

I. Shift from Paper-Based to Technology-Based HRAs

Paper-based HRAs were the standard for about 25 years until the late 1990s, when the electronics era began fostering technology innovations (and additional options) in the design, implementation and application of HRAs as a population health management tool.

About 1998, new HRA innovations began to appear (in the HRA industry) as an option for employers, health plans and other groups, examples being:

- In late 1998, HPN WorldWide and Wellness, Inc. released a next generation HRA called the Health Power Profile (HPP) using Palm computing (a.k.a. personal digital assistants/PDA) technology to capture the data in conjunction with or independent of health screenings
- Between 1998-2000, Staywell, Inc. and other vendors released Internet versions of their conventional paper-based HRAs.

II. Palm-Technology HRAs

To date, with over 200,000 people having used Palm-based HRAs, here are some noteworthy findings:

- Completion time is cut by 60% or more (vs paper) taking ≤ 5 minutes to complete 40-50 questions
- Participation rates nearly doubled
- No questions are skipped — better data capture
- Money is saved from paper questionnaires not being needed and related costs, scanning time, postage
- Participants are attracted to the technology regardless of age, gender, education level or ethnicity
- Less than 10 people asked for a paper version
- No Palm devices disappeared
- Customization of questions were easier, faster and less costly

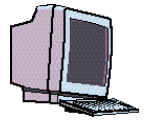
These findings apply whether the HPP is done in conjunction with or independent of an early detection screening (e.g. blood pressure, cholesterol and other clinical tests).

When done in conjunction with voluntary work site early detection screenings, significantly more (90-97%) screening participants completed the palm technology-based HRA as compared to the paper-based HRA offered in previous years (47-55%).

III. Internet-Based HRAs

Our work with groups who have tried internet-based HRAs has yielded the following observations:

- Participation rates are far lower than expected. In fact, they are lower than completion rates of the same paper-based HRAs done in previous years
- It is not uncommon for users completing the on-line HRA to stop and not finish it for any of multiple reasons — e.g., slow computer, dial-up modem, ISP (e.g., AOL) terminating the session, interruptions at work or home
- Employee communications regarding the internet-based HRA were much more involved than anticipated and still yielded less than desirable participation rates
- When done in conjunction with work site early detection screenings, significantly fewer screening participants completed the internet-based HRA (as compared to the paper-based HRA in previous years).



IV. Discussion

The pros and cons of electronic HRAs appear to be specific to the type of technology used and setting (e.g., work site).

Palm-based HRAs appear to dramatically improve HRA participation rates, data capture, efficiencies and cost-effectiveness. The current form and/or implementation methods of internet-based HRAs appear to have many disadvantages (listed above).

Regardless of the technology platform, there are other variables (common to any option) that can influence HRA participation rates, such as:

- Promotional efforts and communications
- Design of personal reports
- Completion incentives
- User interface — paper, palm, screen, layout
- Convenience — time during work or during screening to complete, completion time
- Access — e.g., computer, high speed line (broadband)

Regarding access, internet-based and paper-based HRAs may be more amenable to employees who cannot attend a work site screening (e.g. remote employees), but the findings suggest caution before considering as a primary option (see next page).



Discussion ...continued

Before full confidence can be placed in internet-based HRAs, further exploration of the best design and implementation methods appears critically needed to increase participation rates to acceptable levels of success.

As always with any HRA, none (regardless of platform) should be done without serious commitment to linking to existing resources (e.g., health screenings, follow-up information and resources, training) and/or adding appropriate support resources to help participants begin to reduce and better manage identified risks.

V. Conclusions and Best Practice Recommendations

From research and field experience over the past 25 years (including the past 7 technology platform-related years) our conclusions (assuming all other variables are equal) are as follows:

1. Palm-based HRAs generate the best participation rates.
2. Paper-based HRAs generate moderate participation rates.
3. Internet HRAs yield the lowest participation rates.

Based on findings to date, we recommend the following as HRA best practices::

- A. Use palm-based HRAs especially when done in conjunction with work site implementation methods, with or without screenings.
- B. Use paper-based HRAs where palm-based HRAs are not feasible and/or for those individuals less inclined toward technology-based HRAs.
- C. Carefully review internet-based HRAs and implementation methods to avoid low participation rates and program failure (see D and E below).
- D. Consider B or C as feasible options for hard-to-reach individuals (e.g., small worksites, working at home)
- E. If C is being considered as the primary population-wide method, pilot the proposed approach before major commitments and resources are applied.
- F. To maximize participation success, time, data capture and cost efficiencies, implement HRAs and core health screenings at the same time —using option A as primary HRA method, B as back-up and C when appropriate.

For More Information:

1. U.S. Preventive Services Task Force (1996). A Guide to Clinical Preventive Services - 2nd Edition. Baltimore:Williams & Wilkins.
2. Gorsky, Larson. Best Practices: Health Risk Management and Loss Control (3rd ed.) HPN WorldWide; Elmhurst, IL (2002).
3. www.hpn.com/screenings.html
4. Bob Gorsky, PhD: bobgorsky@hpn.com
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Note: Over 50 employers (e.g., businesses, government, schools) using the technology platforms discussed with over 300,000 employees and spouses spanning over 400 worksites throughout the U.S. were considered in this update.

