

# Smart-Care

**Bruce T. Taylor, M.D.**

**How to save up to 15% or more of the cost of healthcare,**

- **over \$500 Billion per year,**
- **give a 2.7% boost to the economy**
- **improve care and access to care**

**by using the cloud and existing technology for online:**

- **Universal electronic records**
- **Insurance information and demographic**
- **Rapid payments**

## **Enclosed:**

- **1 page version**
- **slides**
- **4 page whitepaper with references**

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**(1) Smart-Care (5 minutes – one page)**

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No one is happy with the current system where the US economy is being crippled by healthcare which is now 18% of our spending. (2) We pay more per capita for healthcare than any other country in the world and yet we don't live as long – for example we spend fifty percent more than the Swiss who live on average 4 years longer; in 2013 U.S. males ranked only 25<sup>th</sup> in life expectancy, right below Slovenia. Congress's current proposals to lower healthcare costs would result in reductions or loss of benefits for millions, including many of the mentally ill. (3) Part of the problem is that we lose an average of 31% of each healthcare dollar to administrative costs. Many psychiatrists do not accept insurance as healthcare providers struggle to get records from one place to another and to complete an elaborate transfer of information to get complex benefits and billing correct, to eventually get paid. These problems reduce funds available for other needs and cause discontent with healthcare. Fewer of our brightest graduates choose health professions, leading to an erosion of future care.

(4) A solution to these issues is the Smart-Care system which can reduce these problems and costs while helping to improve care. Smart-Care will use secure online technology to make patient records available to all providers through the cloud along with insurance coverage, billing and reimbursement. Other countries with lower costs and better results do something similar. This should produce savings of up to 15 percent or more which would be over 500 Billion dollars a year and yield a 2.7 percent boost to the entire United States economy. (5) With Smart-Care waste is cut by accessing the health information system at the start of an encounter using the patient's magnetic card or number along with passwords and possible biometric protection. Benefits are clearly available at the point of service and, after the visit, a brief record of care is uploaded in return for prompt online payment. Everything stays up to date and readily available to improve care.

(6) Smart-Care can build on existing health data exchanges that typically only include hospital records by adding national standards for records, along with benefits coverage and prompt online reimbursements. (7) The online availability of free basic records will make it easy for all providers to participate. More funds will be available for other needs, improving the quality of life in many ways beyond healthcare while helping the US to compete in the world economy.

(8) Some of the many benefits of immediate online record availability, insurance coverage and the ease of prompt online payments include:

- Increased access to care with reduced costs
- Less administrative time and expense
- Happier providers and patients
- Ready availability of records to coordinate care
- Quick look up of organ donor status, health care power of attorney, and living wills
- Patients can opt-in to facilitate research which otherwise would not be possible
- And assisting with lifesaving history when an Emergency Room patient can't provide information as after an OD or stroke.

(9) For a change this big, government must lead the way by: helping to set the standards, giving start up grants and requiring all government employees to be covered by insurance using the program within 3 years. The process would start with providing support for focus groups of stakeholders to study the systems in use elsewhere and to develop the standards for the US within a year. Electronic records vendors might use existing Health Level 7 standards to communicate. Unique patient identifiers need to be assigned and authorized to ensure that the correct information is provided for each person. Demographics and benefits must be consistently outlined. To improve system security each access point can be specified along with two factor identification. Grants can be provided to companies to develop the free online basic records. Once several private carriers voluntarily agree to offer the program in a service area, they will have a competitive advantage and others will follow suit.


Smart-Care would be a huge change and government must help get it started. The Innovation Lab and the APA can champion Smart-Care to Washington. Together we can help protect funding for our patients and bring care into the 21<sup>st</sup> century.

(Numbers in parenthesis are slide numbers.)


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**SMART-CARE**

Online Secure, Universal Health Records with Payments



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APA Innovation Lab  
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**We Spend More and Live Less**


**U.S. spends the most per capita of any country in the world**  
**50% more than Switzerland**  
**Life expectancy is shorter**



Country	Life Expectancy (Years)
Switzerland	80.7
Iceland	80.5
Israel	80.4
Italy	80.3
Japan	80.2
Spain	80.1
Sweden	80.0
Australia	79.9
Luxembourg	79.8
Norway	79.7
Netherlands	79.6
New Zealand	79.5
United Kingdom	79.4
France	79.3
Ireland	79.2
Greece	79.1
Austria	79.0
Germany	78.9
Korea	78.8
Denmark	78.7
Belgium	78.6
Finland	78.5
Poland	78.4
Slovenia	78.3
United States	75.4
Czech Republic	75.3
Estonia	75.2
Slovak Republic	75.1
Hungary	75.0
Mexico	71.7

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- 31% of each U.S. healthcare dollar is lost to administrative costs due to:
  - Multiple complex policies
  - Difficulty getting insurance info
  - Records not readily available
  - Slow complex payment





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**SMART-CARE**

**Secure Online (Cloud):**

- Electronic Records
- Insurance Coverage
- Payments

**Can Save 15 % or More of the cost of care = over \$500 Billion per year**

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**SMART-CARE**



6

**SMART-CARE**



7

## SMART-CARE

- Free Basic Electronic Record
- makes it easy for all providers



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## SMART-CARE: BENEFITS

- Increased access to care
- Less administrative time & expense
- Happier providers & patients
- Coordinated care
- Organ donor, living will & power of attorney
- Facilitation of research
- Lifesaving history for ERs

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## SMART-CARE = Savings Solution

Ready online secure cloud based access to  
critical health information, benefits and payments

Let Washington know



Together We Can Make a Difference

## Smart-Care: Healthcare Savings and System Reform

### Online Health Card Billing, Payment and Electronic Medical Records

Bruce T. Taylor, M.D.

#### Summary:

**By using a magnetic stripe card coupled with password and possible biometric protections to securely access online electronic medical records, insurance information and immediate payments we can save up to 15% or more of the cost of healthcare without cutting benefits or payments.** In addition to many beneficial health effects of the proposed system, **this would be like a 2.7% boost to the economy** since healthcare is about 18% of the cost of most products. **If the savings were only 15%, this would be over \$500 Billion per year in the United States.**

#### Concept Overview

*Problems:* The cost of health care and insurance continues to go up, leaving more and more of the population uninsured; the administrative and overall cost of health care in the U.S. is very high while measures of the effectiveness of our healthcare are below those of other advanced countries. Providers and their staff spend a lot of time and expense figuring out each person's unique coverage situation in order to correctly bill and collect for services. We are not using the most modern billing and payment systems despite all our advances, and as individual providers computerize with unique systems, a lack of inter-operability and standardization of systems communication will further increase costs. Healthcare professions are less attractive to our brightest graduates, eroding the quality of care for our future generations.

*Solution:* Develop and implement a health card (simple magnetic stripe credit card style) for secure over the web patient identification, registration, payment, and Electronic Medical Records with standards and a program that can be implemented in a step-wise fashion on a voluntary basis by the insurance and health care industries, with government leading the way.

*Benefits:* Reduced administrative costs and reduced direct costs will allow our healthcare dollars to go further by decreasing the cost of delivery of healthcare to all. The government money saved can go to fund care for the uninsured and under-insured; the private funds saved can be used to reduce costs, to improve benefits or both. Healthcare satisfaction, delivery and quality are expected to improve. Extensive and comprehensive data will be available for research to advance healthcare. Since healthcare is estimated to be 18% of the cost of most products, the savings should have a broad positive impact on the community, similar to a 1.8% boost in the economy.

#### Details

Healthcare documentation, billing and reimbursement methods are still largely old-fashioned, despite computer advances, yet the technologies are available now to make a significant impact on healthcare and the economics of delivering services if standards are implemented to allow inter-operability and compatibility of systems for record keeping, billing, payment, and reporting. Once developed, in the near future, patients will carry insurance or health cards similar to their current credit cards. The cards do not need to be "smart" or have any more data than the magnetic stripe of a regular credit card. The patient will present this card (or the number) when they are seeking any type of health care service. Medical staff will swipe the card through an inexpensive reader attached to their computer (or the data could be entered manually without a reader). If the patient provides the proper password, and / or their fingerprint or other biometric access can be added for additional security, the screen will pop up with the patient's name, demographic information, insurance coverage, deductibles and co-payments. The healthcare provider will then also have access to the patient's secure online computerized comprehensive medical record and history. The provider will be able to securely upload a computerized record of his or her patient interaction and billing information to receive immediate claim adjudication and payment. The data on the magnetic stripe will be interpreted across the internet by central clearing house(s) to connect to the proper

data base(s) to provide the information and complete the transaction. The screen will indicate any co-payment which the provider should collect on the spot and show the payment that has just been placed directly into the provider's bank account electronically. Similarly if pre-authorization and payment information is needed for a planned procedure, it can be obtained in real-time in seconds instead of hours, days, or weeks.

At some point in the future the health card, Health Savings Accounts (HSAs) and a credit card for retail purchases might be combined. Only one card would be needed to make a health transaction for insurance, HSA and co-pay.

With this system providers will not need to spend precious time waiting to obtain past records of care or benefits; they will not need to have patients return for another visit because they lack data about what has already been done; they will not have to repeat costly lab tests or procedures because results are not available when the patient needs treatment; providers will not need to send multiple reports to insurance companies to get approvals or reimbursements. For those providers who use additional software including electronic medical records packages, updates to these software will enable providers to use the systems they are already familiar with while payers and reviewers will be able to obtain whatever information they need to approve the care and to audit treatment without disrupting provider practices.

Government required reporting can be accomplished with a few clicks on line without re-entering data, enabling accurate and rapid gathering of critical information regarding any illness or treatment of concern.

In addition to regular access, emergency rooms and other approved facilities will be able to make use of emergency contact, next of kin, living wills, durable power of attorney, and key medical information which could be available with special access from secure facilities and terminals at times when the patient might not be able to provide the regular password(s).

With widespread adoption and use, new types of research that are not possible now will be able to supplement current investigation techniques. Aggregate data stripped of identifying information will be available on secured lines to enable authorized researchers to access extensive data and populations, or specific subsets. Supercomputers at academic centers can crunch this data to advance our healthcare knowledge. Researchers with appropriate password access will be able to track patient recidivism and use other concrete measures to rapidly evaluate the adequacy of different treatments and providers. Patients can select if they do not wish to have their health data used for research.

This vision of the future is within our grasp; the technologies already exist and are in use in many other countries. With a large number of providers using the systems described, its cost would be negligible, especially when compared to the savings and benefits. Incentives and government grants could encourage large software companies to donate the software to the public good or developers might contribute to an open source code. A basic version to view and transmit insurance, demographic, billing and payment information should be available at no cost on the web with additional medical records functions being available at varying costs, according to the different packages and services chosen from a variety of commercial vendors. Software can also facilitate diagnosis, treatment and coding of healthcare interactions to improve outcomes.

Government grants should be utilized to establish the criteria, security features and format for the data exchanges, records, billing and payments and to create and implement the first system pilots. Evaluation of systems in other countries and additional studies could be used to guide system development. We already have certain aspects of community electronic records (Chesapeake Regional Information System for our Patients [CRISP] and the Patient Drug Monitoring Program [PDMP]) and billing for healthcare visits and e-prescribing as well as electronic reporting of hospital visits (through the Health Services Cost Review Commission in Maryland), but the systems are not fully integrated, and the resulting payment processes are slow even though they are better than pen and paper. Security and encryption techniques are now sophisticated enough to sufficiently deter unauthorized access when coupled with strong password protections, dual authentication and a network of authorized computers for transactions. The computer systems offer better control over access to records than paper and photocopies, with traceable records and logs holding those with access accountable.

The "big brother aspects" are acceptable tradeoffs for the accountability providers should deliver to the public and for all of the benefits that government, business, providers and patients will reap. Providers will be able to once again be more doctors and practitioners and less paper pushers and administrators. Maryland has been a leader in healthcare before, and there is no reason why such a system could not start in Maryland as a test bed for the rest of the country. While this

proposal is not specific to any specialty, it can encompass the confidentiality needs of all patients and assist all healthcare providers in improving their practices. With less cost to collect payments, and less time spent on administrative duties, providers will eventually be able to see more patients for less money throughout the entire healthcare system and/or provide better, more comprehensive care. Since 3-31% of our healthcare dollars are now spent on administrative expenses, an estimated savings of 10% to 15% would be substantial: a 10% savings would be in excess of \$333 Billion per year nationwide and in excess of \$6.2 Billion annually for Maryland. Preventive care and research would be facilitated. We would have a healthy health system and would expect healthier and happier citizens, businesses, industry and healthcare providers. With healthcare being about 18% of the cost of most products, there would be a widespread positive impact on the economy similar to a 1.8% economic stimulus. Some of the best young people are no longer selecting healthcare due to dissatisfaction with the current systems of delivery and payment; this would be a large step towards correcting this situation.

### **Suggested Implementation Steps**

1. Year 1: Formation of task force &/or study group to develop and implement the standards, assisted by funding and grants from the Federal Government. A wide range of stakeholders from the community should provide input to develop the design and specifications.
  2. Year 2: Completion of system funding, specifications, programming and testing, utilizing existing systems and standards as much as possible, for:
    - Patient registration and identification - including a unique patient identification number to be issued at birth or first health care registration or insurance provision
    - Billing and payment
    - Electronic prescriptions (Significant progress has already been made in this area.)
    - Confidentiality, security and encryption
    - EMR (Electronic Medical Records)– including coding of diagnoses and procedures
    - Model legislation is enacted to implement the system and to facilitate identification, prosecution, and adequate penalties for any who abuse the system.
  3. Years 3 to 10: timelines for government and private sectors to implement the system:
    - Government employees' coverage suggested to meet these guidelines in 3\* years
    - Medicaid suggested to meet the standards in 3\* years
    - Medicare suggested to meet certain standards by 5\* years
    - Large insurers suggested to meet standards by 5\* years, Medium in 7\*, Small in 9\* years
    - Consider suggested timeframes for providers and pharmacies to voluntarily adopt the technology
  4. System specifications and details are made public and available (except as needed for secure access).
  5. Insurers and vendors develop, test and implement the systems with the help of volunteer providers.
  6. Once the system is in place for the providers and insurers who agree to participate, others will, I believe join in before the suggested times once the benefits are visible and known in the community as there will be a desire to adopt technology which saves time and money while improving the quality of care.
  7. Provide Federal grant money to:
    - Pay expenses of hardware and software (or software adaptation) of testers and early adopters
    - Pay for training and support of the systems
    - Set up the "health card" credit card type clearing houses and data banks
    - Study the costs /benefits and indicate areas that may need improvement
- \*The timeframes suggested are draft estimates which may need to be revised as progress is made.

### **Cost to Implement**

Direct cost to government would be minimal, especially when compared to the savings. The initial cost will be the funding of the task force/study group, grants to major insurers and software companies to make their systems compatible, and grants to set up free basic online electronic records and billing for those without compatible systems. There will also be costs to set up the data centers to securely maintain the information, but in many instances, this will simply involve expansion of regional health data networks while making them compatible with national standards and adding the billing and reimbursements. Ongoing maintenance of the system can be financed by small transaction charges. The insurers or third party intermediaries, and electronic records companies will need to adapt their systems to be able to be online, real time and to interface by standard, secure protocols; Federal grants should facilitate this process to enable significant

nationwide savings annually. If the savings were only 10% of the cost of healthcare, this would be in excess of \$333 Billion / year nationally. There may be industry resistance to making this investment in the future of health care, but ultimately the insurers, administrators, providers and the insured public would all save money as claims processing will be automated and other administrative costs substantially reduced. Human intervention will be needed only for monitoring, maintaining, improving and auditing the systems. Some may even predict that payers will be reluctant to implement systems that reduce the time payers get to keep funds to make money on the “float” on the healthcare payment dollars. Change can be difficult, but in this case it can also be very rewarding – there is significant competition in the health marketplace and there should be substantial demand for any system which can save an estimated 10-15% on the cost of purchasing and administering benefits. It is expected that once a few have demonstrated the success of the system, others will voluntarily invest to avoid being left behind. The ones who will save and gain the most will be those who take the risk to obtain the grants and be the first in the demonstration and pilot projects.

I look forward to your comments, concerns and suggestions on implementing this vision. Please feel free to contact me:

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Please note: I do not expect any financial gain from this proposal; the technology and basic software should be open access.

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