In January 2013, the United Kingdom’s National Institute for Health Research (NIHR) established eight new Healthcare Technology Co-operatives (HTCs) to act as centres of expertise to focus on clinical areas or themes of high morbidity and unmet needs of National Health Service (NHS) patients with the aim of fostering innovation in these areas. Working collaboratively with industry, the HTCs aim to develop new medical devices, healthcare technologies, or technology-dependent interventions, which improve patient treatment and quality of life.

The eight HTCs cover a diverse array of clinical problems ranging from mental health to cardiovascular disease management. One of the key areas to benefit from the NIHR’s recognition of unmet need was wound care, with Bradford Teaching Hospital’s NHS Foundation Trust designated as the host organisation for the NIHR Wound Prevention and Treatment HTC (NIHR WoundTec HTC).

The NIHR WoundTec HTC is led by Professor Peter Vowden, the HTC’s Clinical Director, and builds on an established strategic partnership between wound care experts in King’s College Hospital London, Queen Elizabeth II Hospital Birmingham, and the universities of Leeds, Bradford, Wolverhampton, and Southampton (Table 1). Together, these experienced clinicians and academics have a proven track record in wound prevention and treatment, acute and chronic wound management, patient-focused care, patient-led device design, and clinical trial management.

TOWARDS COST-EFFECTIVE WOUND CARE

The management and prevention of skin breakdown is a major cost burden for health care providers and a common area for litigation, yet wound prevention and treatment can often be an area of relatively unregulated clinical practice with a poor evidence base for practice. Variation in clinical outcome across a wide spectrum of health care providers and within diverse national health care systems are well recognised and have led to the adoption of pressure ulcer prevention standards and wound healing rates as quality indicators for clinical care provision.

Funding constraints within all health care systems have led to increasing recognition of cost, in addition quality, as a driver for change in practice. Wound care products form a major subsector of the medical devices industry, and along with staff costs, constitute a major cost burden for healthcare providers. It is therefore understandable that development of new, “advanced”, and more effective medical devices aimed at improved wound care provision is desirable but must be achieved within the constraints of cost effectiveness. In order to aid in the understanding of current wound care
practice within the United Kingdom, WoundTec HTC has commissioned, largely through funding obtained from the wound care medical device industry, a health economic and outcome project, which aims to assess the current "real-life" cost and outcome of wound care delivered to a randomly selected population within the United Kingdom. This data will hopefully assist in informing future wound care developments and policies.

**AIM OF WOUNDTEC HTC**

The successful NIHR HTC model has already raised the profile of wound care within the United Kingdom and now provides the opportunity for healthcare professionals to propel forward a patient-focused, centralised, and coordinated wound care strategy supported by relevant research. The aim of NIHR WoundTec HTC is to be inclusive and encourage participation; with wider input and ideas for innovation, it is more likely to succeed in its goal of advancing the cause and improving the quality of life of patients with wounds, accelerating innovation, development, adoption, and diffusion of wound-related medical devices within healthcare systems. WoundTec HTC is already working with patients and staff to identify unmet needs within wound care and translate these needs into innovations relevant to NHS and the wider healthcare community. Wound care has often lacked an effective voice and a logical implementation strategy; this development will seek to rectify this by fostering and coordinating device and system development led by patient and clinician needs rather than being largely industry pushed.

WoundTec HTC will:

- Identify patient and clinical needs
- Act as a platform for innovation
- Identify and develop promising concepts for medical devices derived from an established network of patients, clinicians, academics, and industry
- Provide theoretical, methodological, and design expertise, as well as a clinical base to develop these concepts into testable interventions and devices
- Offer advice on testing the feasibility, effectiveness, cost effectiveness, and acceptability of proposed innovations in NHS settings and various care pathways and promote the spread of best practice
- Work with industry to foster need-driven product innovation

**INVOLVING THE END USERS**

Securing greater patient and public involvement in healthcare service delivery and research is a central theme of health policy in many countries and are key areas for all of the HTCs. A model developed by the University of Leeds and piloted in Bradford with patients with chronic leg ulcers demonstrated that a patient-led approach to innovation is valuable to industry, health providers, and higher education as it can help identify new market opportunities (McNichol 2012, Elberse 2012).

Through adoption of these principles, NIHR WoundTec HTC has already supported a number of successful innovative grant applications, taken areas of need identified by patients to academics, established working relationships with industry, and established partnership arrangements with two other NIHR HTCs (Devices for Dignity (Sheffield) and Trauma management (Birmingham)). Opportunities for co-operation with similarly focused European-based national organisations utilising the infrastructure support of pan-European groups such as the European Wound Management Association will allow access to additional funding streams, including Horizon 2020 for wound-related research and medical device development. The themes for 2014 within the Horizon 2020 are outlined in Table 2 and provide scope to develop wound-related projects.

For further information on the NIHR Wound Prevention and Treatment HTC, visit our web site or contact Emma Martin (e.martin@medilink.co.uk).

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<tr>
<th>Table 2: Seven themes for Horizon 2020</th>
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<td>Understanding health, aging, and disease</td>
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<td>Effective health promotion, disease prevention, preparedness, and screening</td>
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<td>Improving diagnosis</td>
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<td>Innovative treatments and technologies</td>
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<td>Advancing active and healthy aging</td>
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<td>Integrated, suitable, citizen-centred care</td>
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<td>Improving health information and data exploitation, and providing an evidence base for health policies and regulations</td>
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**References**
