

include healthcare providers which include the hospitals, physicians, and nurses, the medical malpractice provider, the healthcare insurance provider, government and private regulatory agencies, and patient advocacy groups. Together with these two categories of factors one could start seeing a change in the effectiveness of improving safety.

Over the years, our strategy to work with the healthcare institutions that we ensure has evolved. In the 1980s our approach was a traditional legalistic risk management strategy. In the 1990s we incorporated a more clinical perspective to our risk management strategy. And in 1999 when the IOM report was published we jumped on the patient safety bandwagon and incorporated patient safety as a key element into our strategy. Presently we have evolved this patient safety strategy to more of a change management type approach. You could say our strategy has evolved from risk management to change management. In order to ensure the proper adoption and spread of patient safety within the Harvard health care system think about this analogy of seeds and the soil. Through the use of medical malpractice claims data we identify high-risk areas and focus on initiatives and interventions to address these high-risk malpractice claims. Our goal was to develop a Harvard wide program which incorporates an organizational framework and consensus process that's designed to identify content and prioritize best practice models, standards and interventions to implement. These may include algorithms, clinical standards, surgical safety initiatives and others. These fall under "seeds". Implementing these initiatives is another issue. Our goal is to embed these practices into the fabric of each healthcare organization to maintain sustainability; in other words this is an operationalization problem. The way to achieve this is to think about the "soil". One needs to prepare the soil and make sure the environment is able to accept the seeds you plant.

In conclusion, one has to have the following four conditions for successfully adopting and spreading patient safety initiatives. First is an appropriate set of evidence-based patient safety initiatives. Second is a healthcare environment ready and capable of accepting and implementing these initiatives. Third is the proper incentives aligned with regulators, payers and medical malpractice insurers. Finally, fourth is the inclusion of the voice of the patient.

## 「医療の質・安全に求められるもの」

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【佐藤】 今日には講演を日本語でするようにと言われ、大変緊張しております。

私はもともとアメリカに生まれ、アメリカで育ってアメリカで教育を受けたので、日本語は日常会話として適当に話せる程度です。このように専門用語を用いて日本語で話すというのは、私にとっては非常に難しいことです。実は子供のとき、父親が「父上」なら母親は「父下」だろう、と言ったこともありました。今日の講演もとんでもないことを言うかもしれません。その点はあらかじめご理解いただきたいと思います。

さて、ここから本題に入りますが、皆様ご存じのように、1999年、米国の医学研究所（Institute of Medicine: IOM）が「人は誰でも間違える (To Error Is Human: Building a Safer Health System)」を出版しました。この本が出てから、約7年になります。

その当時、この本はさまざまな新しい概念を医療に紹介しました。1つの概念はシステム、システムは何か、ということです。英語では「System is a sort of interdependent elements interacting to achieve a common goal」と定義されますが、人間と人間との間のコミュニケーション、その環境についてのさまざまなシステム、という意味にも取れます。

それから、ヒューマン・ファクター、人間工学があります。人間工学というのは、やはりまた人間と人間との間に起こるコミュニケーション、その環境、組織、仕組みについての研究分野です。さらにこの本は、皆様ご存じのように、アメリカで年間9万8,000人の人々が医療ミスによって亡くなっている、と発表しました。これは1年にB-747ジャンボ機が270機落ちるのと同じことになります。

そして、医療ミスに伴うコストは毎年290億ドル、円に換算すれば3.2兆円です。先ほど話したシステムの問題、このシステムをどのように改善するべきか、という必要性についても書いています。

この本の最後には、医療システムの改善を国家的優先課題として、トップ・プライオリティーとして解決すべきだ、と書いてあります。別の見方で見ると、年間死亡者数は、医療がトップとされているからです。

死亡者1人当たりに対する実施回数について、Harvard School of Public Healthのルーシャン・リープ (Lucien Leap) 先生による分析では、バンジー・ジャンプの場合、10回から100回行くと1人が亡くなることになっています。年間死亡者数からみて、非常に安全なのは、私達が普段乗っている飛行機、鉄道、原子力発電。自動車運転は、それより少しやや

危ない程度です。チャーター飛行機は少し危険になりますが、医療は非常に危険と位置づけられています。

IOMの本が出版されてから7年経ちましたが、アメリカでリスク・マネジメントと患者安全はどのように変わったか、現在どのような状態にあるのか、という話をしたいと思います。

まず、アメリカのリスク・マネジメントと患者安全についての10の「誤解」を取り上げたいと思います。

1番目の誤解は、先ほどお話ししたように、「病院に入院することは飛行機に乗るよりも安全」という誤解です。実際はどうかというと、イギリスの最高医療責任者であるサー・ウィリアム・ドナルドソンによると、やはり医療は特別なハイ・リスク環境にある、ということです。このような状態が続けば、まだまだ医療は飛行機に乗るよりも危ない、と言っています。

2番目の誤解は「手術部位の取り違いミス (Wrong Site Surgery) はアメリカではもうなくなっている」というものです。最近のデータによれば、年間1,300から2,700件の手術部位の取り違いミスが発生している、と推計されています。ここへ来る前にハーバード関連病院全体のクレーム・データを調べてみましたら、過去10年間、25件のクレームがありました。そして患者に対して合計500万ドルが振り込まれていることがわかっています。2006年の「Archive Surgery」というジャーナルによれば、今まで予想された数よりも20倍多くミスが発生しているのではないかと、という論文もあります。

3番目の誤解は、「内容開示と謝罪 (Disclosure and Apology) がアメリカの病院では一般に行われている」、というものです。実状は、各病院はその実行にかなり苦心しています。今年の3月、私達とハーバード病院のリスク・マネージャー達とが共同で「When things go wrong (間違いが起こったとき)」、医療事故に対するレスポンスについてのマニュアルを出版しました。これは、医療事故が起こってから何をすべきかについての原則を40ページぐらいのレポートにまとめたものです。しかし、実際に病院がそれを実行しているかという、まだまだそこまでいっていません。

来年の2007年、リスク・マネジメント財団はそれに伴って内容開示と謝罪についてのカリキュラムを発表する予定です。

4番目の誤解は、「医師と看護師が患者安全を推進するために協働している」というものです。2004年、IOMは看護師の役割に対して「Keeping Patients Safe: Transforming the Work Environment of Nurse」という本を出版しました。看護師の仕事は医療行為と医療ミスを発見したり防止するためにかかなり重要な存在である、という内容です。

5番目の誤解は、「患者安全を取り入れる文化がアメリカのあらゆる病院において普及している」というものです。実際は非難的な文化がかかなりはびこっています。自分の誤りから学ぶべきであるという概念は、アメリカの医師も看護師も受け入れにくいようです。ただ、自分が責任をとらずに他人に責任をなすりつけ合う社会は、誰も責任をとらない社会

と同じではないか、と思います。

6 番目の誤解は、「大多数の病院・診療所の医師は、電子カルテまたは電子オーダーシステムを利用している」というものです。実際にデータを見ると、高機能な電子システム、EMR (Electronic Medical Record) を利用している医師は全体の 10%しかいません。ベーシックなシステムを利用している医師は 24%ぐらいいます。それから電子オーダーリング・システム、CPOE (Computer Physician Order Entry System) を利用している病院は、アメリカ 6,000 病院のうち 5%しかない。それが現状です。

7 番目の誤解は、アメリカのように E メール、インターネットが普及しているところでは、患者と医師の間の Eメールのやりとりが保険会社によって認められているのではないか、というものです。ミネソタ州の Blue Cross and Blue Shield という医療保険会社が今行っているパイロット・プロジェクトでは、1 件のメールについて 35 ドル支払うことになっています。ただしこれはあくまでもパイロット・プロジェクトであって、Eメールを利用した医師と患者の間のコミュニケーションはまだまだ普及していないのが現状です。

8 番目の誤解は、「患者安全の対策や提言はほとんどの病院で完全に普及している」というものです。アメリカには規制機関が非常に多くあります。その規制機関が強制的に標準を課す場合と、病院で自発的に進めたい医療安全対策がある場合、どちらにプライオリティーをつけるか、競争になります。だから、どちらを取るか、どちらを落とすか、何をやればいいのか、というプライオリティーが非常に難しいわけで、なかなか進まない状況です。

9 番目の誤解は、「リスク・マネジャー、ペイシャント・セーフティー・オフィサー、クオリティー・インプルーブメント・スタッフのそれぞれの役割が明確で、皆協働している」というものです。アメリカでも現状はうまく協働していない場合がほとんどです。

リスク・マネジメント財団では、チーフ・メディカル・オフィサー（最高医療責任者）がそれぞれの担当者の調整役割を果たすべきだ、と考えています。各部門は同じデータを共有し、そのデータに基づいて患者安全というプライオリティーに向かって働き、チーフ・メディカル・オフィサーに直接報告するような組織を理想と考え、その理想的な構造組織を各病院と協力して進めていこうとしています。

10 番目、最後の誤解は、「アメリカの医療過誤システムは問題とみなされている」というものです。

確かに問題は問題ですが、過去の医療過誤のデータを非常に精密に分析すると、それを利用して新しいエラーに対する情報を得られますから、過去のデータは非常に大事なデータです。

もう一つ、訴えられることへの恐怖心が現場の行為を変えていて、やはりここになっているのが現実としてあります。訴えられるのが嫌だから何かをやるというのが現状です。

より安全な医療を作り上げるための重要なポイントを取り上げると、問題としてはやはりプロセスの再計画、再デザインの問題だと思います。さらに、私が一番重要と思うのは、各医療機関のリーダーシップを取る人々、院長クラス、副院長クラス、看護師長クラス、

そういう人達が協力して、こういうことを進めていくべきだと思います。

2番目はデータです。データといってもいろいろなデータがありますが、もちろん各病院の中で集めているデータだけではなく、患者の目から見た Patient Complaints Data (患者からの苦情データ) や、医療過誤データを利用したデータもあります。そして、ピア・レビューの保護。それから、過程と結果の尺度 (Process and Outcome Measure)。非難しない環境。そして、透明性。

その他に、複数の関係者の協働が必要です。複数というのは医療、ヘルスケア・プロバイダー (医師・看護師など医療提供者) に当たる人達、それから医療過誤保険会社、医療保険会社、そして規制機関の政府及び民間のエージェンシーです。最後に患者支持団体も含めて、それぞれ皆一緒に協力して、より安全な医療を作り上げていくべきだと思います。

それでは、ハーバード大学病院では何をやっているか、という話に入ります。ここで、CRICO、リスク・マネジメント財団という組織を紹介したいと思います。ハーバードのシステム全体を見ると、ハーバード大学病院は4,800ベッド数。1年の外来数は約700万人です。医師は6,900人、レジデントが2,100人、フェローが1,000人います。CRICO (Controlled Risk Insurance Company) は、1976年にハーバードの医療過誤保険会社として設立され、その当時は10の組織で設立しました。現在は医師が1万人、従業員が10万人いて、その保険料は合計約1.3億ドル。医療過誤訴訟1件について500万ドルの補償があります。

CRICO 設立から3年後、1979年に、リスク・マネジメント財団が設立されました。設立時に携わった10の主な組織には、パートナーズ (マサチューセッツ総合病院、Brigham and Women's Hospital)、Beth Israel Deaconess Medical Center、チルドレンズ・ホスピタルなどが含まれ、ハーバード大学とマサチューセッツ工科大学も加わっています。

ここで「リスクからクレームへの連続体」について話したいと思います。まずリスクがあって、それが事故につながります。その事故に対してロスを和らげるというアクションがありますが、これまでリスク・マネジメントはこの部分だけを考えていました。

このリスク・マネジメントによってクレームが発生するか、クレームがなくなるかのどちらかになります。1999年にIOMのレポートが出版されて以来、安全に対する研究、人間工学が普及してきました。

私達が今取り組んでいる loss prevention は、もう一つの範囲に入ります。これは未然に状況を見て、システムの分析を行ない、システムのチェンジ・マネジメント (change management) を行う仕組みになっています。最後のクレーム・マネジメントは、主にクレームが起こってからの処理部門になっています。

私達は、クレームは氷山の一角だと思っています。医療過誤の経験というのは、より大きな状況を理解するのに役立つと思います。IOMのレポートが発表されるまで、氷山の水面下の状況は、誰にも知られていませんでした。しかし、IOMのレポート以来、患者安全の行動が広がり、病院内の機能が外からすべて見える状態になってきました。アメリカでは現在、クレームはメディアが全部取り上げているので、一般の人達に非常に広がっている情

報です。クレームを通して、病院の中で行われている医療すべてが見えることにもなります。私は、クレーム分析は、水面下の医療を見るための重要なレンズだと考えています。

私達のクレームというのは、数としては非常に小さいです。1年に大体255件ぐらいしかありません。ただ、1つ1つのクレームに対して非常に精密に分析しています。だから、どういう理由でクレームが起こって、どういう理由で事故がクレームに結びついたか、という分析があります。これはコーディングによって深く分析されているデータです。この分析によってわかる主なこととして、たとえばなぜ患者が訴えるのか、その理由が幾つか明らかになりました。まず一番問題なのは、医師と患者との人間関係に問題があるとき、これが一番多いです。

2番目には、その医療が患者の期待にそぐわない。

3番目は、その医療事故に対してもっと情報を知って、真実を知りたい。主にこの3つがクレームのほとんどの理由を占めています。

この他にもいくつか理由があります。怒り、誰が責任を取っているかを全然明らかにしていない。その他には、友人や弁護士に勧められて訴える。最後に金銭上の補償を求めて訴える場合がありますが、これはほとんど少ないです。大体80%が、先に挙げた3つの理由で訴える場合になります。

データによって、4つのハイ・リスク部門がわかってきました。第1に、診断による診断ミスのクレーム。第2に手術ミス。先ほど言った手術部位の取り違いミスはここに入ります。第3に産科関連。第4に Medikation (投薬関連) によるクレームです。この4つがクレーム数では全体の61%から67%を占めていますが、コストとしては全体の80%から90%を占めています。

現在、リスク・マネジメントがあるマサチューセッツ州の他の医療過誤保険会社と比べると、私達の保険料は平均して40%から45%低くなっています。

そして、これをアメリカ全体と比べると、ハーバードは2002年現在で一番低くなっています。ハーバードで1年間に起こる医療過誤数は、先ほど言いましたが225件ぐらいです。それはクレーム・レートでは2.2ぐらいです。アメリカの平均は9から12ぐらいです。だから、ハーバードでは、アメリカの4分の1から5分の1の割合でクレームが起こっていることになります。

先ほど申し上げたように、IOMのレポートは、医療ミスはシステムの問題であると言っています。私達のデータから見てもそれは事実ですが、それだけではありません。医療システムが原因である医療過誤コストは、1976年から2005年のすべての医療過誤のクレームにかかった総費用のうち、全体の51%を占めていて、およそ3,470億円かかっています。

一方、個人的コストというのは、個人的な間違い、誤り、判断のミスを示していて、それが大体49%になります。だから、3,300億円ぐらいのコストがかかっていることになります。したがって、システムだけではなく、個人的な問題もあるわけです。

ここで loss prevention と患者安全に焦点を当てると、1980年代のリスク・マネジメン

ト財団は、法的リスク・マネジメントを主に行い、原告弁護士と被告弁護士の間で賠償額やその内容を決めたりしていました。

1990年代によく臨床的リスク・マネジメントを始めました。これによって少しずつ関係者も変わってきました。今までは弁護士の他には数少ない臨床関係者だけが含まれていましたが、1990年代には臨床関係者、特に看護師と少数の医師を対象にリスク・マネジメントをやってきました。

1999年にIOMのレポートが出てから、私達は患者安全という戦略をとって進んでいます。現在、私達は病院と一緒にチェンジ・マネジメントに取り組んでいます。この方向転換により、現在のリスク・マネジメント財団と病院との関係は、1980年代の関係と全く違うものになっています。病院のシニアクラス、院長、部長、看護師長、事務部長とパートナーシップを組み、リスク・マネジメント、患者安全に取り組んで、実際に医療のマネジメントを変えようとしています。これは、チェンジ・マネジメントという方法によって病院の経営方針を変えていく試みです。

1つの事例として、乳がん対策についてお話しします。1980年代には、乳がんによるクレームの数はほぼ安定していました。ところが、1993年に急にクレームが増え、2000年にリスク・マネジメント財団が乳がんのためのクリニカル・スタンダードを発表しました。それはCRICO-RMF-Breast Care Management Algorithmというスタンダードです。そして2000年から2002年、その徹底的な普及を行いました。一部では電子カルテにこのガイドラインを導入したり、スタンダードをそのまま使う人もいたり、さまざまでした。結果をデータで示しますと、1993年にクレームが急上昇して、そのまま何もしなければ、2000年から2005年の予想賠償額は6,100万ドル出るところでした。けれども実際は950万ドルに抑えられました。私達はやはりこのスタンダードによってクレームの数が下がったのではないかと見ています。

もう一つの事例として、ハーバード・ビジネス・スクールと共同して、エグゼクティブ・リーダーシップ・コースのパイロット・プロジェクトを立ち上げました。医療システムの問題が医療過誤の原因の51%を占めていることになったので、医療関係者にもやはり基礎経営、MBAプログラムで習うような教育が必要ではないか、という概念からこれは始まったものです。このプログラムは5日間にわたっての合宿、そして複数年にわたるプログラムとして始まりました。

マサチューセッツ総合病院(MGH)がパイロット・サイトとなることになり、つい先日、2006年10月にMGHのトップの70人、医師、看護師、事務部門の人達がビジネス・スクールに行って、経営の基礎知識、MBAの基礎コースを中心として学びました。この経験によって、MGHという組織が転換するきっかけとなったと思います。今、彼らのやっているさまざまな患者安全のイニシアチブがこのMGHのコース、ハーバード・ビジネス・スクールのコースによってかなり進んでいます。

最後に、種を作ること、土を耕すこと、についてお話ししたいと思います。こういう乳

がんのガイドライン、その他の患者安全の対策というのを、私は種として見ています。それから、その種をまく環境、この場合は環境整備として、ハーバード・ビジネス・スクールを利用して、MGH はこのようなガイドライン、いわば種を受け入れる状況に達しました。これは病院内の文化、リーダーシップ、人材を変えていくカルチャーです。安全文化を作り上げていく基盤の一つです。

先ほどお話ししたように、より安全な医療をつくるための要素がいくつかありますが、やはりいい種だけが大事なのではなく、土も耕すことが大事だと思います。実際に何が必要かという、エビデンスに基づいた患者安全の対策、これが種。そして対策を受け入れて実行できる医療環境、これが土です。

さらに、医療保険会社と医療過誤保険会社と合意したインセンティブ、これも環境づくりの一つとして重要です。最後に患者の声。これら4つをうまく組み合わせていくことが、患者安全の普及に必要な条件だと思います。

以上です。(拍手)

【高久】 佐藤先生、どうもありがとうございました。

日本語で、普通お慣れになっていない日本語でご講演いただきまして、しかし完璧な日本語で非常に感銘を受けました。本当にありがとうございました。

まだ少し時間がありますので、もしどなたかご質問がおありでしたら、普通特別講演はあまり質問はないんですけれども、時間がありますので、どなたかもしご質問されたい方がおありでしたらどうぞ。

よろしいでしょうか、どうぞ。

【江原】 神戸大学医療安全管理室の江原ですけども、先ほどちょっと先生お話しになったところで、ディスクロージャーというところで、そういう医療事故の調査分析を病院でやった上で、患者さんにどの程度ディスクロージャーすべきかという、弁護士さんからはそれはあまりしてはいけないというふうに言われているんですけども、その辺のところ、ハーバードのお考えを教えてくださいたいんですけども。

【高久】 できれば。

【佐藤】 そのディスクロージャーが非常に難しいというのは、この場合は飛行機事故でも同じですが、事故が起きてから得られる事実が非常に限られている、ということによると思います。

事実がない状況で、これは英語で speculation というのですが、日本語で何と言うのでしょうか。要するに事実がない状況の guess work、「guess」ですか。

【高久】 推測。

【佐藤】 推測ですね。事実がない状況の中では推測が中心になります。その推測によってクレームが来る場合が非常に多いのです。だから、自分が持っている事実の範囲内で何をディスクローズするか、という問題なら、私としては全然問題ないと思います。

しかし、どこまでが事実で、どこまでが推測なのかを見分けるのは非常に難しい問題で



す。両方のバランスを取ることが非常に難しいので、それに対するディスクロージャーのトレーニングが必要だと思います。それも病院で毎日毎日起こっているようなものではないので、病院側としては、英語で言えば SWAT チーム (特殊機動隊) のような人達を備えていればよいのではないのでしょうか。何か事故が起きたときにその人達に電話して、こういう状況なんですよ、どうすればいいんですかというアドバイスを得て、そこから進んでいくという方針を私達は立てようとしています。

【江原】 ありがとうございます。

【高久】 どうもありがとうございました。どうぞ、じゃあ、それでおしまいにしていただきます。

【長尾】 京都大学の安全管理室の長尾と言います。大変貴重な講演ありがとうございます。

先生のお書きになった論文の中に、アメリカでのいわゆる保険危機の発生した原因が、アメリカが当時とった対策のまずさにあるのではないかというご指摘があって、そのアメリカが当時とった対策というのは、つまり医療者の犯したミスのがわりを保険会社が行う、あるいは第三者機関で医療過誤かどうかの判定をすることといったような対策が当時行われて、それで保険料がどんどん高騰していったと。つまりお金で医療者を救済するという立場をとったがために、保険のいわゆる訴訟の嵐というのが吹き荒れていって、その高騰を招いたと。

それで、私思うんですけれども、今のそのハーバードの取り組み等を見ておきますと、逆にそれが非常によく働いて、その一つのアウトカムが賠償金であるとか、そういったものでアウトカムしながら、対策を非常に現実的に取り組んでおられるという感じがいたします。日本は今、訴訟の嵐が今後吹くかどうかという時期に来ていると思ひまして、その行っている対策も、あるいはしようとしている対策も、第三者機関の設立であるとか、あるいは保険会社、国立大学病院が保険会社に加入したといったような、ちょうど米国が当時置かれた状況に非常によく似ているなと思うんですけれども、ただ日本は訴訟の嵐を経験しないで、できればリスク・マネジメントを完成させたいというふうに思っていると思うんですが、佐藤先生のお考えとして、果たしてどういうあり方が今後の日本に求められているのかということ率直なご意見をお伺いしたいんですが。

【佐藤】 今、日本で一番問題だと思うのは、非難的な文化で、たとえば医療事故が起きた場合、警察が乗り込んでくるという、その環境ですね。今、日本は医療過誤に対して比較的まだ新しい道にようやく入ったところだと思うのですが、アメリカの場合は、コストが上がった理由というのは裁判で、jury という人達がいます。

【高久】 陪審員ですね。

【佐藤】 はい。陪審員の陪審によって賠償金が決まるのですが、アメリカの裁判には弁護士と弁護士との「ショー」のような要素があります。陪審員達に、医療過誤の原告(被害者)がいかに苦勞しているか、この人が立ち直るためにこれだけのお金が必要で、という

主張がいつも出て、そのおかげで賠償額がますます上がっています。

特に 9・11 テロ以降、被害者・犠牲者に対する賠償金額は非常に高くなってきました。このようなアメリカの現象を victimization (犠牲にすること) という人もいます。それも加わって、さらに賠償額は上がる傾向にあります。日本も幾らかそういうことを経験するべきだとは言いません。理想としてはもちろんそれはいいほうがいいと思います。

しかし、日本の場合には、患者の声を導入した医療システムというのはあまり発達していないようなので、逆にアメリカのような動きが出てくると思います。この二つのバランスはいつか将来とれると思いますが、私には今それだけしか言えません。

【高久】 どうもすみません、もう時間になりましたので。

先生、どうもありがとうございました。

【佐藤】 どうもありがとうございました。

## Five Years After *To Err Is Human* What Have We Learned?

Lucian L. Leape, MD

Donald M. Berwick, MD

**F**IVE YEARS AFTER THE INSTITUTE of Medicine (IOM) reported that as many as 98 000 people die annually as the result of medical errors and called for a national effort to make health care safe, it is time to assess our progress. Is health care safer now? And, if not, why not?

The IOM's report, *To Err Is Human: Building a Safer Health System*,<sup>1</sup> galvanized a dramatically expanded level of conversation and concern about patient injuries in health care both in the United States and abroad. Patient safety, a topic that had been little understood and even less discussed in care systems, became a frequent focus for journalists, health care leaders, and concerned citizens.

Small but consequential changes have gradually spread through hospitals, due largely to concerted activities by hospital associations, professional societies, and accrediting bodies. All hospitals have implemented some new practices to improve safety. Fewer patients die from accidental injection of concentrated potassium chloride, now that it has been removed from nursing unit shelves<sup>2</sup>; fewer patients have complications from warfarin, now that many taking anticoagulants are being treated in dedicated clinics<sup>3</sup>; and serious infections have been reduced in hospitals that have tightened infection control procedures (J. Whittington, written communication, March 2005; K. McKinley, Geisinger Clinic, written communication, April 2005; and P. Provost, Johns Hopkins Hospital, written communication, January 2005).<sup>4</sup>

Five years ago, the Institute of Medicine (IOM) called for a national effort to make health care safe. Although progress since then has been slow, the IOM report truly "changed the conversation" to a focus on changing systems, stimulated a broad array of stakeholders to engage in patient safety, and motivated hospitals to adopt new safe practices. The pace of change is likely to accelerate, particularly in implementation of electronic health records, diffusion of safe practices, team training, and full disclosure to patients following injury. If directed toward hospitals that actually achieve high levels of safety, pay for performance could provide additional incentives. But improvement of the magnitude envisioned by the IOM requires a national commitment to strict, ambitious, quantitative, and well-tracked national goals. The Agency for Healthcare Research and Quality should bring together all stakeholders, including payers, to agree on a set of explicit and ambitious goals for patient safety to be reached by 2010.

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Although these efforts are affecting safety at the margin, their overall impact is hard to see in national statistics. No comprehensive nationwide monitoring system exists for patient safety, and a recent effort by the Agency for Healthcare Research and Quality (AHRQ) to get a national estimate by using existing measures showed little improvement.<sup>5</sup> Although that estimate was largely based on insurance claims data, measures known to have low sensitivity for detecting quality improvement, little evidence exists from any source that systematic improvements in safety are widely available.

Perhaps inevitably, critics have pushed back against viewing safety as a problem of science—of system design. Public support for improving patient safety often turns instead on fixing blame. Despite the widely disseminated message from the IOM that systems failures cause most injuries, most individuals still believe that the

major cause of bad care is bad physicians, and that if miscreant clinicians were removed everything would be all right.<sup>6</sup> Some have claimed that the emphasis on systems, and particularly, not blaming individuals for errors, will weaken accountability for physician performance.<sup>7</sup> Related concerns have led to legislation imposing stricter reporting requirements on hospitals and physicians.<sup>8</sup> The latest surge in the malpractice premium crisis has deflected interest of lawmakers from error prevention to an effort to put caps on malpractice settlements.

Although the proven measured fruits of the IOM report so far are few,

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its impact on attitudes and organizations has been profound. In addition, thanks to research sponsored by AHRQ, health care leaders have also learned a great deal about safety that they did not know in 1999. In sum, the groundwork for improving safety has been laid these past 5 years but progress is frustratingly slow. Building a culture of safety is proving to be an immense task and the barriers are formidable. Whether significant progress will be achieved in the next 5 years depends on how successfully those barriers are addressed.

Our goal is to summarize what has happened, analyze the reasons why improvement has not been greater, and make recommendations for what needs to be accomplished to realize the IOM's vision.

### What Have We Accomplished?

The effects of the IOM report are evident in at least 3 important areas: viewing the task of error prevention, enlisting the support of stakeholders, and changing practices.

**Viewing the Task of Error Prevention.** First, the IOM report profoundly changed the way many health care professionals and managers think and talk about medical errors and injury. It truly changed the conversation. Although a substantial minority among both clinicians and the lay public continue to doubt that injury and mortality rates are as high as the IOM claimed,<sup>6,9,10</sup> subsequent data from various sources suggest that the IOM may have substantially underestimated the magnitude of the problem.<sup>11-16</sup> Nosocomial infections alone, most of which are preventable, account for more than 90 000 deaths per year,<sup>17</sup> and hospital-acquired bloodstream infections alone may rank as the eighth leading cause of death in the United States.<sup>18</sup> Few individuals now doubt that preventable medical injuries are a serious problem. Far more physicians and nurses today ask not whether there is a problem but rather what they can do about it.

The concept that bad systems, not bad people, lead to the majority of er-

rors and injuries, which is a crucial scientific foundation for improvement of safety in all successful high-hazard industries, has become a mantra in health care. Skeptics abound but more and more health care leaders appear to accept the corollary that blaming individuals is usually neither fair nor effective as a mainstay approach in pursuit of safety. Interest in technologies to support safer care has increased, most especially with respect to computer-assisted physician order-entry systems; the decades-old stalled discussions about electronic health care records have acquired new life. Before the IOM report, deficient safety was simply not a problem widely known in the health care industry. Now, it is.

Some ambiguity exists about the relationship between safety as a desired characteristic of health care and the broader issues of health care quality in general. The IOM Roundtable on Quality of Care categorized threats to quality in 3 broad families: overuse (receiving treatment of no value), underuse (failing to receive needed treatment), and misuse (errors and defects in treatment).<sup>19</sup> In its narrowest form, a focus on safety addresses only the third family, that is, a subset of the whole domain of quality of care.

However, mistakes by caregivers that lead to physical injuries are much less acceptable to patients than overuse or underuse, and cause far more emotional reaction. Indeed, the focus on active harm—misuse—may help explain the intense public interest in safety compared with quality improvement in general. Health care professionals, too, may feel far worse if they harm a patient directly than if they provide inappropriate care.

As attention to patient safety has deepened, the boundaries among overuse, underuse, and misuse have blurred. It seems logical that patients who fail to receive needed treatments or who are subjected to the risks of unneeded care are also placed at risk for injury every bit as objectionable as direct harm from a surgical mishap. Operationally, the terrain of quality is becoming more uni-

fied. Importantly, it is much clearer now that the most effective method to improve either safety or quality overall is to change the systems.

**Enlisting the Support of Stakeholders.** The second major effect of the IOM report was to enlist a broad array of stakeholders, some quite surprising, to advance patient safety. The first stakeholder was the federal government. Responding to the IOM recommendation, the US Congress in 2001 appropriated \$50 million annually for patient safety research. That support, although a tiny fraction of the \$28 billion budget for the National Institutes of Health, was enough to enlist hundreds of new investigators into patient safety research, essentially launching the academic base for that work. Research in error prevention and patient safety became a legitimate academic pursuit.

Unfortunately, in 2004 after only 3 years of support, federal funding for patient safety research through AHRQ became almost entirely earmarked toward studies of information technology. As crucial as such technologies are, this reallocation revealed a serious misunderstanding of the broad array of research that will be needed to address the safety problem, and is quickly starving the new recruits who would have pursued aspects of safety other than information technology.

Congress, however, did codify AHRQ as the lead federal agency for patient safety and AHRQ established a Center for Quality Improvement and Safety, which has become the leader in education, training, convening agenda-setting workshops, disseminating information, developing measures, and facilitating the setting of standards. Despite its limited budget, AHRQ has been an important voice for safety through its support for evaluating best practices, demonstrations to enhance reporting of adverse events, errors and near misses, its development of patient safety indicators now used by many hospitals, and its development of a roadmap of evidence-based best practices used by the National Quality Forum (NQF).

The Veteran's Health Administration quickly emerged as a bright star in the constellation of safety practice, with system-wide implementation of safe practices, training programs, and the establishment of 4 patient-safety research centers.<sup>20,21</sup>

A host of nongovernmental organizations have made safety a priority. The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) has led the way, tightening up accountability within health care organizations and requiring hospitals to implement new safe practices.<sup>22</sup> The NQF, a public-private partnership to develop and approve measures of quality of care, developed a consensus process that generated standards for mandatory reporting<sup>23</sup> and created a list of high-impact evidence-based safe practices that the JCAHO and other organizations are now beginning to require hospitals to implement.<sup>24</sup> The Centers for Medicare & Medicaid Services and the Centers for Disease Control and Prevention have joined with more than 20 surgical organizations in a new program to reduce surgical complications,<sup>25</sup> and many other specialty societies, particularly the American College of Physicians, have incorporated safety topics into their meetings, education, and research.

The National Patient Safety Foundation, originally housed by the American Medical Association, has become a major force in increasing awareness. Although the National Patient Safety Foundation remains short of stable funding, it has gained a national following and the annual conferences are a wellspring of education and research findings in patient safety.<sup>26</sup> The Accreditation Council on Graduate Medical Education and the American Board of Medical Specialties are engaged in a massive effort to define competencies and measures in each specialty, both for residency training and continuing evaluation of practicing physicians.<sup>27</sup>

The Institute for Healthcare Improvement has helped hospitals redesign their systems for safety through demonstra-

tion projects, system changes, and training in implementation of safe practices for thousands of physicians, nurses, and pharmacists. Several Quality Improvement Organizations have become skilled at helping hospitals reduce medication injury rates and other hazards.

Regional coalitions have sprung up across the country to facilitate stakeholders to work together to set goals, collect data, disseminate information, and provide education and training to improve safety. The original list of medication safety practices for hospitals was disseminated in 1999 by the Massachusetts Coalition for the Prevention of Medical Errors and later adopted by the American Hospital Association. Several large, integrated health care systems, notably Kaiser-Permanente, Ascension, and the Veteran's Health Administration, have been leaders in implementing new safe policies and practices. Hospital group-purchasing organizations, such as VHA and Premier, have made major commitments to disseminating safety information and practices.

Purchasers and payers have entered the arena, particularly the Leapfrog Group, formed by a number of major US corporations. The Leapfrog Group has strongly encouraged the adoption of a number of safer practices in hospitals, including computerized physician order entry systems, proper staffing of intensive care units, and the concentration of highly technical surgery services in high-volume centers. The most recent "Leap" focuses on implementation of the NQF's Safe Practices.

But the most important stakeholders who have been mobilized are the thousands of devoted physicians, nurses, therapists, and pharmacists at the ground level—in the hospitals and clinics—who have become much more alert to safety hazards. They are making myriad changes, streamlining medication processes, working together to eliminate infections, and trying to improve habits of teamwork. The level of commitment of these frontline professionals is inspiring. Most are making

changes, not primarily in response to mandates, but rather to improve the quality of care for their patients.

**Changing Practices.** The third effect of the IOM report was to accelerate the changes in practice needed to make health care safe. Initially, adoption of new safe practices was entirely voluntary. Some hospitals responded to recommendations for medication safety from regional coalitions or the American Hospital Association. Other organizations sent teams to Institute for Healthcare Improvement programs that trained them in rapid cycle improvement and the application of human factors principles in the redesign of their processes. Still others began to change practices in response to the Leapfrog Group mandate.

Following the 2002 publication by the NQF of a list of 30 evidence-based safe practices ready for implementation, the JCAHO in 2003 required hospitals to implement 11 of these practices, including improving patient identification, communication, and surgical-site verification.<sup>22</sup> Additional practices have been added for implementation in 2005.

It is too soon to evaluate the effect of the JCAHO requirements, and few large controlled studies of previously implemented changes have been performed. However, time-series data from hospitals and systems that have been working to improve safety are encouraging. The results achieved in implementing 12 practice changes are presented in the TABLE.<sup>4,28-35</sup> If these results were replicated nationwide, the impact would be substantial.

Finally, a major practice change occurred in teaching hospitals in 2003 when all residency training programs implemented new residency training work hour limitations. These limitations were promulgated by the Accreditation Council on Graduate Medical Education and based on strong but not previously acknowledged scientific information on the relationships between fatigue and errors at work.<sup>36-39</sup> While these work hour restrictions are an enormous step forward, they do not

address the most important cause of fatigue: sleep deprivation due to extended duty shifts. Recent studies have provided specific evidence of the pernicious effect of sleep deprivation on resident performance.<sup>40</sup>

### Barriers to Progress

The diversity and level of engagement in improving safety in health care is impressive. Ten years ago, no one was talking about patient safety. Five years ago, before the IOM report, a small number in a few pioneering places had developed a strong commitment, but its impact was limited and most of health care was unaffected. Now, the majority of health care institutions are involved to some extent and public awareness has soared. A growing patient safety movement is afoot.

But if so much activity is going on, why isn't health care demonstrably and measurably safer? Why has it proved so difficult to implement the practices and policies needed to deliver safe patient care? Why are so many physicians still not actively involved in patient safety efforts? What needs to be done to accelerate the pace of improvement in patient safety?

The answers to these questions are to be found in the culture of medicine, a culture that is deeply rooted, both by custom and by training, in high standards of autonomous individual performance and a commitment to progress through research. It is the same culture that in the latter half of the 20th century brought profound advances in biomedical science and delivered unprecedented cures to millions of US individuals. This culture is technically audacious and productive; many of today's most powerful drugs and treatments were not available as recently as 2 decades ago.

However, these advances created challenges to safety not faced by other hazardous industries that have succeeded far better than medical care in becoming safe, even ultra-safe. The first such challenge is complexity. Modern health care technology is almost certainly more complex than that of other

**Table.** Clinical Effectiveness of Safe Practices

Intervention	Results
Perioperative antibiotic protocol	Surgical site infections decreased by 93%*
Physician computer order entry	81% Reduction of medication errors <sup>28,29</sup>
Pharmacist rounding with team	66% Reduction of preventable adverse drug events <sup>30</sup> 78% Reduction of preventable adverse drug events <sup>31</sup>
Protocol enforcement	95% Reduction in central venous line infections† 92% Reduction in central venous line infections‡
Rapid response teams	Cardiac arrests decreased by 15% <sup>32</sup>
Reconciling medication practices	90% Reduction in medication errors <sup>33</sup>
Reconciling and standardizing medication practices	60% Reduction in adverse drug events over 12 mo (from 7.6 per 1000 doses to 3.1 per 1000 doses) <sup>33</sup> 64% Reduction in adverse drug events in 20 mo (from 3.8 per 1000 doses to 1.39 per 1000 doses) <sup>4</sup>
Standardized insulin dosing	Hypoglycemic episodes decreased 63% (from 2.95% of patients to 1.1%) <sup>34</sup> 90% Reduction in cardiac surgical wound infections (from 3.9% of patients to 0.4%)§
Standardized warfarin dosing	Out-of-range international normalized ratio decreased by 60% (from 25% of tests to 10%) <sup>33</sup>
Team training in labor and delivery	50% Reduction in adverse outcomes in preterm deliveries
Trigger tool and automation	Adverse drug events reduced by 75% between 2001 and 2003 <sup>35</sup>
Ventilator bundle protocol	Ventilator-associated pneumonias decreased by 62%*

\*J. Whittington, written communication, March 2005.

†P. Pronovost, Johns Hopkins Hospital, written communication, January 2005.

‡R. Shannon, written communication, January 2005.

§K. McKinley, Geisinger Clinic, written communication, April 2005.

||B. Sachs, Beth Israel Deaconess Medical Center, written communication, October 2004.

industries. The dean of safety researchers, Professor James Reason, has observed that health care is also more complex than any other industry he knows in terms of relationships, with more than 50 different types of medical specialties and subspecialties interacting with each other and with an equally large array of allied health professions (oral communication, October 2003). The more complex any system is, the more chances it has to fail.

A second challenge is medicine's tenacious commitment to individual, professional autonomy. Creating cultures of safety requires major changes in behavior, changes that professionals easily perceive as threats to their authority and autonomy. Overlay this demand to change individual behavior with the challenges of learning a nonblaming systems-oriented approach to errors and establishing new lines of accountability, and it is not surprising that progress in achieving safety in health care is slow.

Fear poses a third major challenge. Many physicians greeted the horren-

dous mortality data published by the IOM with disbelief and concern that the information would undermine public trust. The normal human resistance to change was amplified by fear of loss of autonomy, antipathy toward attempts by others outside the profession to improve practice, and skepticism about the new concept that systems failures are the underlying cause of most human errors. An understandable fear of malpractice liability inhibits willingness to discuss, or even admit, errors.

The combination of complexity, professional fragmentation, and a tradition of individualism, enhanced by a well-entrenched hierarchical authority structure and diffuse accountability, forms a daunting barrier to creating the habits and beliefs of common purpose, teamwork, and individual accountability for successful interdependence that a safe culture requires.

In addition to these powerful cultural factors, lack of leadership at the hospital or health plan level impedes progress. Changing the culture, even

changing a few practices and policies, requires that all personnel share a common vision and personally own safety. This cannot happen without commitment at the top level of the organization. Although the JCAHO requires all hospitals to implement safe practices, and the NQF has issued a clear statement about the responsibility of boards,<sup>41</sup> few of the chief executive officers and boards of hospitals and health plans have made safety a true priority in their institutions or committed substantial resources toward safety.

Another key barrier to making progress is a paucity of measures. Identifying problems, measuring progress, and demonstrating that improvement has been achieved all depend on the availability of robust measures. Some exist, such as measures of specific types of infections, certain laboratory tests (blood glucose), AHRQ's recent promulgation of a set of patient safety indicators,<sup>42</sup> and the Institute for Healthcare Improvement's trigger tools for measurement of harm,<sup>43</sup> but many more measures are needed. More global measures are especially necessary, such as the Adverse Outcomes Index developed by the Quality Assurance Committee of the American College of Obstetricians and Gynecologists, which is used in labor and delivery and includes weighted values for all complications (B. Sachs, Beth Israel Deaconess Medical Center, written communication, October 2004). Measures are crucially necessary to be able to demonstrate that changes improve safety and decrease costs.

The current reimbursement structure works against improving safety and actually rewards less safe care in many instances. For example, insurance companies sometimes will not pay for new practices that reduce errors, such as anticoagulation clinics operated by nurses, new information technologies, or counseling of patients by retail pharmacists. However, payers often subsidize unsafe care quite well, although unknowingly. In most industries, defects cost money and generate warranty claims. In health care, perversely, under most forms of payment, health

care professionals receive a premium for a defective product; physicians and hospitals can bill for the additional services that are needed when patients are injured by their mistakes.<sup>44</sup>

### What Do We Need to Do?

Despite these formidable barriers, health care is well poised to increase the pace of improving patient safety in the near future. As a result of the advances by the many stakeholders over the past 5 years, a critical mass of informed and concerned physicians, nurses, pharmacists, administrators, risk managers, and other individuals is in place to help organizations make substantial changes. Not only do these highly motivated individuals have the skills and knowledge needed to make changes, they have the tools they need in the form of tested and effective safe practices awaiting implementation.

Dramatic advances are likely within the next 5 years in at least 4 important areas: implementation of electronic health records; wide diffusion of proven and safe practices, such as those approved by the NQF; spread of training on teamwork and safety; and full disclosure to patients following injury.

The electronic health record may be, finally, an idea whose time has come. Many of the technical problems, such as the lack of standards for data elements and ensuring interoperability that have held back adoption, are resolved or well on their way to solution. The federal government has appointed an information technologies czar, Dr David Brailer, within the Department of Health and Human Services to oversee and stimulate dissemination. Major payers and health care systems have begun to realize that the substantial up-front investment that is required to put systems in place in every hospital and every physician's office will be paid back handsomely within a few years by increases in efficiency and decreases in charges for costly adverse events.

The pace of adoption of safe practices will almost certainly accelerate. The JCAHO and several payers, including Centers for Medicare & Medicaid

Services, have indicated their interest in furthering the adoption of the NQF proven safe practices. As hospitals have wrestled with implementing the initial set of practices required by the JCAHO over the past 2 years, they have developed considerable expertise in making changes, and the capacity of the Quality Improvement Organizations to help them has also grown. Hospitals will now be able to implement new practices faster, and will find increasing incentives to do so.

Training physicians, nurses, and other professionals to work in teams is another idea whose time seems to have come. The interest in team training has grown rapidly over the past several years, abetted by the adoption of simulation techniques. The Accreditation Council on Graduate Medical Education has now articulated practice-based learning and systems-based practice as 2 of the core professional skills to be inculcated in all approved residency training schemes. Whole systems and hospitals are now providing team training to their entire medical staffs.

Finally, the ethically embarrassing debate over disclosure of injuries to patients is, we strongly hope, drawing to a close. Although actual practice still lags far behind the rhetoric,<sup>45</sup> few health care organizations now question the imperative to be honest and forthcoming with patients following an injury. As evidence accumulates that full disclosure does not increase the risk of being sued, it is becoming easier for physicians and nurses to do what they know is the right thing—tell the patient everything they know when they know it.

These advances will be welcomed and will have a measurable impact on reducing medical errors and injuries over the next 5 years. However, these advances represent only a small fraction of the work that needs to be done. A truly national response to the IOM's call to reduce preventable patient injuries by 90% requires that every health care board, executive, physician, and nurse make improving safety an absolutely top strategic priority—fully equal

to the corporate priority of financial health. At a national level, such a commitment has yet to emerge; indeed, it is not in sight.

If the experience of the past 5 years demonstrates anything, it is that neither strong evidence of ongoing serious harm nor the activities, examples, and progress of a courageous minority are sufficient to generate the national commitment needed to rapidly advance patient safety. Such a commitment is not likely to be forthcoming without more sustained and powerful pressure on hospital boards and leaders—pressure that must come from outside the health industry.

### Mobilizing Pressure for Change

Where will this pressure come from? In England, the governmental response has been to establish a National Patient Safety Agency under the National Health Service, charged with stimulating and coordinating safety efforts throughout the system.<sup>46</sup> In the current US political climate, it is hard to imagine a similar effort by the federal government within the foreseeable future.

Can public outrage provide the pressure needed for change? Although surveys continue to show the public is concerned about medical errors and sensational cases provoke bursts of outrage, public concern is evanescent and thus an inadequate motivator for change. Even campaigns from patient advocacy groups<sup>47,48</sup> have failed to stir many boards of trustees of hospitals to call for major organizational changes.

What about regulation? One of the star players in the safety movement over the past 5 years has been the JCAHO, which has steadily increased the demands on hospitals to take patient safety seriously and indicated its commitment to continue to press for adoption of more proven safe practices. But regulation works as a sustainable force for change only when those organizations being regulated see those changes to be in their longer-run self-interest. The threat of decertification can produce evanescent, compliant behav-

iors, but it seems insufficient to do the job of transforming cultures, where the deeper solutions lie.

Can reimbursement provide the pressure for change? The current method of financing health care not only fails to provide incentives for safe care, it rewards unsafe care. That can change, and in fact, is changing. The pay for performance movement is gathering steam. Experiments with bonuses for physicians and plans who achieve goals of providing needed care, such as annual eye examinations for patients with diabetes mellitus, are well under way. Under the recent Medicare Modernization Act, the Centers for Medicare & Medicaid Services is launching some important and promising demonstration experiments that may offer evidence on the effect of improved payment schemes on safety efforts.

Whether these schemes will result in measurable improvements in safety remains to be seen. An important concern is whether current performance measures have sufficiently high sensitivity and specificity to accurately identify safer care when used in report cards or reimbursement plans. A second question is whether we have a sufficient number of validated measures to have a significant impact on safety, or on reimbursement. Finally, it seems likely that pay for performance, like all other methods of reimbursement, will have its own unanticipated perverse incentives that could undermine its effectiveness.

A better approach would be to favor in-payment hospitals and physicians who actually achieve high levels of safety. What about incentive bonuses for driving levels of ventilator-associated pneumonia, surgical site infections, or central line infections to zero, or close to zero? These levels have already been achieved in a small number of hospitals committed to safe care (P. Pronovost, Johns Hopkins Hospital, written communication, January 2005).<sup>4</sup> Payment incentives could accelerate widespread adoption of these practices with savings in life and money that would be enormous.

It may be equally important to begin to create negative financial consequences, or at least disincentives rather than financial rewards, for hospitals and other health care organizations that continue to tax the public and their patients with the burden of unsafe practices and resulting complications. Payment should not reward poor safety. In this regard, the recent decision by payers in Minnesota to cease paying hospitals for serious preventable adverse events<sup>49</sup> makes good sense and should be emulated by payers nationwide.

### Setting Safety Goals

But for nationwide impact, we cannot rely on these piecemeal efforts to provide the pressure needed for change. If the payers and other parties are to have a significant impact on patient safety in the next 5 years, their efforts must be aligned behind common national safety goals. The most important single step that should be taken by the United States to align the forces of change would be to set and adhere to strict, ambitious, quantitative, and well-tracked national goals.

In November 2004, at the Commonwealth Fund–IOM meeting commemorating the fifth anniversary of the IOM report, participants called for a concerted effort to set clearly defined achievable goals for improving patient safety over the next 5 years—goals with measurable end points.

We call upon the AHRQ to bring together the JCAHO, NQF, American Hospital Association, American Medical Association, Leapfrog Group, and all of the major payers, including the Centers for Medicare & Medicaid Services, to agree on a set of explicit and ambitious goals for patient safety to be reached by 2010. The list provided by the Commonwealth Fund–IOM would be a good place to start. It is short, concrete, and achievable. This list called for a 90% reduction in nosocomial infections, a 50% reduction in medication errors, a 90% reduction in errors associated with high-harm medications, and 100% elimination of



the NQF "never" list.<sup>24</sup> In its 100 000 Lives campaign,<sup>50</sup> the Institute for Healthcare Improvement has adopted these as well as so-called rapid response teams to prevent failures to rescue.<sup>51</sup> Not only would these results measurably improve safety overall, but also achieving them would require institutions to make a high-level commitment and to develop effective teams, 2 critical elements of the culture change that is needed.

Technically, results like these are not out of reach. With sufficient will and leadership, they lie entirely within our grasp. The primary obstacles to achieving these results for the patients who depend on physicians and health care organizations are no longer technical; the obstacles lie in beliefs, intentions, cultures, and choices. All of those can change. The most important lesson of the past 5 years since the IOM spoke out on one of the major public health issues of

our time is that we will not become safe until we choose to become safe.

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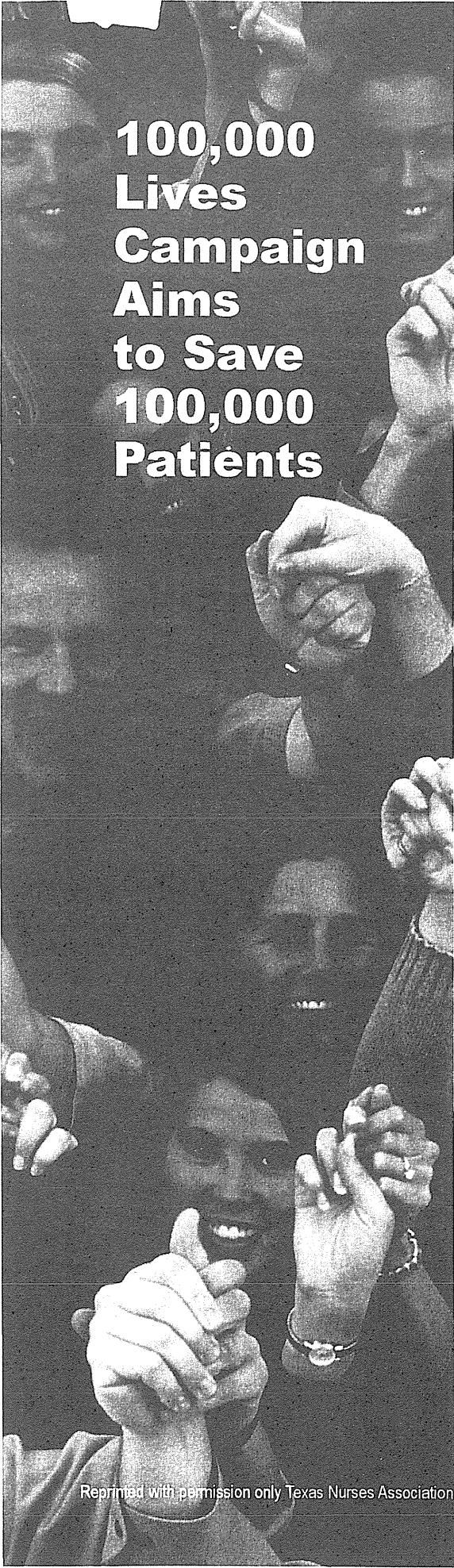
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# 100,000 Lives Campaign Aims to Save 100,000 Patients

## COVER STORY

There's a group of health care organizations across the country - Texas Nurses Association and American Nurses Association among them - who share a belief that a few proven interventions implemented broadly enough can save 100,000 lives a year. With that belief in mind, the 100,000 Lives Campaign was born, its members dedicated to the thought that "for every broken part in our (health care) system, there are remarkable examples of excellence."

The 100,000 Lives Campaign, launched in December of 2004, is a nationwide initiative of the Boston-based,

not-for-profit Institute for Healthcare Improvement (IHI) that has a goal of rapidly reducing morbidity and mortality in American health care by preventing common hospital system errors. The campaign is on an 18-month accelerated pace to improve U.S. hospital care by getting health care organizations to implement proven, life saving interventions. The IHI stands convinced that "a remarkably few proven interventions, implemented on a wide enough scale, can avoid 100,000 deaths over the next 18 months, and every year thereafter."

**... AN ESTIMATED  
98,000 PEOPLE  
DIE UNNECESSARILY  
EACH YEAR IN U.S.  
HOSPITALS BECAUSE  
OF MEDICAL  
INJURIES ...**

## HARNESSING EXPERIENCES, APPLYING BEST METHODS

Spurred on by earlier (1999) Institute of Medicine statistics revealed in *To Err is Human*, that perhaps as many as 98,000 people die unnecessarily each year in U.S. hospitals because of medical errors, and the CDC's estimate that two million patients suffer hospital-acquired infections each year, the 100,000 Lives Campaign seeks to "disseminate powerful improvement tools, with supporting expertise, throughout

the American health care system." It plans to do this by enlisting the nation's 5,500 hospitals in applying proven, best methods 100% of the time from those organizations that have made changes to improve care and reduce patient harm. As of mid-June 2005, over

2,000 hospitals nationwide have enrolled in the campaign and in the commitment to implement changes in care that have been proven to prevent avoidable deaths.

The first to set extremely specific, safety measures, the 100,000 Lives Campaign is promoting six changes in care that can reduce harm and deaths:

■ **Deploy Rapid Response Teams** at the first sign of patient decline. The teams may be summoned at any time to examine patients at the first sign that their condition has declined.



**Goal:** Prevent deaths in patients who are progressively failing outside the ICU by implementing rapid response teams.

■ **Deliver Reliable, Evidence-Based Care** for Acute Myocardial Infarction to prevent deaths from heart attack. This can include early – and at discharge – administration of aspirin and beta-blockers, and even smoking cessation counseling.

**Goal:** Prevent deaths among patients hospitalized for acute

myocardial infarction by ensuring the reliable delivery of evidence-based care.

■ **Prevent Adverse Drug Events** by implementing medication reconciliation that ensures patients receive all intended medications and no unintended medications that frequently occur following transitions in care locations.

**Goal:** Prevent adverse drug events by implementing

medication reconciliation.

■ **Prevent Central Line Infections** by implementing a series of five interdependent, scientifically grounded steps, such as hand hygiene and daily review of line necessity.

**Goal:** Prevent central venous catheter-related bloodstream infection (CR-BSI) and deaths from

CR-BSI by implementing a set of interventions known as the “central line bundle” in all patients requiring a central line.

■ **Prevent**

**Surgical Site Infections** by reliably delivering the correct perioperative antibiotics at the proper time.

**Goal:** Prevent surgical site infection (SSI) and deaths from SSI by reliably implementing ideal perioperative care for all surgical patients.

■ **Prevent Ventilator-Associated Pneumonia** by implementing a series of interdependent, scientifically grounded steps such

as elevating the head of the bed by 30 degrees.

**Goal:** Prevent ventilator-associated pneumonia (VAP) and deaths from VAP and other complications in patients on ventilators by reliably implementing a set of interventions known as the “ventilator bundle.”

IHI plans to add other changes in the future that have also been proven to save lives.

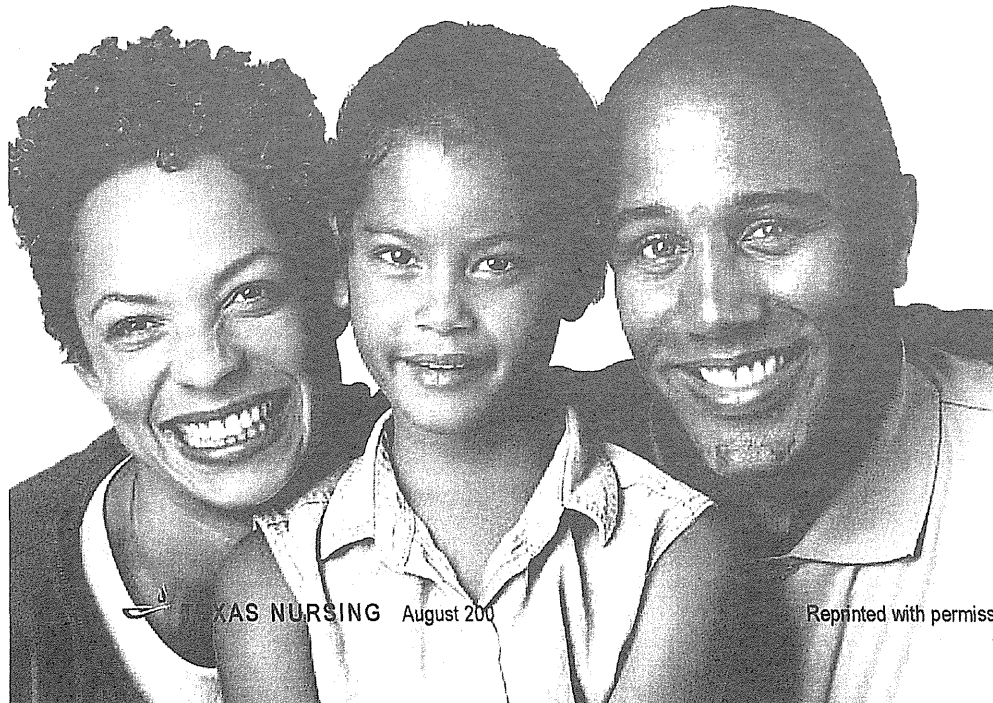
### FIRST STEP: SIGN UP

Texas has one of the lowest participation rates in the nationwide campaign that includes an impressive list of participants. Nurses who can incorporate the six changes into their care, can also educate others about the campaign goals and encourage their health care organizations to become part of the 100,000 Lives Campaign. Regardless of practice setting, nurses can influence others in their health care communities to pursue the improvement interventions.

There’s no cost to join the 100,000 Lives Campaign – only a commitment to make changes and report back on your progress. Signing up is as easy as completing and submitting an official enrollment form which is available online ([www.ihl.org/ihl/programs/campaign](http://www.ihl.org/ihl/programs/campaign)).

At the same Web site is plenty of easily accessible information about participating in the campaign: detailed information about participating hospitals, the platform and improvement methods, Getting Started kits, and useful, informational tools and resources. If you need a printed copy, please contact TNA Headquarters at 800-862-2022 or [tna@texasnurses.org](mailto:tna@texasnurses.org).

**“HEALTH CARE DOES NOT YET RELIABLY TRANSFER BEST-KNOWN SCIENCE INTO PRACTICE.”**



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