Working at the heart of their communities, Yorkshire and Humber GPs witness the effects of poverty on their patients' health every day. Working with practice teams, and increasingly the voluntary sector, GPs try to ameliorate the social determinants of health for the vulnerable and socially excluded. Unemployment remains high in this area because the textile, mining, and steel industries, which employed many of the region’s million or so residents in the past, have gradually died off. Substantial numbers of the oldest and youngest in the region are living in poverty: 23% of children and 20% of older people compared with the national averages of 4.9% and 7.4%, respectively. Deprivation is concentrated in the major urban centres of Bradford, Leeds, Hull, and Sheffield, alongside pockets of destitution in the former mill towns of West Yorkshire and some rural areas: some of the poorest communities in Europe can be found in our region.

Marmot has confirmed the impact of deprivation on health and life expectancy through the social gradient theory.2 Sadly there are numerous examples to illustrate this from our region. For example, if you hop on the number 83 bus in the leafy south west of Sheffield and travel northwards, the life expectancy of women quickly drops by 10 years.2 In Hull there are life expectancy gaps of 12 years for men and 11 years for women between the richest and poorest.4 Rates of premature mortality from coronary heart disease are more than double in deprived areas of Sheffield compared with affluent counterparts.3 The contrast in life expectancy and health in relation to poverty can only be described as unjust and immoral.

In 2009 Glasgow University’s Professor Graham Watt used the metaphor of a swimming pool to reflect the social gradient in health; the deep end of a swimming pool to reflect the social gradient in health; the subsequent increasing need associated with increased deprivation; and the flat distribution of funding. The green represents the rurality of Yorkshire and the blue of the Humber coastline, with a rose to unify the two.

**FIRST MEETINGS**

In autumn 2015 we identified the 100 practices with the highest deprivation scores in Yorkshire and Humber, and invited them to our first meeting; we also invited GP trainers who would be willing to support training in Deep End areas or with marginalised groups. We first met in October 2015 in Pontefract and welcomed 11 Deep End GPs to listen to the story of the original Scottish Deep End group from Professor Una Macleod. We also explored what GPs’ vision would be for a Yorkshire and Humber Deep End group.

There was an overwhelming desire to reduce health inequality and for the group to:

- help with workforce and recruitment;
- provide educational sessions relevant to Deep End work;
- advocate for communities and to develop networks for Deep End practitioners and provide a forum to share ideas on planning services and strategy; and
- link with academic research communities to evaluate the effects of interventions, gain funding, and facilitate organisation and recording of events.

This was followed up by a symposium in Wetherby in March 2016 where we heard a passionate fusion of narratives and evidence. Here, frontline GPs, nurses, researchers, educators, a director of public health, and contributions from the audience of 64 delegates created an atmosphere of hope in this often depressing era of austerity and fear. Considering the personalities of GPs who work with the most vulnerable patients in our region, it was not surprising the room buzzed with ideas and enthusiasm; GPs were keen to collaborate with researchers and educationalists who were also passionate about finding practical solutions to the complex challenge of redressing health inequity. A full report and feedback from the day can be found on our blog [https://yorkshiredeependgp.org/](https://yorkshiredeependgp.org/) and a summary of ideas from delegates can be found in Box 1.

**WHAT NEXT?**

Workforce, Education, Advocacy, and Research (WEAR) were identified as the key areas (Box 1) by Deep End GPs in Yorkshire and Humber on which to focus our efforts. HEE continues to fund us and we envisage the Deep End group acting as a catalyst to support innovative models for both undergraduate and postgraduate training, promoting recruitment and retention into our most socially-deprived and under-doctored areas. Trainees will have the opportunity to work with marginalised groups through placements modelled on those offered by the North Dublin City GP training scheme led by Austin O’Carroll (http://www.healthequity.ie/). At the same time we are working to ensure that all trainees in Yorkshire and Humber experience tutorials in health inequalities and the social determinants of health to gain the knowledge and skills to tackle these at multiple levels. Sheffield has recently launched a popular 4-week social accountability placement for students and has approved the appointment of a clinical 

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**Figure 1. The Yorkshire and Humber Deep End logo.** Inspired by the Scottish Deep End work, the logo represents the deep end of a swimming pool to reflect the social gradient in health; the subsequent increasing need associated with increased deprivation; and the flat distribution of funding. The green represents the rurality of Yorkshire and the blue of the Humber coastline, with a rose to unify the two.

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Debate & Analysis

**Mining for Deep End GPs:**

a group forged with steel in Yorkshire and Humber
teaching fellow to support the expansion of current undergraduate placements in more deprived areas.

We are creating three geographical professional development hubs in South Yorkshire, West Yorkshire, and Hull (North Lincolnshire and East Yorkshire Coast), with the help of the 25 Deep End GPs who volunteered to steer the group. We will host regular local meetings for Deep End GPs and offer two region-wide conferences a year. The following topics were identified for CPD and training.

1. Work with patient participation groups to facilitate community empowerment and advocacy.
2. Develop and distribute synopsis of research and narratives relevant to Deep End GPs, initially shared via our blog (https://yorkshiredeependgp.org/useful-links/).
3. Develop and deliver a Professional Development Programme for GPs.
5. Advocacy • Develop and distribute synopsis of research and narratives relevant to Deep End GPs, initially shared via our blog (https://yorkshiredeependgp.org/useful-links/).
6. Work with patient participation groups to facilitate community empowerment and advocacy.
7. Collaborate with CCGs to reduce health inequity and explore possibilities of developing performance indicators relevant to the Deep End.
8. Research • Develop a programme of research relevant to Deep End GPs to improve patient care including: barriers to self-care, access to preventive medicine at the Deep End; evaluate and describe innovations and services, for example, interpreting, social prescribing, case management, and care for patients with complex needs.
9. Explore and document the experiences and attitudes of GPs and trainees working at the Deep End.

Box 1. What did the Yorkshire and Humber Deep End GPs say? The WEAR themes

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
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<tbody>
<tr>
<td>Workforce</td>
<td>• Simplify the process of becoming a Deep End training practice with support from established trainers and teams.</td>
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<tr>
<td></td>
<td>• Explore innovative primary care Deep End models with alternative team skills.</td>
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<tr>
<td></td>
<td>• Promote future recruitment to Deep End practices with increased under- and postgraduate training opportunities.</td>
</tr>
<tr>
<td>Education and training</td>
<td>• Develop and deliver a Professional Development Programme for GPs.</td>
</tr>
<tr>
<td></td>
<td>• Postgraduate training. Enable more trainees to undertake placements with Deep End voluntary-sector organisations. Promote inclusion of Deep End scenarios and issues in assessment and training.</td>
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<tr>
<td></td>
<td>• Undergraduate training. Work with medical education university departments.</td>
</tr>
<tr>
<td>Advocacy</td>
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</tbody>
</table>

over the next year. We will also be reporting on the Yorkshire and Humber Deep End story and describing the impact of clinical and educational innovations along the way. Working systematically and collaboratively to support Deep End GPs through the four themes of workforce, education, advocacy, and research, we are striving as a team to take heed of the take-home message at our Wetherby meeting: ‘Health is a human right: do something, do more, do it better.’

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