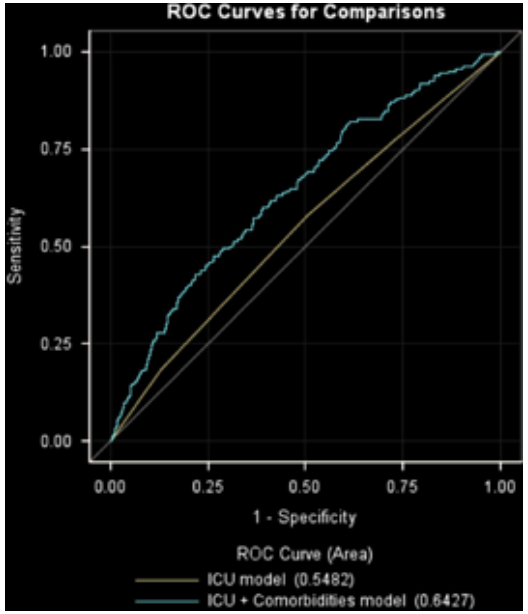
Currently no adjustment for patient-level co-morbidities

Recent study of SSI data from 28 hospitals

- Developed model that added patient data using ICD9 codes
- When comparing hospital rankings by crude complex SSI rate to risk-adjusted ranks
  - 24 of 28 (86%) hospitals changed ranks
    - 16 (57%) changed by ≥2 ranks
    - 4 (14%) changed by >10 ranks

ICU CLABSI data from 22 hospitals

- 10 hospitals (45%) changed rank



Jackson S et al. Clin Infect Dis 2017; Jackson S et al. ICHE 2017.

Methods Matter - Example

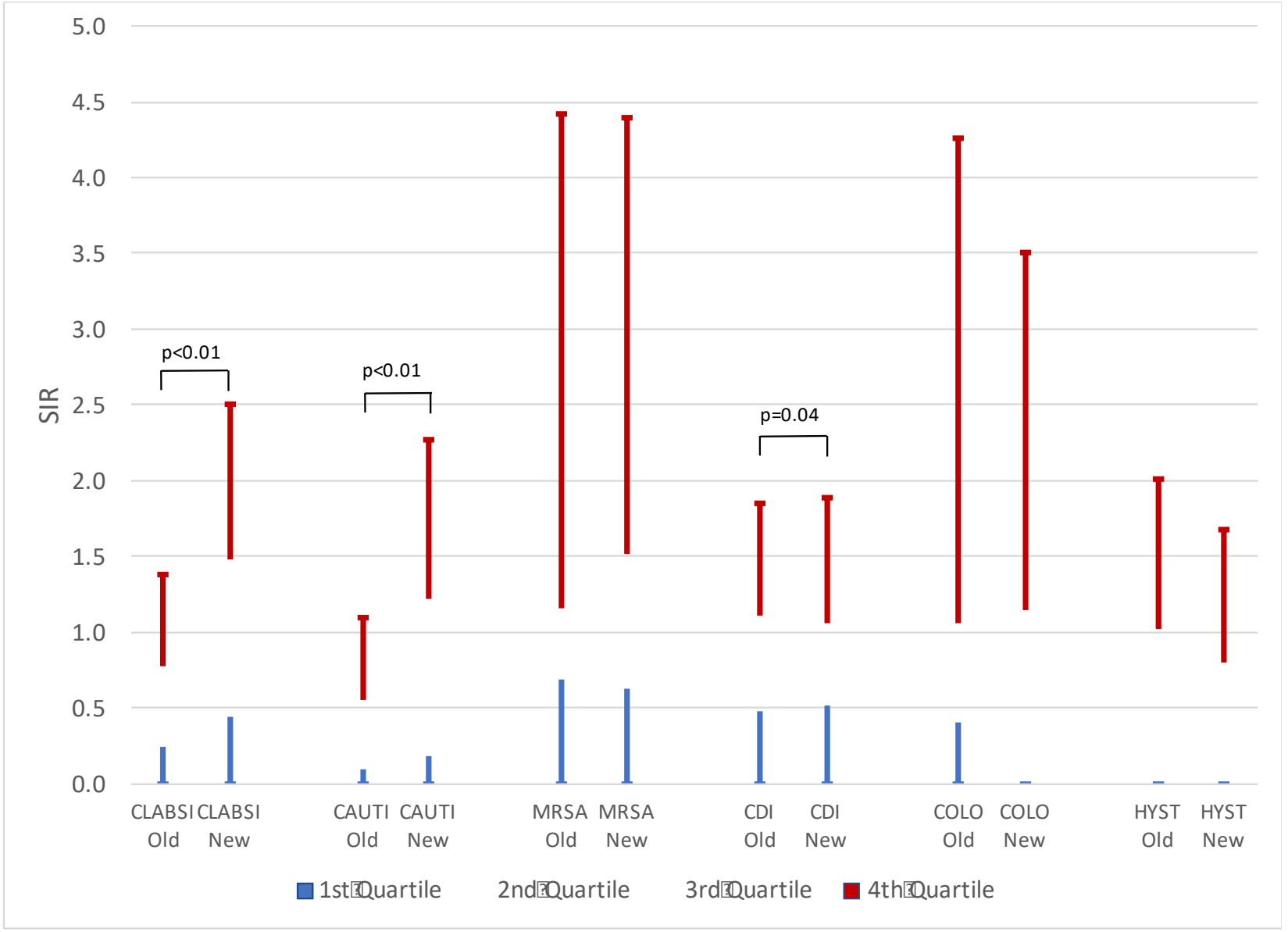
- NHSN updated risk adjustment models and “rebaselined” SIRs for HAIs.
- Both source of aggregate data and the risk adjustment methodology were updated
- SIRs expected to increase and shift closer to 1
- CLABSI and CAUTI updated again after rebaselining released

HAI	Original ACH Baseline Data Year	Rebaseline Data Year
CLABSI	2006-2008	2015
CAUTI	2009	2015
MRSA	2010-2011	2015
CDI	2010-2011	2015
SSIs	2006-2008	2015

$$\text{SIR} = \frac{\text{number of } \textbf{observed } (O)}{\text{number of } \textbf{expected } (E)}$$

2016 SIR Rebaselining Effect

38 DICON hospitals



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Methods Change – Ranks Change

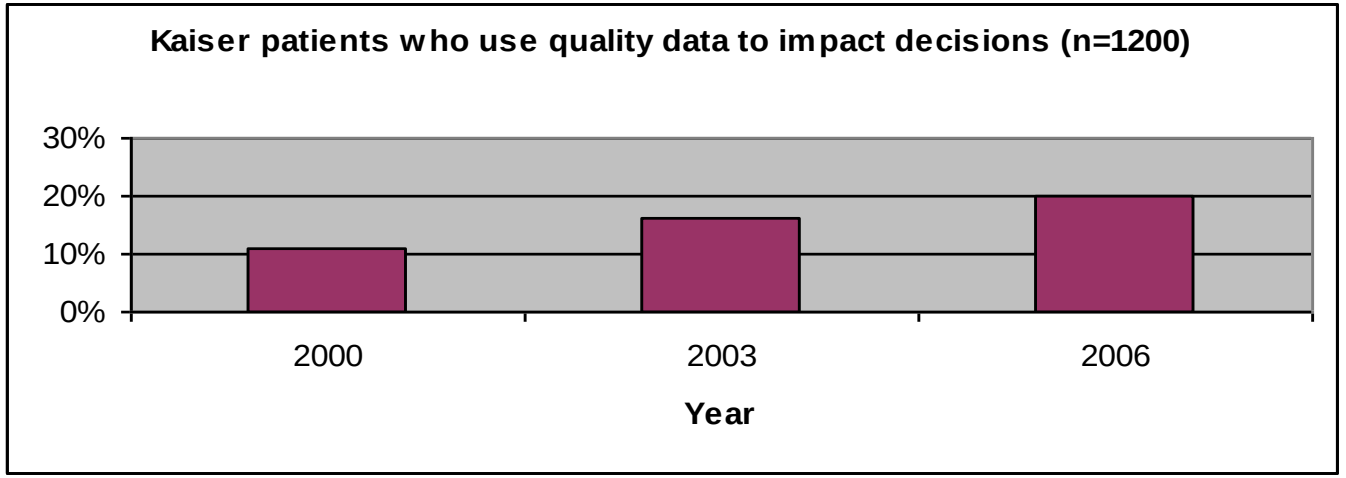
Hospital (HAI)	Old SIR	Old Rank	New SIR	New Rank	Δ in Rank
A (CLABSI)	0.600	18	0.119	5	↓13
B (CLABSI)	0.414	12	1.399	22	↑10
C (CAUTI)	0.478	22	1.285	29	↑ 7
D (CAUTI)	0.578	28	0.193	10	↓18
E (MRSA)	0.677	7	1.025	16	↑ 9
F (MRSA)	1.018	17	0.888	12	↓ 5

Data Not Used…

Pennsylvania – Survey after implementing mandatory reporting and a CABG "score card" for hospitals

- Only 1-2% of patients used the data to help make decisions
- The rest were not aware, didn't trust the data, or didn't understand it

Kaiser in California – Only 20% of participants used any type of quality data to impact healthcare choices



…Except by Lawyers

Public reporting of outcomes related to nosocomial and healthcare-associated infections will be “red meat” for some plaintiff malpractice attorneys.

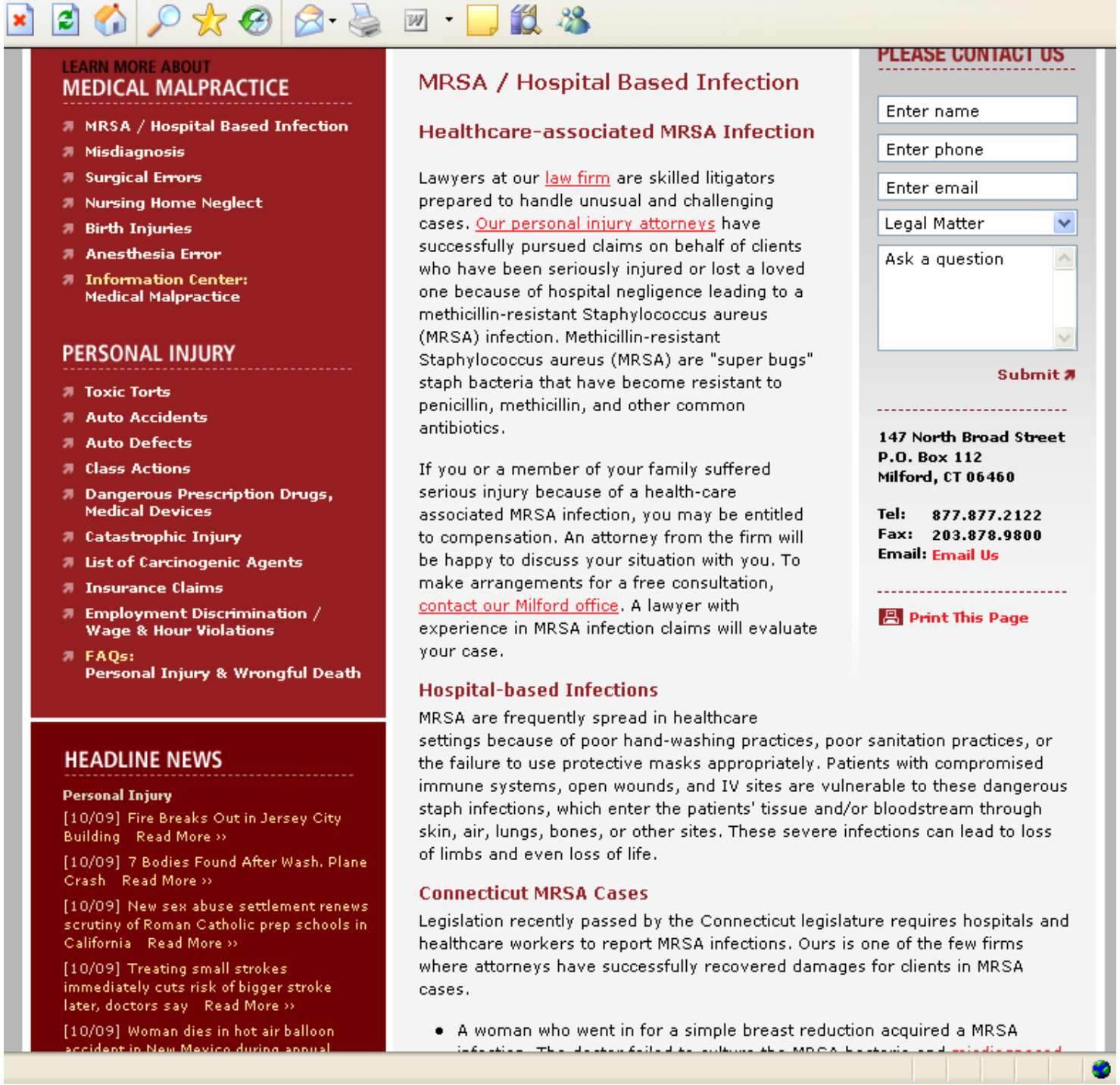
- ‘Mining’ of such data is likely to promote even more malpractice lawsuits

Public reporting of rates of HAI may be construed as evidence of negligence

- Hospital clearly knew of the existence of HAI but
- Failed to address a known problem

Law firms have already begun soliciting for “MRSA claim evaluations”

Just a Click Away!



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MRSA / Hospital Based Infection

Healthcare-associated MRSA Infection

Lawyers at our law firm are skilled litigators prepared to handle unusual and challenging cases. Our personal injury attorneys have successfully pursued claims on behalf of clients who have been seriously injured or lost a loved one because of hospital negligence leading to a methicillin-resistant Staphylococcus aureus (MRSA) infection. Methicillin-resistant Staphylococcus aureus (MRSA) are "super bugs" staph bacteria that have become resistant to penicillin, methicillin, and other common antibiotics.

If you or a member of your family suffered serious injury because of a health-care associated MRSA infection, you may be entitled to compensation. An attorney from the firm will be happy to discuss your situation with you. To make arrangements for a free consultation, contact our Milford office. A lawyer with experience in MRSA infection claims will evaluate your case.

Hospital-based Infections

MRSA are frequently spread in healthcare settings because of poor hand-washing practices, poor sanitation practices, or the failure to use protective masks appropriately. Patients with compromised immune systems, open wounds, and IV sites are vulnerable to these dangerous staph infections, which enter the patients' tissue and/or bloodstream through skin, air, lungs, bones, or other sites. These severe infections can lead to loss of limbs and even loss of life.

Connecticut MRSA Cases

Legislation recently passed by the Connecticut legislature requires hospitals and healthcare workers to report MRSA infections. Ours is one of the few firms where attorneys have successfully recovered damages for clients in MRSA cases.

- A woman who went in for a simple breast reduction acquired a MRSA

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Cause Harm for Patients?

“Skimming the cream”

- Risk-avoidance by health care providers (refusal to undertake risky but potentially beneficial procedures
- Leads to diversion of care

Inappropriate or harmful care

- Increased use of antibiotics in ER for pneumonia have led to higher rates of *C. difficile* disease

Diversion of Care

NY state implemented public reporting of CABG rates

In the following year, the number of cardiac patient transfers to the Cleveland Clinic from NY hospitals increased more than 31%

Reports of increasing racial disparity in CABG procedures in NY

- 19% fewer CABGs in Blacks & Hispanics in NY compared to other states; racial disparity lasted 9 years

Werner RM et al. Circulation 2005;111:1257-1263.

SUMMARY

Using National Targets (and Penalties) is well intentioned but heavily flawed

No data to suggest that public reporting of HAI data actually improves outcomes for patients

- Heavy burden on hospitals for what benefit?

Quality of reporting determines value

- Methods matter
  - No risk adjustment
- No guarantee of high quality

Focus resources on local efforts

- Knowledge of areas of needs