



Peter Harrison Centre

for Disability Sport

Newsletter

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In this issue:

P. 2-3: Dr Vicky Tolfrey at the ParalympicGB's Preparation Camp

P. 3: Data Collection Project - Beijing 2008 by Barry Mason & Student Profile of Paul Kitchin

P. 4: The Beijing 2008 Paralympic Games by John Lenton, GB Wheelchair Tennis

P. 5: Handcycling strikes GOLD! by Dr Paul Smith, University of Wales & BASES

P. 6: Classification Issues at the 2008 Beijing Paralympics by David Purdue, PhD Student

P.7: Reflections on the Beijing Paralympic Experience by Marie Dannhaeuser, PHC Research Assistant & Stop Press

P. 8: Student Profiles of Mhairi Keil & Louise Croft

Welcome

to the 3rd newsletter from the Peter Harrison Centre for Disability Sport (PHC). This month the introduction to the newsletter has been provided by Paul Davies, the Performance Manager from the British Paralympic Association. The Centre would also like to thank Nik Diaper, from the English Institute of Sport, for providing the newsletter with photographs of the Beijing 2008 Paralympics which are featured at the top of pages 1-3.



Beijing 2008 will go down in history as the most successful Games of the modern era for ParalympicsGB.

The team of 206 athletes returned with 42 Gold, 29 Silver and 21 Bronze medals, a total of 102 medals in all and the best performance by a Great Britain Paralympic team since Seoul in 1988. This performance by the ParalympicsGB team was a huge effort, by both the athletes who delivered on the field of play, but also by the many backroom staff that supported the athletes in their preparation and delivery.

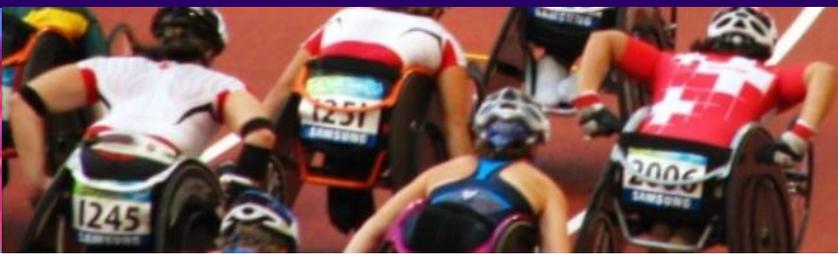
Beijing presented many unique challenges to our Paralympic athletes: jet-lag, environment concerns and culture were all identified as potential major threats to performance. To counter these threats a four year programme of support was put in place to ensure all ParalympicsGB athletes were as well prepared as they could be to compete to the

very best of their ability. One of the central pillars of this programme was the Beijing Acclimatisation Group, a multi-disciplinary team of sports scientists and healthcare experts. This team, led by Dr Vicky Tolfrey, developed individualised support programmes for each of the Paralympic sports, ensuring that each team was best prepared for the challenge of Beijing.

The Paralympic Games have evolved tremendously over their relatively short history, and they will continue to evolve as performances improve and the competition becomes even more fierce. ParalympicsGB will always look to be one step ahead of our competitors, by investing in initiatives that will give our athletes a performance advantage. We will continue to work closely with partners, like the Peter Harrison Centre, on projects such as wheelchair set-up and energy expenditure to make sure we leave no stone unturned in supporting our athletes towards world's best performances.

By Paul Davies, Performance Manager, British Paralympic Association

We hope you enjoy learning more about the Centre and find the links to the website and other resources useful. If you have any feedback or would like to contact the Centre please email: PHC@lboro.ac.uk or contact the Information Officer on 01509 226387 or C.Greasley@lboro.ac.uk



Dr Vicky Tolfrey at the ParalympicGB's Preparation Camp prior to Beijing 2008

By Dr Vicky Tolfrey, Director of the Peter Harrison Centre

Two venues in the Far East were chosen by the British Paralympic Association (BPA), as the base for the pre-Beijing holding camp – Macau and Hong Kong. Dr Vicky Tolfrey was in Macau in September 2008 where many of the Paralympic medalists were preparing for their big event that only comes around every 4-years 'the Paralympics'. Squads that used the Macau camp included; archery, athletics, CP football, cycling, blind football, judo, power lifting, shooting and wheelchair rugby. Some squads travelled with their own sport science team, others utilised the services of the British Paralympic Association which included the support of Dr Vicky Tolfrey (Science Team Leader) and Helen Alfano (Sport Scientist).

Leading up to this camp, Vicky worked with Paul Davies (BPA Performance Manager) and her role was to provide strategic direction and on the ground leadership for delivery of the scientific components of the acclimatisation strategy. This involved; a) delivering coordinated physiological and sport science support on a daily basis regarding acclimatisation and b) assisting athletes and staff by providing information and advice regarding nutrition, fluids and hydration (in conjunction with Jeanette Crossland who was based at the Hong Kong venue).

The preparation camp is an integral part of an athlete's planning ahead of a major championship. Spending time at the camp gives them the opportunity to get use to similar competition weather conditions and get over jet-lag (athletes endured a 12 hour flight to Hong Kong and a 45 minute jet boat trip to get to Macau) while getting away from the distractions of home.

Vicky explained: "With average daily temperatures in Macau reaching around 30°C, athletes were able to train under hot and sticky conditions similar to those they then went on to compete at in Beijing. For those athletes competing indoors they were able to gradually adjust to the new time zone in a relaxed and comfortable sports setting. Moreover, this was a fantastic opportunity to get to know the requirements of Paralympic sports prior to a major competition. I feel that the Peter Harrison Centre for Disability Sport's future lies with acting as an 'academic hub' with advancing our knowledge in disability sport and training in collaboration with the BPA. This is an area which we are looking to divert our attention to, so that we can utilise the next four years effectively through 'smart-training methods' ready for London 2012."

...continued on page 3



Photo: Dr Vicky Tolfrey seen on the front row (2nd left) with the ParalympicsGB core staff in Macau (missing from the photo are Mark Jarvis & Andy Cooper)



Photo: Peter Norfolk & Jamie Burdekin at the Beijing 2008 Paralympic Games. Image courtesy of John Lenton



Meanwhile whilst Vicky was in Macau, John Lenton (associated PHC Sport Scientist) had travelled directly into China with the wheelchair tennis squad. In the tennis event, Peter Norfolk eased his way to his second gold beating the Swedish player Johan Andersson in the 'quad' singles

event. He also secured a bronze in the doubles with Jamie Burdekin. Vicky has worked with Dawn Newbery (Wheelchair Tennis Team Manager) across two Paralympic cycles with the sport's strategic planning of physiological support.

Data Collection Project - Beijing 2008

By Barry Mason, Associated PhD Student

Barry worked as a 'performance analyst' for ParalympicsGB on a data collection project as part of a team including Ken Kelly (Coaching Officer), Nik Diaper (Performance Profiler) and Helen Alfano (Sport Scientist). The project involved Barry collecting footage from a series of pre-determined events to assist the coaching process towards London 2012.

Performers from sports who did not have their own performance analysts and were identified as medal potentials for 2012 were the main focus of this project. Subsequently Barry collected video footage from a wide range of

sports including powerlifting, judo, shooting, football, athletics, archery and goalball. In order to map performers progress over the coming years in the lead up to London, the 'worlds best' were also analysed for each performers sport.

Since returning to the UK, all this footage has been edited and sent off to the coaches from the relevant sports. Regular updates will be sought to see how the sports are utilising the footage and any assistance will be provided if necessary.

Student Profile

Paul Kitchin, Part-Time Associated PhD Student

Paul Kitchin is the latest associated PhD student to join the Sport Culture and Policy Research Strand of the Peter Harrison Centre for Disability Sport.

Paul is a lecturer at London Metropolitan University and is the programme director for the MA Sport Management programme. Paul's background before arriving in London from Australia in 2002, was in facility management and physical education.

His main areas of teaching are sports marketing and strategy; he is on the editorial board of the *International Journal of Sport Management and Marketing* and is currently the editor of the *London*

Journal of Tourism Sport and Creative Industries.

Paul's research focuses primarily on the development of identity in young people participating in an elite sporting programme. These young people can be characterised as having learning difficulties, a visual impairment, a physical impairment or a combination of these three. The secondary focus of the research is on the network of organisations that manage and support the programme and its participants. In his study he is investigating the use of participatory action research that will hopefully lead to aspects of the research being carried out by the young people on the programme.

P4 The Beijing 2008 Paralympic Games

By John Lenton, Research Assistant GB Wheelchair Tennis



The Paralympic games were the pinnacle of my involvement with the Wheelchair Tennis players for whom I have worked with over the last two years in my role as sports scientist. Beijing 2008 began with a pre-games holding camp in which wheelchair tennis were based in Beijing.

The correct preparation was essential for all the athletes competing in a major tournament as it firstly provides them with the opportunity to recover from jet-lag and travel fatigue, and secondly the training sessions allowed acclimatisation to the conditions that the athletes would face throughout competition. My colleagues in the core staff support team were team manager - Dawn Newbery, physiotherapist - Lynda Daley and national coaches - Martyn Whait, Stephanie Trill, Geraint Richards and Laura Wolfenden. The sports science support available to the players covered the following areas; jet-lag, well-being, hydration, cooling strategies and monitoring of the players individual preparation programs. The support required by each player was tailored to the individual as a result of the players having benefited from

my involvement at previous tournaments throughout the world and our on-going education program.

The Paralympic games were fantastic and something that will stay with me for the rest of my life, an unforgettable experience. Beijing Paralympics will be remembered for lots of reasons such as the wonderful elite sport on show from exceptional athletes, the superb organization, the stunning venues and the most spectacular opening and closing ceremonies. This aside, to see two of the wheelchair tennis players I have worked with be successful and bring home Paralympic medals tops all the aforementioned. Peter Norfolk defended his Paralympic title from Athens winning gold in the 'quad singles' event whilst in the 'quad doubles' event partnered Jamie Burdekin to the Bronze medal. This was such a proud moment as all the hard work and effort in supporting the players throughout the previous two years had paid dividends on the biggest stage of their wheelchair tennis careers.

Supporting all of the players in the GB wheelchair tennis squad was exciting and allowed me to utilise my skills as an applied sports scientist/physiologist on the biggest sporting stage. To be part of a support team that has helped contribute to the players realising their potential and competing at the highest level is a reward in itself. All of my experiences will have an important role in helping me develop and improve as an applied sports scientist/physiologist.

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Images of wheelchair tennis courtesy of John Lenton

By Dr Paul Smith,

Senior Lecturer at University of Wales Institute Cardiff, BASES Accredited & UK Handcycling Association Trustee.

We were all very privileged to have viewed the spectacles of the XXVI Olympiad and XIII Paralympiad this summer. Perhaps as a pleasant surprise to us all was the fact that the athletes in the respective GB squads did extremely well and brought back a fantastic haul of medals. We were accused by our Commonwealth cousins in Australia to have only done well in events where competitors either sat or lay down – and, quite frankly, who cares? We finished 4th in the table of rankings for the overall medal tally in the Olympic Games and 2nd in the Paralympic Games.

The track and road cyclists in both squads did particularly well. It can't be understated that I was overjoyed when I found out that Rachel Morris had won the factored women's Handcycling time trial. Rachel's achievement is even more impressive when you consider that she only took up the sport two years ago. With the continued guidance and support from British Cycling, Rachel is likely to get better – she's got real grit and determination, so watch out for her in London 2012. For further information on hand cycling then please read the article on the PHC website.



Photo: Rachel Morris at a Handcycling UK training weekend held at Stoke Mandeville - the other people pictured are long-standing members of HCAUK.

Paul has recently attended the annual meeting of the European Handcycling Federation in the Czech Republic. From the discussions it is clear that there are many research opportunities associated with handcycling.

Dr Vicky Tolfrey is exploring funding opportunities with Dr Paul Smith to further the sports science knowledge of the sport of hand cycling (an update will appear on the PHC website shortly).

P6 Classification issues at the 2008 Beijing Paralympics

By David Purdue, Associated PhD Student in the Sociology of Sport

Classification is used in disability sport to group impaired athletes into 'classes' to facilitate fair competition. The importance and power of classification within disability sport was apparent at the 2008 Paralympic Games.

The robustness of the current classification systems were shown, during the 2008 Paralympics, to still be a work-in-progress. British athlete Rebecca Chin arrived at the 2008 Paralympics classified as a 'Les Autres' athlete (F44) but found herself reclassified as an athlete with mild cerebral palsy (F38). Chin thought she had won silver in the F37/38 discus, only to later be told that it had been decided she "no longer fitted into a recognised International Paralympic Committee class"¹. Chin was stripped of her medal.

Derek Malone, bronze medal winner at the 2004 Paralympics in the T38 800m was deemed ineligible to compete in seven-a-side football (for athletes with cerebral palsy) at the 2008 Paralympics, as he was judged to no longer meet the minimum disability criteria required to qualify for the Paralympics². Malone's case highlights how an athlete's training (particularly an athlete with cerebral palsy) can improve their performance but also alter their classification, even to the extent that they become ineligible to compete at the Paralympics.

These acts of re-classification and disqualification are not uncommon³ and highlight important issues. The accuracy and robustness of classification may be questionable if an athlete's classification can be changed twice in quick succession. What constitutes the minimum level of impairment that an athlete has to have to compete in the Paralympics? Some athletes may become left in limbo as they are impaired (negating able-bodied competition) but do not possess the minimum impairment that enables their participation in the Paralympics. Undoubtedly categorising impairments into classes to facilitate 'fair' competition is complex. This situation demands open discussion as athletes are possibly being let down by a functional classification system which is still not fit for purpose.

The combining of classes which possess athletes with different types and levels of impairment proved to be a provocative issue in Beijing. British cyclist Sara Storey finished fifth in the Women's 500m Time Trial (LC1-2/CP 4). A surprising result

considering Storey recorded the second fastest time of the competition. However, this was a mixed classification race with a percentage factor applied to all times to take into consideration the different impairment groups involved. The new time generated after the impairment-based factor had been applied relegated Storey to fifth place. This process highlights the possible confusions and frustrations created by combining classes for athletes and spectators, as the fastest time recorded in a race may not be the event winning time.

The integrated functional classification system within swimming, as a tool for providing fair competition between disability groups, remains debatable. Natalie Du Toit, winner of 5 swimming Gold medals at the 2008 Paralympic Games stated that she did not think she would ever compete in the 100m breaststroke as "arm amputees normally win this event"⁴. It is important to focus upon this comment. For an Olympian and multi-medal winning Paralympian to discount entering an event in the Paralympics which she considers she has very little chance of winning due to her impairment, rather than her sporting proficiency, is a major concern. This illustrates an irony in that an impaired swimmer views competing in the Olympics with able-bodied swimmers to provide a fairer challenge than entering a particular event in the Paralympics.

The 2008 Paralympics helped highlight the importance of classification within the Paralympic movement. My research aims to illustrate the importance of classification both historically and for the future of the Paralympic Games.

References:

1. See the BBC's report on Chin's classification experience at: http://news.bbc.co.uk/sport2/hi/other_sports/disability_sport/7615106.stm
2. More details available at: <http://www.dailymail.co.uk/sport/olympics/article-1054524/Cerebral-palsy-footballer-kicked-Paralympics--hes-disabled-enough.html>
3. British track athlete Jenny Ridley withdrew from the 2004 Athens Paralympics following her re-classification as she felt significantly disadvantaged by her new classification. Ridley's article is available at: http://news.bbc.co.uk/sport1/hi/other_sports/disability_sport/7601856.stm
4. Access Du Toit's interview via: http://news.bbc.co.uk/sport2/hi/other_sports/disability_sport/7617473.stm

By Marie Dannhaeuser, Research Assistant & PhD Student at the PHC



Photo: Marie is shown on the front left hand side

It has been nearly a month since I returned from the Games in Beijing, and it literally and figuratively feels another world away! I was fortunate to have the incredible experience of being part of the Canadian team in Beijing as part of the mission staff supporting the entire Canadian team.

My role there was as the "Athlete Services Officer" - essentially being a link between athletes and the other members of mission staff working on behalf of the Canadian Paralympic Committee. In this role, I had the opportunity to meet and work with athletes from all different sports, helping them to have the best Games experience possible. This included setting up the Athletes' Lounge in our apartments in the Village as a place for athletes to relax and hang out, securing event tickets for athletes and other team members to witness the action live at the venues, and generally just being there as someone with whom athletes could speak and ask questions!

It's difficult to pinpoint a 'favourite Games moment'. From the minute we touched down at the airport in Beijing, it was obvious that the organisers had set out to prove that China could put on a world-class show. Paralympic-specific signage and flags marked the entire journey from the airport to the Paralympic Village and getting off of the bus at the Village, we were greeted by a flock of volunteers - all university stu-

dents - who were full of enthusiasm and eager to help. I arrived in Beijing the day the Village officially opened, when other countries and most of the athletes had yet to arrive. It was amazing to watch it transform from a shell of nearly empty buildings to a bustling, vibrant, and moving place. The Village was massive, and yet careful landscaping with lots of greenery and trees, made surroundings very peaceful and calming. From the awe-inspiring grand scale of the Opening Ceremonies to the number of volunteers on site, the sheer size of everything, especially the venues, was breathtaking.

I had the chance to go out and see some Paralympic sports I've never seen before - like women's sitting volleyball and watching the spontaneous outpouring of enthusiasm from the crowd at the USA v. China match in round-robin play, while learning more about the fast-paced and tactical nature of the game. Going out to swimming - a much more familiar sport - also provided a first, as we witnessed three Canadian flags being raised at the Water Cube as our athletes swept the women's S13 200m Individual Medley. While at the 'Bird's Nest' I watched a Chinese athlete win a gold medal on the track - the stadium erupted, packed to the brim with people crowding into the aisles of the stadium's lower bowls to catch a glimpse of the action. Just being there and soaking up that energy and atmosphere was fantastic!

The Games were full of long, busy days, but there was a great team of people 'behind the team' who worked hard to ensure that all of the athletes, coaches and other support staff had the things and atmosphere they needed to perform at their best. It a very different Games experience to that as an athlete, one that I really enjoyed and will cherish forever!

Stop Press!!

Congratulations to Katherine Black for defending her PhD

In October, Katherine who was funded by the Centre successfully defended her PhD in a viva voce with modifications required before receiving her PhD.

Sean Tweedy Visiting PHC in January 2009

On the week commencing 19th January 2009, Sean Tweedy from The University of Queensland, Australia will be visiting the PHC. Sean's research interests are in classification and disability sport.

4th PHC Interest Group Meeting Planned

Due to the success of the first three Interest Group Meetings, a fourth meeting has been planned for the beginning of 2009. This meeting will be open to anyone who wishes to attend. Please contact the Information Officer, Charlotte Greasley for further details.

BPA Conference 4-5 March 2009

The 7th Annual Sports Science, Medicine & Coaching Conference will be held at Burleigh Court, Loughborough. Please see the BPA website for further details.

Mhairi Keil, Associated PhD Student

The PHC would like to welcome its latest associated part time PhD student, Mhairi Keil. Mhairi joined the Centre in July 2008 and will be undertaking her studies in conjunction with her current role as a Performance Nutritionist with the English Institute of Sport.

Amongst other Olympic and Paralympic sports, Mhairi currently works with the GB Wheelchair Basketball team, who have just returned from the Paralympic Games in Beijing with the bronze medal, winning to the USA, the pre-Games favourites, in the medal match.

Mhairi would like to optimise players power to weight ratio's to promote power, speed and agility on court as well fine tuning nutritional strategies to enhance muscle recovery and adaptations to training. Under the supervision of Vicky Tolfrey and Susan Shirreffs, Mhairi will be investigating the body composition and nutritional requirements of wheelchair basketball

players. This will help to provide answers to some of the questions that have arisen in her to day to day practice and further the knowledge and understanding of the specific nutritional requirements of this particular cohort of athletes.

Mhairi explained that the beginning of a new four year Paralympic cycle is the perfect time to pursue this field of study, in order to push the Performance Nutrition service forward, and ensure that the success of the Beijing Games is at least met, if not exceeded in London 2012.

Mhairi has been with the English Institute of Sport for 2 years, prior to which she completed her MSc in Sport and Exercise Nutrition at Loughborough University in 2005 and her BSc in Sport and Exercise Science at Birmingham University in 2003.

To contact Mhairi please email her at: m.keil@lboro.ac.uk

Louise Croft, Associated PhD Student



Louise joined the PHC in October 2008 after successfully applying for a PhD studentship in 'Body composition and energy expenditure in Paralympic Athletes'. Louise is the latest member to join the Sport Science Research strand of the PHC which is led by Vicky Tolfrey.

Louise recently moved to Loughborough after studying for her undergraduate and postgraduate degrees at Liverpool John Moores University (LJMU). Louise completed her BSc in Sport Science in 2007 where she majored in Physiology. She continued her passion for physiology by studying for her MSc in Sports Physiology which she will gain in December 2008.

Louise has had some work experience with the English Institute of Sport (EIS) and has gained

other experience in physiology work with professional athletes. Previously, Louise worked with Professor Tom Reilly from LJMU looking at the fitness of female footballers (BSc) and has also worked with Dr Barry Drust and Dr James Morton for her MSc with the following publication; '*Heat shock and antioxidant protein adaptations of human skeletal muscle to high intensity interval running training: a comparison of the vastus lateralis and gastrocnemius muscle*', in the *Proceedings of the Physiology Society*, 2008.

Louise explained that she was interested in the Centre's PhD studentship because it would allow her to work with elite Paralympic athletes whilst also using her knowledge and experience of physiology. Louise says there has been little research done in this area with the focus on Paralympic athletes and envisages that her work could be used to help inform athletes about certain aspects of their physiology which may be of benefit for the London Paralympics. Although the area of energy expenditure will be new to Louise she has already studied nutrition and metabolism during her master's course.

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