chi+med
making medical devices safer

Update
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Advisory Group guidance (January 2010)

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The CHI+MED Advisory Group comprises experts and representatives of key communities relevant to the **CHI+MED vision**, which is that *interactive medical devices will be made safer through better interaction design, based on an explicit and rigorous foundation. Explicitness and rigour will be achieved through the complementary application of empirical and computational reasoning techniques. Impact on practice will be achieved through productive dialogue with stakeholder groups and the delivery of analytic, theoretically founded and empirically tested methods and tools to support the interaction design of medical devices.*

The **Advisory Group** meets annually, and members are invited to other project meetings and events as appropriate. As well as advising the CHI+MED team and raising awareness of CHI+MED activities externally, we can work together, building on our complementary interests and raising the profile of work in this area, to jointly have a greater impact on research and practice than any one project could have on its own.

At the January 2010 project meeting, the advisory group gave helpful advice and guidance which the CHI+MED team are acting on. Perhaps the most encouraging was that we should expect to be dysfunctional at times and that we should get used to failing! This update summarises key points from that meeting, and progress since January.

Priorities and vision: We were reminded that we need to identify both short-term priorities and long-term vision. And that the basic science must not suffer in the cause of interdisciplinarity and engagement. We are aiming to do excellent fundamental science, while also ensuring that it is relevant to practical needs, and building dialogues between the contributing disciplines. It's a challenging balance to achieve! It's good to be reminded of these things, and we will be running workshops on these topics in 2011.

Being engaging: We need to make the area more visible. Various approaches to engagement with stakeholders were suggested, including running courses and developing guidelines and assessment tools for different audiences. We were reminded that good examples of interaction design can be as valuable as bad ones, and that good technology transfer is, itself, a research challenge. We are taking opportunities that we're aware of, but welcome being alerted to others.

What to study? Medical devices are at the heart of CHI+MED. There was substantial discussion on what systems we should study (e.g. dialysis machines, bed controls, infusion devices), and how much to focus on particular devices and how much to generalise. We have agreed that the primary focus for at least the next two years will be infusion devices. Particular device designs will be used as shared exemplars across as much of the project as possible, starting with the Alaris pump that was the focus for early device simulation. At three years, the decision will be reviewed. Individuals may study other devices (e.g. for MSc and PhD projects), with a view to checking how well results of the programme generalise across product families. We have identified criteria for selecting devices to focus on which include: how interesting they are to the research and practitioner communities; what research issues they raise (for individual work packages and across the scientific work packages); and what impact we can expect to have on procurement and on development.

Metrics, metrics everywhere: A need was recognised for various metrics to assess progress, including metrics for stakeholder engagement, international scientific leadership, researcher development and successful interdisciplinary working. We are working on these, drawing on best practice from elsewhere. A series of baseline interviews with all CHI+MED researchers is planned for the Autumn and staff development plans are being developed. We are also involving MSc students and linked PhD students in CHI+MED as part of their personal development.

Awareness and community building: Various suggestions were made for people to contact, in the UK and North America. We have noted these, and are gradually developing connections across the UK and North America. So far we have found fewer connections into Europe or the Far East, so any pointers in these directions would be welcome.

Suggestions were also made for resources to read. With our newly developed Document Management System, we are building up a library of resources to support CHI+MED activities, and we welcome suggestions of material to add to this library.

For academic dissemination of our work, we need to identify (or create) good journals. We will target both the best single-discipline journals and the best relevant interdisciplinary journals. We will edit special issues of journals to create themed collections of papers. The first of these is planned for 2012!

We were reminded not to try and do everything ourselves. We agree, and the Advisory Group is a key component of this. We are also seeking other opportunities to build connections and strengthen the community concerned with safety of interactive medical devices, including (but not limited to) users of those devices. We are looking forward to working with the Advisory Group and other stakeholders within and beyond the timeframe of CHI+MED.