

HEALTHone™



Clinical Management, for life

**The Consumer-held
Personal Health Record**

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Consumer-held Personal Health Record

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Consumer-held Personal Health Record

The need

There is a clear demand, world-wide, for electronic health records (see Annex 1). Until now the market has been for electronic health records to be used by healthcare professionals but the new, and rapidly expanding market, is for personal health records for individual consumers.

In April 2004 President George W. Bush called for the widespread adoption of electronic health records in the USA within 10 years. The demand is here already. 61% of Americans want access to their own personal medical records (see Annex 2).

The consumer-held, lifelong personal health record, has three unique benefits, each of which is unachievable with healthcare professional records. They are:

- continuity of information;
- co-ordination of care;
- enabling choice.

Each is discussed in more detail in Annex 3.

The benefits and requirements of electronic health records for healthcare professionals are relatively well understood and met. However, the consumer-held personal health record imposes major new constraints that most existing electronic health record software suppliers are not able to meet. For example, the logical place for a consumer-held personal health record is the Internet, accessed by both the consumer and the healthcare professionals treating the consumer.

This is straightforward to achieve, but, by itself, creates an absolute dependency on an Internet connection for healthcare to function. This is impractical and a portable offline version of the record is mandatory in addition. This must be a live operational version of the record, not merely a copy. The Internet version cannot be locked while the offline version is in use and therefore both the online and the offline versions must be capable of simultaneous and independent updating and then, when next connected, they must synchronize automatically and robustly. Few existing electronic health record suppliers can provide a record for a single consumer, online and offline, with simultaneous independent updating and automated synchronization.

This has opened the market to new entrants. Yet the consumer-held personal health record needs to be just as powerful as the records used by healthcare professionals and the new entrants lack the experience and depth of understanding of the established suppliers.

Many formats are possible for the offline version, including CDs, thumb drives, and memory cards, or mobile phones, but the Smart card, being credit card sized, is by far the most familiar form for consumers, and thus the one most likely to find a place in the consumer's purse or wallet.

The solution

Health One Global Limited is the London based international developer and distributor of *HEALTHone*, a software solution for the management of electronic health records.

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HEALTHone is currently used by about 3,000 healthcare professionals in 18 different medical specialities in 6 countries (Ireland, Belgium, France, Switzerland, South Africa, and USA) and in 3 languages, English, French, and Dutch. The Spanish and Portuguese versions are also available.

Globally HEALTHone is used by the Special Olympics movement (see below and Annex 5) to collect healthcare screening data from 600 events in 65 countries each year including the Summer World Games in Dublin, Ireland in 2003, the World Winter Games in Nagano, Japan in 2005 and the upcoming World Summer Games in Shanghai, China in 2007 which will attract a total of 7,500 athletes.

HEALTHone is a mature, stable, robust, standards-based product with a 20 year history of continuous R&D, evolution and refinement in an unusually wide variety of clinical specialities, organisations and countries. HEALTHone is available in Windows and Internet versions which can share a common record server giving maximum flexibility in implementation.

By virtue of its unique software architecture HEALTHone not only meets the existing requirements for healthcare professionals but is also able to meet the new requirements for the consumer-held personal health record.

In July 2006 Health One Global successfully wrote and read a HEALTHone personal health record to and from a Smart card, kindly supplied by Sharp. Such is the power and flexibility of HEALTHone that this was achieved within 2 weeks of receipt of the Smart card from Sharp.

Therefore a HEALTHone personal health record can now be freely transferred between the Internet and offline versions in both directions, updated simultaneously and independently and automatically synchronized whenever the Internet and offline versions are connected. Entries are automatically merged and placed in the correct chronological sequence in both versions.

HEALTHone 's technology now meets the requirements of the consumer-held personal health record around the world and offers both healthcare professionals and consumers worldwide, a common, interoperable, and multilingual electronic personal health record system. This is a major competitive advantage.

Instead of, or perhaps alongside, a Smart card version of HEALTHone, some consumers are certain to want a mobile phone version of their personal health record. The HEALTHone data architecture is capable of this and the next logical step for Health One Global is to write the mobile phone version. The same applies to a PDA version. Both these will inherit all the current abilities of HEALTHone, including simultaneous and independent updating of all versions and automated synchronization when any two versions are connected.

Consumers could, therefore, maintain an Internet version, a PC version, a PDA version, a Smart card version and a mobile phone version of their personal health record, or any combination of these that suited their own preferences. Consumers would use whichever version was most convenient for them at any particular time, knowing that all versions could be updated independently and simultaneously and all synchronized at will.

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Interoperability

One pre-requisite for the widespread use of personal health records is the use of interoperable data standards. Relevant international standards are only now emerging. Most governments and international organizations are strongly supporting the development and dissemination of these standards. Health One Global staff are closely involved in the international standardization development and the HEALTHone data architecture has been designed to adapt easily to these emerging standards.

The opportunity in healthcare

Through the availability of personal health records at all times, and anywhere in the world, both patients and healthcare professionals will have all the relevant data available at the point of care; and without fail. There will be no missing data, wherever the patient is in the world. This will empower the patient and will also eliminate waste and duplication of resources. It will also enable choice.

The personal health record will transform healthcare quality, costs, control and patient safety, and there will be great benefits for patients, healthcare professionals, insurers, providers, Governments and pharmaceutical companies alike.

The start point for the personal health record will be those consumers, and their healthcare professionals, for whom a lack of continuity of care, and lack of co-ordination of care, are major problems. This will include those with any disabilities as their care requires the co-ordination of the largest number of different healthcare specialists. The problem is worst of all for children since they are growing and the mix of healthcare professionals involved with their care is constantly changing as the child develops. Co-ordinating their care is a nightmare today. An electronic personal health record in the hands of the parent would dramatically improve the quality of care of the child.

The next logical group may be those with rare diseases. A rare disease is defined as a disease affecting 1:100,000, whose care is also highly fragmented. Though patients with each such disease may be few, there are over 5,000 of these rare diseases. There are 25 million patients in Europe with a rare disease that would benefit from having a personal health record. There is a similar number in the USA.

The benefits of the personal health record for those with disabilities and rare diseases are, in fact, the same benefits that apply to *any* consumer. Healthcare is the world's most ubiquitous 'consumer product' as it is the only one that we can be certain every consumer in the world needs, wants, and now can have. The market is worldwide, and thus vast.

Unique global marketing opportunity

Special Olympics (www.specialolympics.org) was founded in 1968 by Eunice Kennedy Shriver, the sister of John F Kennedy, as an international non-profit organization dedicated to empowering individuals with intellectual disabilities through sports training and competition.

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Today it is the world's largest amateur sports organization with 2.2 million athletes in 160 countries participating in 20,000 events every year culminating in the Summer and Winter World Games every 4 years (see Annex 5).

Alongside its sporting activities Special Olympics runs a global program called Healthy Athletes to provide free healthcare screening at the largest 600 Special Olympics sports events worldwide each year. **This makes Special Olympics unique.** There is no other organization in the world that seeks to offer free healthcare services to a population of 2.2m individuals in 160 countries nor any other disease or condition with an equivalent global infrastructure.

Health One Global is the exclusive Special Olympics Healthy Athletes Global Partner for the provision of electronic health records.

At the Special Olympics US National Games in Ames, Iowa in July 2006, Health One Global demonstrated the HEALTHone personal health record being written to and from the Smart card.

Dr Julie Gerberding, Director of the Centers for Disease Control and Prevention, Atlanta, who saw the HEALTHone record in action in Iowa, spoke at a Senate Hearing held to coincide with the Special Olympics US National Games. In her Senate testimony she encouraged the use of medical technology, and suggested that athletes have access to a personalized electronic health record.

She went on to say:

"We saw an example of an athlete that could have information on a smart card or on the Internet. Their physicians or they will be able to access it. That is technically possible to do that today. Special Olympics athletes (could) be leaders in electronic health information in our country."

<http://www.desmoinesregister.com/apps/pbcs.dll/article?AID=/20060703/NEWS08/607030332&SearchID=7324984745419>

As a result, Special Olympics has now requested a proposal from Health One Global to launch the personal health record (Internet and Smart card) at the World Summer Games in Shanghai in October 2007 for subsequent roll out across the world.

Providing the personal health record to Special Olympics is a **unique** opportunity to gain international exposure and brand association with Special Olympics, combining the powerful attributes of sport, health, and caring, a global blue chip charity, leading-edge technology and a global marketing presence.

Special Olympics has the opportunity to lead the world in showing the way to improve the quality of care in one of the most disadvantaged groups there is, through the secure access to detailed personal health information at the point of need.

Special Olympics will be a unique global demonstrator and reference site for the personal health record and for Health One Global, and our partners. This is a unique global opportunity.

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The opportunity outside healthcare

HEALTHone is extremely flexible and could be used outside of healthcare. The principles of automated synchronisation and reconciliation of the Internet and Smart card versions of the record create widespread opportunities well beyond healthcare.

What the consumer-held personal health record actually does is to empower the consumer with information by giving them their own copy of their healthcare transactions. But this empowerment through consumers having their own copies of transactions is generic. For example, the only copy of credit card transactions issued is held by the credit card company, exactly paralleling what happens in healthcare today. Consumers are not aware of fraud or errors unless the amount is large, and the card company notices, or the consumer reconciles their card statements diligently, which many of us do not.

But if all credit card transactions, just like the proposed healthcare transactions, were also written to the consumer's Smart card, then the consumer could synchronize their Smart card copy with an Internet copy (of the card provider) automatically, using an adapted HEALTHone. Any fraudulent use, any errors, or any discrepancies would be immediately and automatically identified.

It would immediately detect fraud with 'white cards' using a customer's stolen details since that transaction would not be on the customer's real Smart card and would show up at the next automated reconciliation by the customer. It would also ensure non-repudiation of transactions since a customer who had a transaction on their Smart card could not claim they had not authorized that transaction.

Precisely the same would be true for, for example, social security benefits claims and payments, for all travel tickets, for all entry accesses etc. etc.. Organizations and the consumers both having copies of each transaction would dramatically reduce argument, dispute and confusion about what had happened or what had been agreed, and consumers would be immensely empowered by no longer being dependent on the organization releasing the relevant information to them.

Next steps

Health One Global is seeking alliances, partners, investment, and Special Olympics sponsorship so as to commercialise the global opportunity for the personal health record and, in due course, the opportunities outside of healthcare.

Health One Global's strategy for the personal health record market is based on two principles to achieve rapid growth:

- target large organizations to market the personal health record to their customers / members / subscribers / employees including insurers, private and state healthcare providers, pharmaceutical companies, international corporations, travel companies etc.;
- form partnerships or alliances with large companies with related services to market and deploy the HEALTHone personal health record to customers of mutual interest.