

# How Convergence Will Reshape Health Promotion

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Technology for a Healthier Lifestyle

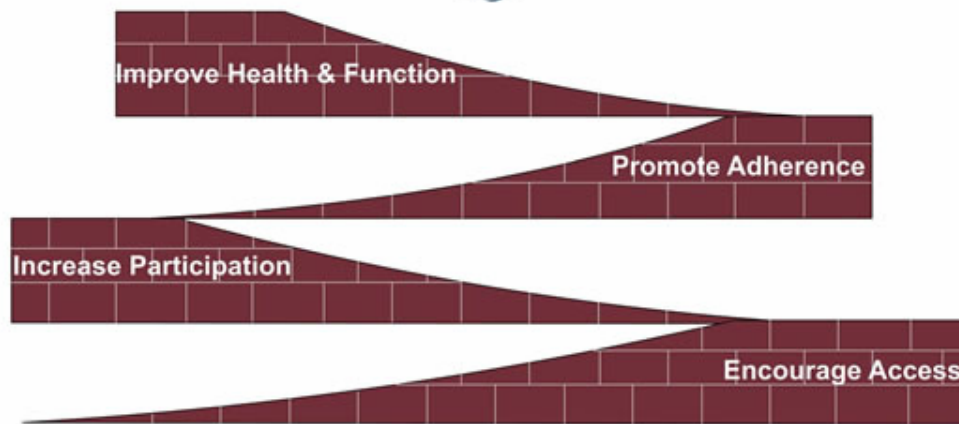


# RecTech Impact Areas

## ALL 4 Areas:

1. Access;
2. Participation;
3. Adherence;
4. Health and Function

### *Technology for a Healthier Lifestyle*



# Key Terms

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- **Convergence** is the drawing together of IT, telecoms, entertainment and consumer electronics industries, toward one large 'converged' industry.
- **Bandwidth** is the capacity of a channel to carry information.
- **Broadband** is "broad bandwidth" or a high capacity communication technology.
- **Last mile** is the term used to refer to getting the channel to the consumer.

# Forces Driving Convergence

- Hardware and software advances made large-scale digitization economically viable.
- The *digital revolution* created a common “product” for carriers.
- Technology advances created greater channel capacity for carriers - *broadband*.
- Good old American business avarice and coveting thy competitors clientele

# Broadband: Quo Vadis?

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1. *Ubiquitous broadband* is necessary to fully realize the promise of convergence.
2. The *last mile* issue is the stumbling block.
3. Wired (including optical) and wireless solutions are currently competing.
4. Cable tv home market penetration is approximately 70% but has actually declined due to wireless penetration.
5. Homes passed by cable in the US is 95%.

# How Close is the Future?

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- Municipal Broadband Projects
  - 44 states have one or more municipal wireless projects functioning or in development.
  - 19 states have one or more municipal *fiber to the premises* projects functioning or in development.

# Why Municipal Broadband?

Even excluding the community access (a.k.a economic development) angle, the case for municipal broadband is compelling. The uses for a citywide network are many, enabling a massive set of efficiencies just in terms of municipal operations. For example, our own customers have communicated a gain of no less 2-3 additional hours productivity per day PER OFFICER when police officers have mobile field access to their LANs and the Internet. Layer in other departments, such as city inspectors, fire/EMS, traffic management, video monitoring, internal leased line replacement, etc. and soon the rationale is so strong as to make it absurd not to deploy.

Patrick Leary, Alvarion



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# Common Home Broadband Services Currently Available

- ✓ Video on demand (VOD)
- ✓ Voice over IP (VoIP)
- ✓ Interactive services
- ✓ Consumer electronics integration through home gateways

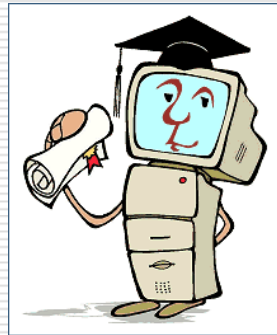


# Current eHealth Applications

- ❖ Telehomecare
- ❖ Telecoaching
- ❖ Telemonitoring
- ❖ Teleassessment
- ❖ In Home Rehab



# Remote Assessment: The Future



Computerized adaptive testing (CAT) and integrated *smart tools* assure a valid survey with a minimum number of items



*Solutions wizard* matches items for specific access issues with possible solutions from the cumulative knowledge base and sends them to the team.

Items without a good match

Or items for which the team feels the existing solutions are not adequate or appropriate.

Review by the TRT with report sent to survey team and facility

New solutions get added to the solutions knowledge base

Ubiquitous broadband allows survey teams to access Web application from anywhere.

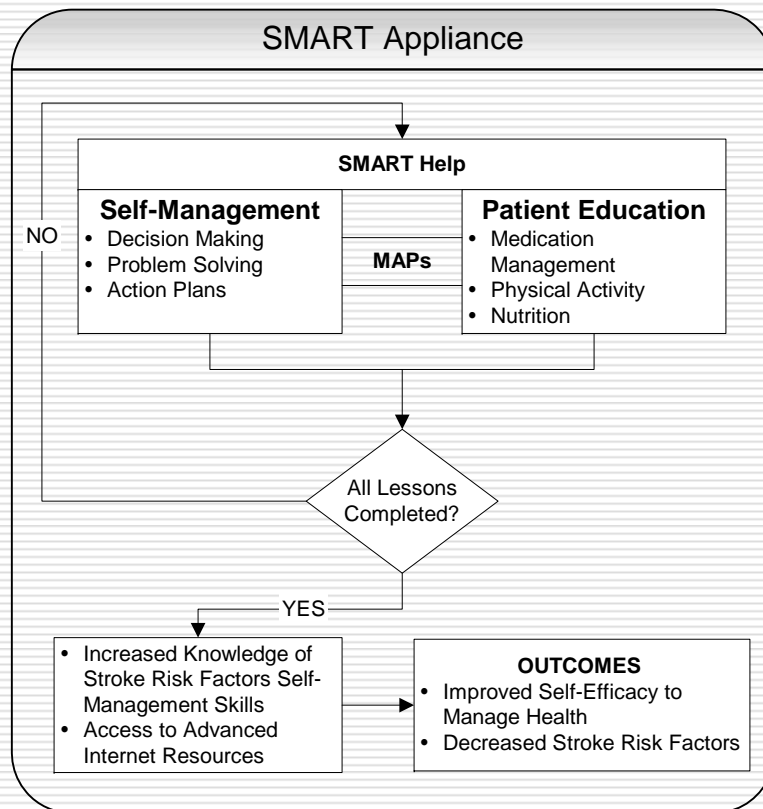


# Technology applications for enhancing health outcomes

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1. Effective, on-demand and *just-in-time* instructional programs
2. Self-management instruction and support
3. Self-modeling (*video futures*): watching you do it right

# A Prototype Generic Health Promotion Internet Appliance



Prototype of the SMART Appliance based on a TabletPC showing touch-screen interface, Webcam, and wireless adapter.

# Technology for promoting participation and adherence

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- ☑ Tailored Communications - individualized supports
- ☑ Virtual Exercise/Rehab Environments
- ☑ Increasing adherence through immersion vs diversion
- ☑ Incidental activity and improved health status

# Future Developments

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1. Enriched Virtual Exercise Environments: more immersive, more engaging, more effective
2. Co-location: *real buddies* joining you in the virtual environment
3. Data-based prescriptive programs: continuous monitoring, *smart tailoring* and data mining to optimize programs for YOU
4. Autoconfiguring exercise devices: dynamic universal design

# Contact Information

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