# Human Factors Research Consortium in Medical and Delivery Devices

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## The Challenge

While Human Factors as a whole is quite mature, HF in healthcare is maturing with much opportunity for new research.

Most HF work in medical companies is development-focused and relies on HF consultants.

- Thus, advancing development of healthcare-specific tools, approaches and theories is challenging.

Most HF researchers at universities find funding of short duration, but not for multi-year research programs, resulting in.

- Challenges for project planning and staff retention
- The content is narrowly focused and limiting generalizability

Although there are many viable HF organizations working on standards, presentations and publications, these typically do not promote a systematic advancement of HF methodology and tools within the industry.

## A Solution to Address the Challenge

One solution to address this issue is the development of an Industry-University Cooperative Research Center (IUCRC).

Such a research center would follow the vision advanced by the National Science Foundation's IUCRC program.

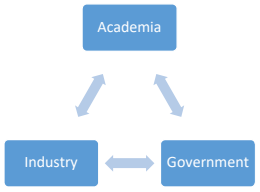
## The IUCRC Partnership

IUCRC fosters:

- Industrially-relevant
- Pre-competitive
- Multi-member
- Sustained partnership

Fundamental research

- Drives innovation
- Advances U.S. competitiveness




## The Industry Partner Benefits

- Be able to directly influence projects that includes a full time student and faculty
- Access to software and hardware tools
- Access to publications and pre-publications database
- Access to university HF facilities, Usability and other Laboratories for shared and proprietary work
- Participation for up to two attendees in annual project selection and review meetings
- Periodic team (faculty-student; government) visits to company
- Access to student interns and graduates for employment

## University Partners Benefits

- Receive funds to conduct projects of industry or academic interest
- Access to software and hardware tools
- Access to publications and pre-publications database
- Participation for up to two attendees in annual project selection and review meetings
- Periodic team (industry and government representative) visits to universities
- Access to jobs for student interns and graduates

## Government Partners Benefits

- Be able to directly influence projects that includes a full time student and faculty
- Access to software and hardware tools
- Access to publications and pre-publications database
- Participation for up to two attendees in annual project selection and review meetings
- Periodic team (faculty and industry) visits to organization
- Access to student interns and graduates for employment

## Benefits for All Partners

- Relationship building with a group of HF practitioners, faculty, scholars, and regulators
- A forum to advance the practice of medical human factors in a systematic way
- Annual meeting including presentation and discussion sessions

## Potential Projects

## (Based on industry and regulatory needs)

- Develop industry specific and application-focused software tools. Leverage open source programs.
- Improving training efficiency for users of medical devices, systems and combination products
- Better understand learning decay when applied to combination products
- Profiling of various users of medical devices and combination products.
  - Personas
  - Hand strength characterization
- Better applications of health literacy tools to usability testing
- Differentiation techniques and studies for package differentiation (pharmacy)
- Differentiation techniques and studies for device differentiation
- Strengthening statistical foundations for HF, medical devices and combination products

## Target Devices, Instructions and Training

- Syringes
- Autoinjectors (disposable and reusable)
- On-body delivery systems
- Infusion pumps
- Best practices for Instructions for Use
- Best practices for Quick Reference Guides
- Apps and web support of training for those devices
- Stand-alone apps that may have HF requirements
- Training methodologies (labeling and devices) for the above

## Conclusions

- There is a need for a Medical Devices / Combination Products HF research consortium.
- The consortium can help advance and accelerate relevant human factors devices and combination products research.
- All participants will receive numerous benefits and value
- Please take our survey and leave your card/email if you would like an invitation to an informational webinar May/June

## Please Help Us with Survey

- What kind of organization do you belong to?
- What is your job function?
- Do you think your organization would be interested in learning more about the HF Medical Devices /Combination Products Consortium?
- Are there other organizations that you think would be interested?
- What kinds of project ideas would make this attractive to your organization?
- What annual fee would you consider to be a "good deal" for your organization?
- What annual fee would you consider to be too expensive?

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