

IPEN Newsletter

2014 Edition

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Welcome

Kicking off our year of work for 2015 is an opportunity to thank everyone in the IPEN network for their contributions, enthusiasm and goodwill in 2014.

With such a strong international team and with so many excellent contributions, it's a challenge identifying any particular IPEN team members for special recognition. Best that we let the growing list of IPEN publications speak for itself, with so many strong leadership contributions from the first authors and excellent support from the members of the writing teams.

We have so many exciting challenges ahead of us in 2015. Something for us all to take on board is aiming to build our local analysis-support capacities. There is still so much to do with the scientific options that arise from us having such powerful exposure and outcome variables, capacities to examine variations within and between countries, and options for identifying associations with many other important (and emerging) health-related variables.

MVPA remains our central outcome of interest, but we are in a field where thinking about physical activity and health continues to evolve and there is potential in prospect to address relationships with sedentary behavior and light intensity activity, variations in accelerometer-measured activity patterns, specific self-reported physical activity behaviors, associations for particular age and/or socio-demographic groups, and a plethora of other outcome variables.

Let's keep our list of IPEN publications growing!

- Neville Owen

Research Updates

IPEN Adult Publications

2014-Landmark Year for IPEN

Ten years after the IPEN network was announced in 2004, the first data-based papers from an IPEN collaborative study were published! That makes 2014 the best year of IPEN history so far. I am confident we will have many more publications in 2015, so this year should be even better.

The IPEN GIS methods paper is a remarkable achievement that shows the dramatic variation in built environments across IPEN Adult countries. The figures also show the study design was effective in creating large variation within each country. This paper required an amazing amount of work to put together comparable GIS variables across 10 countries. I want to thank the GIS experts in each country who were very understanding about the repeated requests to recalculate variables, document decisions, and answer questions. Special thanks to the Coordinating Center GIS team of Marc Adams, Larry Frank, and Jim Chapman, along with Paul Hess (from Toronto), the external comparability evaluator. This paper is likely to be a model for others doing international work on many topics, though one lesson is that there are no shortcuts. I'm really pleased with the publication in the International Journal of Health Geographics, which is open access.

Adams, M.A., Frank, L.D., Schipperijn, J., Smith, G., Chapman, J., Christiansen, L.B., Coffee, N., Salvo, D., du Toit, L., Jan Dygrýn, J., Hino, A.A.F., Lai, P-C., Mavoa, S., Pinzón, J.D., Van de Weghe, N., Cerin, E., Davey, R., Macfarlane, D., Owen, N., and Sallis, J.F. (2014). International variation in neighborhood walkability, transit, and recreation environments using Geographic Information Systems: The IPEN Adult Study. *International Journal of Health Geographics*, 13:43. doi: 10.1186/1476-072X-13-43. <http://www.ij-healthgeographics.com/content/13/1/43>

IPEN Adult

Takemi Sugiyama (was at University of Adelaide, Australia; now back in Melbourne) wins the prize for the first IPEN Adult publication presenting data on one of the main study questions. This paper demonstrates that perceived neighborhood environments are related to walking for recreation, based on data from all 12 countries. We should all be pleased that a respected journal, *Health and Place*, published this paper.

Sugiyama, T., Cerin, E., Owen, N., Oyeyemi, A.L., Conway, T.L., Van Dyck, D., Schipperijn, J., Macfarlane, D.J., Salvo, D., Reis, R.S., Mitáš, J., Sarmiento, O.L., Davey, R., Schofield, G., Orzanco-Garralda, R., and Sallis, J.F. (2014). Perceived neighborhood environment attributes associated with adults' recreational walking: IPEN Adult study in 12 countries. *Health and Place*, 28, 22-30.

Ester Cerin capped off 2014 in style when her IPEN Adult paper appeared in print in December in *Medicine and Science in Sports and Exercise*, which is another very strong journal. This was in addition to conducting statistical analyses for papers led by other IPEN investigators, so Ester had an especially productive year. Her paper examined perceived neighborhood environment and accelerometer-measured MVPA.

Cerin, E., Cain, K.L., Conway, T.L., Van Dyck, D., Hinckson, E., Schipperijn, J., De Bourdeaudhuij, I., Owen, N., Davey, R.C., Hino, A.A.F., Mitáš, J., Orzanco-Garralda, R., Salvo, D., Sarmiento, O.L., Christiansen, L.B., Macfarlane, D., Schofield, G., and Sallis, J.F. (2014). Neighborhood environments and objectively measured physical activity in 11 countries. *Medicine and Science in Sports and Exercise*, 46(12), 2253-2264. Published online April 28, 2014. PubMed PMID: 24781892.

More IPEN papers are on the way. Delfien Van Dyck's paper on the relation of MVPA and sedentary behavior to BMI and weight status has been accepted.

Van Dyck, D., Cerin, E., De Bourdeaudhuij, I., Hinckson, E., Reis, R., Davey, R., Sarmiento, O., Mitáš, J., Troelsen, J., Macfarlane, D., Salvo, Aguinaga-Ontoso, Owen, N., Cain, K., and Sallis, J.F. (accepted). International study of objectively-measured physical activity and sedentary time with body mass index and obesity: IPEN Adult. *International Journal of Obesity*.

Billie Giles-Corti, of University of Melbourne, Australia, led an IPEN-affiliated conceptual paper on the translation of built environment research to policy and practice. This paper will be useful for IPEN investigators because it includes 10 recommendations for effective translation of the research. Thanks to Billie for leading this paper, which has been accepted by an excellent internationally-focused journal.

Giles-Corti, B., Sallis, J.F., Sugiyama, T., Frank, L.D., Lowe, M., and Owen, N. (accepted). Translating active living research into policy and practice: One important pathway to chronic disease prevention. *Journal of Public Health Policy*.

Jacqueline Kerr is leading a paper on the relation of perceived neighborhood environment on walking and bicycling for transportation, and the manuscript received positive reviews and currently (early 2015) is being revised for resubmission. Good luck to Jacqueline and co-authors.

One observation about the papers so far is that the collaborative writing process is working well. Authors from all countries are contributing to, and getting recognition for, important IPEN analyses. Thanks to everyone for your responsiveness. A second observation is that so far all the papers have been accepted by excellent journals. This should be encouraging to everyone, and it indicates that the quality and significance of IPEN Adult is being recognized. Please aim high for your target journals. The better the journals we publish in, the stronger will be our impact on science and policy.

IPEN Adult Presentations

IPEN was featured in several major conferences around the world. Here are some highlights. There was an international symposium at the Active Living Research Conference. San Diego, CA., March 2014. IPEN was highlighted in this well-attended event. Mike Pratt organized a panel that featured IPEN investigators from Latin America: Rodrigo Reis, Deborah Salvo, Olga Lucia Sarmiento. Their presentations were summarized in a recent paper with open access.

Salvo, D., Reis, R.S., Sarmiento, O.L., and Pratt, M. (2014). Overcoming the challenges of conducting physical activity and built environment research in Latin America: IPEN Latin America. *Preventive Medicine*, 69 (suppl.), S86-S92. . http://activelivingresearch.org/sites/default/files/PrevMed2014_Salvo.pdf

International Conference on Physical Activity and Public Health. Rio de Janeiro, Brazil. April 2014. IPEN updates were provided at meetings of the Council on Environment and Physical Activity (CEPA). See Jim's blog for more on this meeting . Visit: <https://drjamesallis.wordpress.com/2014/05/01/ipen-related-news-from-icpaph-2014/>

Delfien Van Dyck organized an IPEN Adult symposium at the International Society of Behavioral Nutrition and Physical Activity. San Diego, USA. May 2014. Four data-rich papers based on pooled data were presented, led by Ester Cerin, Ilse de Bourdeaudhuij, Jacqueline Kerr, and Delfien Van Dyck. Ester Cerin organized an IPEN Adolescent symposium at the ISBNPA conference that featured country-specific results.

I was honored to be an Invited Keynote speaker at the International Congress of Behavioral Medicine. Groningen, The Netherlands. August 2014. I took this opportunity to present portions of analyses of several papers in progress. Putting the findings together made it clear that perceived environments are strongly related to walking for leisure, walking and cycling for transport, total objective MPVA, and BMI/weight status. Further, almost all the findings apply across countries, suggesting there are generalizable principles related to the health effects of built environments. It was a pleasure to start to integrate the work of so many IPEN investigators. I also enjoyed being in Groningen, which has one of the highest documented rates of cycling for transport in the world.

- Jim Sallis



Beautiful pedestrian streets in Groningen.



Bicycling is a big part of the culture in Groningen.

Research Updates

IPEN Adolescent

IPEN Adolescent: 2014 Status Report

There was much progress on IPEN Adolescent in 2014. Most importantly, many countries were planning, collecting, or completing data collection. Here is the current list of IPEN Adolescent countries with their status.

Australia - collecting
Bangladesh - planning
Belgium - collecting
Brazil - completed
Czech Republic - completed

Denmark - completed
Hong Kong - completed
India - collecting
Israel - collecting
Malaysia - planning
New Zealand - completed

Nigeria - completed
Portugal - collecting
Spain - collecting
Taiwan - completed
United States - completed

A few other countries are still seeking funding to support an IPEN Adolescent study, so it is possible other countries could join the study.

IPEN Senior

Data collected from older adults in Belgium, Hong Kong, and the US form the starting point of an IPEN Senior study. We have submitted proposals twice to the US National Institutes of Health, and both have been rejected. Two separate review committees expressed little enthusiasm for a cross-sectional study. Numerous IPEN investigators have expressed continuing enthusiasm to participate in IPEN Senior. We are exploring other funding strategies, and if you have ideas for getting this study funded, please let us know.

IPEN GPS

In June 2014, our IPEN GPS grant, adding GPS data to the IPEN Adolescent Study, was very well reviewed. We received a 16th percentile score. This was excellent for our first submission. Unfortunately, the National Institutes of Health is currently funding research with scores less than the 10th percentile. We will, therefore, be resubmitting the proposal in the coming months to attempt to improve the score. Reviewers were very helpful in identifying lack of expertise in route choice modeling in our team. We have, thus, identified experts in route choice modeling: Drs Dill and Broach from Portland State University. We are excited to submit a greatly improved proposal and will keep investigators and IPEN members up to date in due course.

-Jacqueline Kerr

IPEN meetings prior to ISBNPA Conference in San Diego



Attendees at the IPEN meetings



IPEN Adolescent meeting,
San Diego 2014



Jim Sallis, Neville Owen, Ester Cerin, Delfien Van Dyck, Josef Mitas, Jacqueline Kerr, and Rodrigo Reis at IPEN symposium at ISBNPA. San Diego, May 2014.

The International Society of Behavioral Nutrition and Physical Activity (ISBNPA) conference was held in San Diego, California USA last May 21-24, 2014. Because many IPEN investigators were attending, we held two days of meetings (May 19 - 20) at the IPEN Coordinating Center's offices prior to the start of ISBNPA. On the first day (Monday May 19th) we had a very productive writing retreat for IPEN Adult investigators. Lead authors teamed up with coauthors to firm up manuscript aims, writing plans, and modify prospectuses where needed. This day was capped by a party hosted by Jim and Shemi Sallis – it was a very fun evening with lots of good food and drink... and entertaining dance moves! On the second day (Tuesday May 20th), the writing retreat continued for interested IPEN Adult authors. We also had a full day of presentations covering topics key to IPEN Adolescent investigators. IPEN Adolescent countries were well represented at the meeting and gave updates on their country's progress. Ester Cerin gave an informative presentation on updated analysis procedures for IPEN Adolescent, the UD4H team presented preliminary results on the 'sausage buffer' sub study, and Coordinating Center members gave updates on quality control procedures, GIS templates and trainings, and publication plans. The Coordinating Center also presented *MAPS-Global* for assessing activity-supportive microscale attributes in IPEN Adolescent countries, which set plans in motion for a reliability pilot study that is currently being conducted in five countries (Australia, Belgium, Brazil, Hong Kong, and Spain). Also attending the meetings were visitors from Dr. Mohan's Diabetes Specialities Centre in Chennai, India, and we are pleased to report that these investigators are now conducting a study that will become part of IPEN Adolescent. Our pre-ISBNPA meetings were quite productive and lots of fun – it was great seeing and spending time with so many of our IPEN colleagues!

- Terry Conway

ISBNPA 2014, San Diego

IPEN had a strong presence at the ISBNPA 2014 San Diego meeting. Our main IPEN symposium was well attended and there was great interest in the other IPEN-related work that was presented. ISBNPA San Diego was in effect our major launch platform for IPEN findings and we had excellent explanation, discussion and commentary on analytic methods, led with flair and aplomb by Ester Cerin. We had a strong presence of IPEN network main investigators and others involved, with some good critical commentary and a good sense of consolidation, clarification of our thinking and new ideas arising. Reflecting on our emerging IPEN findings and the team interactions at ISBNPA 2014, there is a strong sense of our driving ideas and hypotheses being nicely supported by new findings, a maturing of our understanding of IPEN's conceptual and methodological underpinnings and gratifying evidence of progress and achievements on which we can continue to build. See Jim's blog for more info: <https://drjamessallis.wordpress.com/2014/06/04/ipenisbnpa-week-in-san-diego/>

- Neville Owen

IPEN Activities

ISBNPA 2015, Edinburgh

From June 3 until June 6 2015, the 14th ISBNPA conference will take place in Edinburgh, Scotland. It is becoming a (very good!) habit that the IPEN Adult and IPEN Adolescent groups plan 2 days of IPEN meetings before the conference. Previous meetings have been very fruitful, with updates from the different countries, plans for new papers and an actual writing retreat. So, we are confident that this year's IPEN meetings will be at least as successful! On Monday and Tuesday (June 1 and 2), an IPEN Adult writing retreat will be organized: writing groups will work on their papers and proposals for new papers can be written and discussed. On Tuesday, there will be an IPEN Adolescent meeting: investigators will start to form writing groups and work on paper proposals.

Also at the conference, IPEN will be represented. Ester Cerin will be chairing an IPEN Adult symposium, with presentations of Neville Owen, Rodrigo Reis, Jim Sallis and Delfien Van Dyck. Ilse De Bourdeaudhuij will be the discussant in this symposium. Without a doubt, other interesting oral and poster presentations will be included in the ISBNPA program, once the final program is composed, the timing of interesting IPEN contributions will be communicated.

-Delfien Van Dyck

Worldwide Environment Measures: More and More Good NEWS

NEWS Africa

As built environment studies are conducted in more diverse environments, the measures need to be adapted. IPEN investigators are making progress on both self-report and observational environment measures. In 2014, data collection continued for the NEWS-Africa reliability study. Adewale Oyeyemi has managed this multi-country study very well, and data collection should be completed early in 2015.

The development of NEWS-Africa is an initiative of IPEN to stimulate and advance built environments research in the African region. After many months of meetings, discussions and careful adaptation, a version of NEWS-Africa was finally developed that could be used across the lifespan throughout sub-Saharan African countries. It is remarkable that seven Africa countries are currently completing psychometrics evaluation studies on the NEWS-Africa survey, using common protocol. Analyses of pooled data will commence in March, 2015, and it is expected that 2015 will be a year of multiple papers from Africa documenting the role of built environments on physical activity and sedentary behaviors. Many thanks to investigators from Cameroon (Felix Assah), Ghana (Reginald Ocansey and Elvis Hagan), Kenya (Vincent Onywera, Stella Muthuri and Joy Lucy-Wachira), Mozambique (Antonio Prista), Nigeria (Kingsley Akinroye and Rufus Adedoyin), South-Africa (Tracy Kolbe-Alexander, Hanlie Moss, Clare Bartels and Vicky Lambert) and Uganda (Sandra Kasoma) for their commitments and hard work on this project. We must also thank Mark Tremblay and Richard Larouche from the University of Ottawa in Canada for their invaluable contributions as members of the NEWS-Africa group. Of course, the overall progress on the project cannot be divorced from the big support and leadership of Jim Sallis.

-Adewale Oyeyemi

NEWS India

An exciting development in 2014 was the creation of NEWS-India. This began with Deepti Adlakha, a doctoral student at Washington University in St Louis, who is originally from Chennai, India. She is developing and evaluating NEWS-India for her doctoral dissertation. She obtained input from experts and residents to inform her adaptation. Dr. Anjana and team recommended additional adaptations, and now there is a unified version of NEWS-India that is being evaluated among adults and used in the adolescent study.

BE ACTIV INDIA! STUDY – IPEN ADOLESCENT COMPONENT



The escalation in the prevalence of type 2 diabetes in India has been accompanied by the spread of the disorder to younger age groups, such that the disorder is no longer uncommon among adolescents and youth. Physical inactivity, a major risk factor for T2DM, is widespread among youth in India. While improving the built environment has the potential to improve activity levels, little data is available on this topic from India; most research on BE has been conducted in developed countries and cannot be translated to the Indian context. The BE ACTIV India! project aims, for the first time, to examine the associations between detailed measures of the

neighborhood BE (objectively measured by Geographic Information Systems [GIS] and subjectively measured by questionnaires) and physical activity and sedentary behavior (objectively measured by accelerometry and subjectively measured by questionnaires) with metabolic health (body weight/ glucose intolerance/ insulin resistance/ hypertension/ lipid abnormalities). The study will be conducted as a door-to-door survey of adolescents aged 12-18 years in Chennai, South India.

The BE ACTIV India! study will be the first among the IPEN adolescent studies to look at the relation of BE and physical activity to metabolic parameters such as glucose intolerance. In addition, this study will also help to improve awareness about PA in Indian adolescents and will be the first to provide objective evidence about adolescent PA patterns. It is hoped that the findings of the study will assist policymakers in developing healthier and safer cities in the country.

The Indian team joined the IPEN group at the ISBNPA meeting in May 2014 in San Diego. Since, then the team has been busy, writing up and submitting their project for funding to Department of Science and Technology (DST), Government of India, obtaining permission from the local Institutional Review Board, adapting protocols to the Indian scenario, selecting and training the field teams, procuring equipment and undergoing training in San Diego with Prof. Sallis and team. A pilot study has been conducted in January 2015 and the main field work is expected to begin in February 2015.

- Dr. R.M. Anjana

MAPS Global

With input from IPEN Adolescent investigators in many countries, we have the first version of an international MAPS tool, MAPS-Global. We are currently conducting a reliability study of the instrument in 5 countries (Australia, Belgium, Brazil, Hong Kong and Spain). Each site is conducting 2 on-the-ground observations and 1 observation using online sources (Google Earth and Streetview) for 80 participant routes. UD4H is also conducting an online audit for 40 of the same routes in each country so we can test the reliability among raters with varying levels of familiarity with the area. Hong Kong and Australia have completed on-the-ground data collection and are working on online observations, and Belgium, Brazil and Spain are in the field collecting data now. Data are being transferred to the Coordinating Center on a regular basis and we expect analyses to be underway in the Spring. We are looking forward to a final version of MAPS-Global to be ready to use in IPEN Adolescent countries in 2015!

- Kelli Cain

IPEN Activities

Jim Sallis visits Bangkok, Thailand



Jim Sallis visiting Kasem Nakornkhet (far left) and colleagues at Thai Health, Bangkok, Thailand, July 2014.

Jim Sallis was pleased to present IPEN methods and results to the Thai Health Promotion Foundation leaders in Bangkok, Thailand in July. Thai Health is beginning a physical activity initiative that emphasizes environment and policy approaches, so IPEN can be a resource as they build their evidence base in Thailand. Plan ahead for the 2016 International Congress on Physical Activity and Public Health in Bangkok. For more information, see Jim's blog.

http://www.ispah2016.org/index.php?option=com_content&view=featured&Itemid=435

Jim Sallis and Marc Adams visit IPEN team in Malaysia

Wan Manan and his colleagues organized meetings, trainings, and tours in three cities for Marc and Jim in March 2014. See Jim's blog for details. <https://drjamesallis.wordpress.com/2014/03/27/malaysia-tour-for-ipen/>



Marc Adams and Jim Sallis at IPEN GIS training for Wan Manan and colleagues at the Department of Built Environment, Kuala Lumpur, Malaysia, March 2014.



Marc Adams and Jim Sallis visit Wan Manan and his team, Kota Baru, Malaysia, April 2014.

GIS News

Looking back, 2014 was a big year for measuring built environment features objectively in the IPEN Adult study! We are excited to say that final GIS datasets and variables from 11 countries are now ready! During the last year we completed the comparability evaluation to ensure that methods, metrics, and final variables across countries were comparable for use, and we created short and long dictionaries to guide statistical analyses by international investigators. Additionally, we published the first IPEN GIS paper entitled "[International variation in neighborhood walkability, transit, and recreation environments using Geographic Information Systems: the IPEN adult study](#)" in the open-access International Journal of Health Geographics. The paper documents development of the IPEN GIS measurement process, presents about a dozen figures showing incredible variation in urban form across 15 cities – 9 standard deviation difference in walkability! – and discusses some GIS challenges inherent in this ambitious project. Further publications are in progress to examine the relations between objectively-measured urban form, physical activity, and other health outcomes. Look for them soon!

GIS News, continued

We also spent the last year refining and further developing the set of GIS templates for IPEN Adolescent. We incorporated refinements learned by our experience with IPEN Adult to make the templates simpler. We also added new templates (e.g. regional accessibility, vacant land use) and will aim to assess urban form features around both home and school neighborhoods. Draft templates were circulated to participating investigators and GIS staff for feedback last summer and their comments are incorporated in the final set of documents. We also have enhanced the comparability process for IPEN Adolescent by incorporating the survey platform, Qualtrics, in the GIS comparability process. Country teams can now document and save their responses to the many template questions in Qualtrics, and the enhanced logic checks and conditional display features in Qualtrics promises to improve the quality and speed of our GIS comparability evaluation. Lastly, Urban Design for Health (UD4H) has created a series of webinars to guide GIS analysts during their work. These videos promise to further ensure close integration with the GIS templates and help build capacity across the world. Look for the release of IPEN GIS Templates 2.0 and webinars on the IPEN website.

-Marc Adams

1] Achieving Consistent GIS Variables – Webinar Training

During 2014 and 2015, Urban Design 4 Health (UD4H), in collaboration with the IPEN Coordinating Center, has developed protocols for built environment measure calculation. These standards help ensure consistency between countries.

UD4H led a series of training webinar presentations designed to provide technical direction on the geographic information systems (GIS) processes used to produce urban form variables. The first webinar presentation (*Neighborhood Selection & Built Environment Measures Using GIS, Jan 2014*) detailed a comprehensive approach to select using GIS to determine eligible neighborhoods or administrative units to recruit from based on a high/low stratification by walkability and socio-economic status (SES). The second webinar, *Parcel Aggregation for IPEN Adolescent (May 2014)*, supplied a detailed description of aggregating parcel-based data to administrative units and participant network buffers. The webinar highlighted the construction of parcel-based built environment measures used to formulate the walkability index using several software packages.¹ The third webinar, *Development of Road Networks for IPEN Adolescent (Sept 2014)*, offered a detailed look at the GIS method used to develop a comprehensive walkable road network including the potential incorporation of non-motorized pathways used for active transportation. The walkable road network forms the basis for the participant buffers as well as various network distances measuring accessibility to goods, services and public amenities. The fourth webinar, *Developing Home & School Network Buffers, provided guidance on data and methods to be used to create the required buffers*.

Copies of each of the presentation slides and video of the presentations are available for download from the IPEN website at the following locations:

Parcel Aggregation for IPEN Adolescent (May 2014)

- [https://www.dropbox.com/s/311c993k2zkhrra/IPEN Adolescents Webinar 2 Parcel Aggregation Presentation UD4H 05132014.pdf?dl=0](https://www.dropbox.com/s/311c993k2zkhrra/IPEN%20Adolescents%20Webinar%202%20Parcel%20Aggregation%20Presentation%20UD4H%2005132014.pdf?dl=0)
- [https://www.dropbox.com/s/7822ydb0bddn12y/IPEN Adolescent Webinar 2 Parcel Aggregation UD4H 05142014.wmv?dl=0](https://www.dropbox.com/s/7822ydb0bddn12y/IPEN_Adolescent_Webinar_2_Parcel_Aggregation_UD4H_05142014.wmv?dl=0)

Development of Road Networks for IPEN Adolescent (Sept 2014), (Presentations and video can be found at:

- [https://www.dropbox.com/s/4cr25omdg5nkwiu/IPEN Adolescents Webinar 3 Road Network Presentation UD4H 09152014.pdf?dl=0](https://www.dropbox.com/s/4cr25omdg5nkwiu/IPEN%20Adolescents%20Webinar%203%20Road%20Network%20Presentation%20UD4H%2009152014.pdf?dl=0)
- [https://www.dropbox.com/s/97skpjkxqlmf7s2/IPEN Adolescent Webinar 3 Road Network UD4H 10172014.wmv?dl=0](https://www.dropbox.com/s/97skpjkxqlmf7s2/IPEN%20Adolescent%20Webinar%203%20Road%20Network%20UD4H%2010172014.wmv?dl=0)

Developing Home & School Network Buffers

- [https://www.dropbox.com/s/w2w68vfn6ha8fvz/IPEN Adolescent Webinar 4 Developing Network Buffers 01262015 final presented.pdf?dl=0](https://www.dropbox.com/s/w2w68vfn6ha8fvz/IPEN%20Adolescent%20Webinar%204%20Developing%20Network%20Buffers%2001262015%20final%20presented.pdf?dl=0)
- [https://www.dropbox.com/s/wlzi2fww06j0miu/IPEN Adolescent Webinar 20234 01262015 UD4H final presented.wmv?dl=0](https://www.dropbox.com/s/wlzi2fww06j0miu/IPEN%20Adolescent%20Webinar%20%20234%2001262015%20UD4H%20final%20presented.wmv?dl=0)



URBAN DESIGN 4 HEALTH

www.ud4h.com

GIS updates, continued

Ongoing Assistance from Urban Design 4 Health is Available to Study Partners:

UD4H's Lawrence Frank, Jim Chapman and Eric Fox have also assisted participating investigators with GIS consultation for specific questions. They remain available to help IPEN Adolescent participating countries to problem solve issues with the development of built environment measures working within local data constraints.

2] MAPS Global Contributions:

As part of the IPEN Adolescent use of the Microscale Audit of Pedestrian Streetscapes (MAPS) tool, UD4H assisted the IPEN Coordinating Center develop a refined version of the online survey tool using Google Street View and aerial imagery through Google Earth software. Collaborators from five study sites (Ghent, Hong Kong, Melbourne, Porto Alegre and Valencia) are taking part in a pilot study to collect walking route data starting at participant homes. A UD4H training webinar covered the methods and tools used to complete the online MAPS tool with Google Earth. This technical instruction focused on clarifying best practices for efficient use of the software as well as suggested ways of streamlining the data acquisition process.

Training webinar presentations:

Webinar Presentation: MAPS Global Training for IPEN Adolescent

- [https://www.dropbox.com/s/xynvh66xlmnyjxh/IPEN Adolescents MAPS Global Online Training UD4H 10092014.pdf?dl=0](https://www.dropbox.com/s/xynvh66xlmnyjxh/IPEN%20Adolescents%20MAPS%20Global%20Online%20Training%20UD4H%2010092014.pdf?dl=0)

Video Training Presentation: MAPS Global Training for IPEN Adolescent

- [https://www.dropbox.com/s/tsyr0ibrloh2z1q/IPEN Adolescents MAPS Global Online Training UD4H 10092014.wmv?dl=0](https://www.dropbox.com/s/tsyr0ibrloh2z1q/IPEN%20Adolescents%20MAPS%20Global%20Online%20Training%20UD4H%2010092014.wmv?dl=0)

3] IPEN Adult Buffer Comparison --Update on Paper #36: International Comparison and Validation of Alternative GIS Buffer Methods to Develop Environmental Predictors of Physical Activity In order to determine the most effective approach to buffering and developing built environment measures (BEM) for an international study², Urban Design 4 Health (UD4H) completed an initial analysis of the explanatory power differences of BEM variables developed using different types of spatial buffers around participant households. BEM calculations were done by study partners from Brazil, Denmark, New Zealand, United Kingdom, and United States for eight cities. All buffers radiated out 1km along the street network from a participant's home. The buffers differed by analytical method (original IPEN (generalized), detailed-trimmed, and sausage)³, the offset width of the buffer along the street (25m or 75m), and whether the point features were first "snapped" to the nearest road or allowed to remain where located. Eleven different BEMs⁴ were calculated and five outcomes (related to transportation walking, leisure walking, and sedentary activity) from existing IPEN data were used. Results indicated that while BEM values often differed significantly by buffer type (when compared across buffer analytical method, offset distance, and snapping or not), BEM coefficients in the physical activity models did not significantly differ by buffer type. In most, but not all cases, the BEM association with each physical activity outcome had the same level of statistical significance for each buffer type. Based on these results, and consideration of the desire to use an approach that can be most consistent across GIS software and versions, it is recommend that IPEN Adolescent buffers use the sausage method with a 25m offset and when counting locations/destinations represented by points, that the points are first "snapped" to the nearest road segment.

1. ESRI ArcGIS, Spatial Ecology Geospatial Modeling Environment (GME) and the programming language R
2. For more details please see the prospectus -<https://www.dropbox.com/s/kuyyb7gdgq5yef0/Paper%2036%20IPEN%20Adult%20Manuscript%20revision%205th%20March%202014.docx?dl=0>
3. For more details please see the methods document -[https://www.dropbox.com/s/0v7kijwy6hf3obx/IPEN Adult Buffer Comparison Method issue 05292014 submitted.docx?dl=0](https://www.dropbox.com/s/0v7kijwy6hf3obx/IPEN%20Adult%20Buffer%20Comparison%20Method%20issue%205292014%20submitted.docx?dl=0)
4. Net residential density -- single & multi family, Intersection density -- counts and density, Bus and rail stops -- counts and density, Private recreation-- counts and density, Public parks -- counts and land area, Mixed use, Walk index

GPS updates

Jacqueline Kerr of UC San Diego was recently invited by Exercise and Sports Science Reviews to contribute a piece on accelerometer, GPS, and GIS research. In collaboration with University of Southern Denmark colleague Jasper Schipperijn and postdoctoral researcher Marta Jankowska, the trio wrote a piece titled "A Framework for Using GPS Data in Physical Activity and Sedentary Behavior Studies". The paper focuses on what types of questions can be asked from combining sensor data with environmental context, and presents a framework for project development as well as selecting an appropriate analysis path. The framework will be a valuable asset for informing ongoing research in the IPEN adolescent cohort, for which many countries are collecting GPS as well as accelerometer data on participants in Australia, Belgium, Brazil, China/Hong-Kong, Czech Republic, Denmark, Portugal, New Zealand, USA, and Taiwan.

- Marta Jankowska

CEPA update

The Council on Environment and Physical Activity (CEPA) was organised at the 3rd ICPAPH (Toronto) in 2010. Its aims were to encourage and support researchers from different countries in conducting rigorous research on physical activity and the environment and to inform local policy on planning and transport. Eight groups were formed during the 4th ICPAPH in Sydney (2012), including the Children's group and these groups have been working on particular issues involving physical activity and the environment. At the 5th ICPAPH in Rio De Janeiro, (2014), there was a showcase of activities from the different groups including the children's group.

The executive team for CEPA-Children's working group is comprised of Erica Hinckson (group leader), Jo Salmon (Australia), Greet Cardon (Belgium), Ester Cerin (Hong Kong), and Mika Moran (Israel). The executive team met at 2014 International Society and Behavioral Nutrition and Physical Activity conference and discussed the possibility of an IPEN (International Physical activity and Environment Network)-Children study. One of the actions from this meeting was to survey countries to identify the type of data countries collected/plan to collect relating to physical activity and the built environment in children. The survey is in the link provided here:

https://www.surveymonkey.com/r/CEPA_Children_Survey

If you are interested in being part of an international study with children, please complete the survey. We appreciate your time.

- Erica Hinckson

CEPA-Children Executive team



International visits and exchanges

The ISBNPA meeting in San Diego in May 2014 attracted many IPEN investigators to come together, and the San Diego team was extremely pleased that several colleagues arranged for extended visits to San Diego. For several weeks our office was an IPEN Fiesta of great ideas and new collaborations and friendships. In addition to work-related meetings, there were extra-curricular activities that allowed visitors to enjoy some of the beauty and attractions of San Diego.



Jo Salmon from Melbourne, Australia stayed for several weeks. With her husband Paul, we had a great visit to Rosarito Beach, Mex-

Jasper Schipperijn, from Odense, Denmark, had a productive meeting working on both IPEN papers and additional projects with Jacqueline Kerr.



Jasper Schipperijn, Jim Sallis, and Neville Owen bike around San Diego Bay. May 2014.

Irene Esteban Cornejos, from Madrid, Spain, had an extended visit as part of her PhD studies. She completed several papers for her thesis and has a submitted paper based on our US data on adolescents. Irene made several bike rides around the beach area.

Ferdinand Salonna from Olomouc, Czech Republic made two visits, supported by a postdoctoral grant. He developed a paper plan using IPEN Adult data. On his second visit, I took him and Jasper Schipperijn to the scenic Anza-Borrego desert in San Diego County.



Jasper Schipperijn and Ferdinand Salonna in the Anza-Borrego Desert. San Diego County, September 2014

Spain was well represented at the May 2014 meeting. Irene's professor, Oscar Veiga, also attended the IPEN meetings. Javier Molina and Ana Queralt, leaders of the Spanish IPEN Adolescent study from Valencia, were very involved in the meetings. Many of the visitors toured the beach on bikes.

Erica Hinckson, from Auckland, New Zealand, extended her visit to do some planning about an IPEN Child study and also participated in a 10K run across the Coronado Bridge.

Attendees were impressed with the excellent research and community prevention strategies coming from their Center in Chennai. We wish them well on their data collection for BE ACTIVE INDIA! that started January 2015.

Dr. Anjana and Dr. Mohan from Chennai, India, attended the May 2014 meetings and decided to pursue an IPEN Adolescent study. They were referred by our Australian colleagues Jo Salmon and Anna Timperio, which we appreciate very much. Dr. Anjana returned in December with two colleagues, and they were trained in IPEN study methods. Dr. Anjana gave a well-received presentation on the causes and promising solutions for diabetes in India at the UCSD School of Medicine



The Chennai Team with Kavita at Jim's house



Josef Mitas, Jim Sallis, Ferdinand Salonna, & Irene Esteban hike Cowles Mountain. San Diego. May 2014.



Jim Sallis, Ferdinand Salonna, Irene Esteban, & Ding Ding tour San Diego's Mission Bay by bike. May 2014.



Irene Esteban, Ana Queralt, Oscar Veigas, Ferdinand Salonna, Javier Molina, and Jim Sallis bike around Pacific Beach. San Diego, May 2014.

IPEN-Related Publications 2014

Mexico

These are the publications that we know. Please send your papers (pdf) and citations. We will add them to the website.

- Salvo D, Reis RS, Stein AD, Rivera J, Martorell R, Pratt M. Characteristics of the Built Environment in Relation to Objectively Measured Physical Activity Among Mexican Adults, 2011. *Prev Chronic Dis* 2014;11:140047.
- Salvo, D., et al., Overcoming the challenges of conducting physical activity and built environment research in Latin America: IPEN Latin America, *Prev. Med.* 2014; 1:S86-92..

Australia

IPEN ADULT

Van Dyck D, Cerin E, De Bourdeaudhuij I, Hinckson E, Reis RS, Davey R, Sarmiento OL, Mitas J, Troelsen J, MacFarlane D, Salvo D, Aguinaga-Ontoso I, Owen N, Cain KL, Sallis JF. International Study of Objectively-measured Physical Activity and Sedentary Time with Body Mass Index and Obesity: IPEN Adult Study. *International Journal of Obesity*, in press.

BEPAS seniors

Van Holle V, Van Cauwenberg J, Van Dyck D, Deforche B, Van de Weghe N, De Bourdeaudhuij I. Relationship between neighborhood walkability and older adults' physical activity: results from the Belgian Environmental Physical Activity Study in Seniors (BEPAS Seniors). *Int J Behav Nutr Phys Act* 2014; 11: 110

<http://www.ijbnpa.org/content/pdf/s12966-014-0110-3.pdf>

BEPAS children

D'Haese S, Van Dyck D, De Bourdeaudhuij I, Deforche B, Cardon G. The association between objective walkability, neighborhood socio-economic status, and physical activity in Belgian children. *Int J Behav Nutr Phys Act* 2014; 11: 104

<http://www.ijbnpa.org/content/pdf/s12966-014-0104-1.pdf>

BEPAS adolescents

De Meester F, Van Dyck D, De Bourdeaudhuij I, Cardon G. Parental perceived neighborhood attributes: associations with active transport and physical activity among 10-12 year old children and the mediating role of independent mobility. *BMC Public Health* 2014; 14: 631

<http://www.biomedcentral.com/content/pdf/1471-2458-14-631.pdf>

IPEN ADULT (3-country studies – Belgium, USA, Australia)

Van Dyck D, Cerin E, Conway T, De Bourdeaudhuij I, Owen N, Kerr J, Cardon G, Sallis JF. Interacting psychosocial and environmental correlates of leisure-time physical activity: a three-country study. *Health Psychology*, 2014; 33: 699-709

Denmark

- Christiansen LB, Madsen T, Schipperijn J, Ersbøll AK, Troelsen J. (2014). Variations in active transport behavior among different neighborhoods and across adult lifestages. *Journal of Transport & Health* 1;1 (4):316-325.

IPEN-Related Publications 2014

Australia

- Giles-Corti, B., Sallis, J.F, Sugiyama, T., Frank, L.D., Lowe, M., & Owen, N. (in press). Translating active living research into policy and practice: One important pathway to chronic disease. *Journal of Public Health Policy*. (Accepted 13 October 2014). doi:10.1057/jphp.2014.53
<http://www.palgrave-journals.com/jphp/journal/vaop/ncurrent/pdf/jphp201453a.pdf>
- Sugiyama, T., Cerin, E., Owen, N., Oyeyemi, A.L., Conway, T.L., Van Dyck, D., Schipperijn, J., Macfarlane, D.J., Salvo, D., Reis, R.S., Mitáš, J., Sarmiento, O.L., Davey, R., Schofield, G., Orzanco-Garralda, R., Sallis, J.F. (2014). Perceived neighbourhood environmental attributes associated with adults' recreational walking: IPEN Adult study in 12 countries. *Health & Place*, 28, 22–30.

Below are recent papers from the PLACE data.

- Koohsari, M.J., Sugiyama, T., Lamb, K.E., Villanueva, K., & Owen, N. (2014). Street connectivity and walking for transport: role of neighborhood destinations. *Preventive Medicine*, 66, 118–122.
- Sugiyama, T., Giles-Corti, B., Summers, J., du Toit, L., Leslie, E., & Owen, N. (2013). Initiating and maintaining recreational walking: A longitudinal study on the influence of neighborhood green space. *Preventive Medicine*, 57(3), 178–182.

Bangladesh

- Islam MZ, Moore R, Cosco N. (2014) Child-Friendly, Active, Healthy Neighborhoods: Physical Characteristics and Children's Time Outdoors. *Environment & Behavior Journal*. <http://eab.sagepub.com/content/early/2014/10/16/0013916514554694>

Announcements

You Tube channel - Active Living Clips

Jim Sallis announces a new You Tube channel called "Active Living Clips." He has been making short Iphone videos of interesting places and programs related to physical activity while recording his commentary. They are informal and casually produced, but they show examples of physical activity environments from several countries. He will keep adding clips. He welcomes comments. For "Active Living clips" go to You Tube and search for "Dr Jim Sallis"

The Active Living Research group was commissioned by Nike to explore the literature on the co-benefits of designing cities for active living. An extensive and wide-ranging search revealed a great deal of evidence supporting co-benefits in health, safety, environmental sustainability, and economic domains. This information is relevant to IPEN because it shows decision makers that policies supporting "active design" produce multiple benefits. This information is incorporated into Nike's "Active Cities" report that will be published and distributed globally in the first part of 2015. Look for it.

The paper is open access at *International Journal of Behavioral Nutrition and Physical Activity*. A longer report and the data tables are available on the ALR website.

Sallis, J.F., Spoon, C., Cavill, N., Engelberg, J., Gebel, K., Lou, D., Parker, M., Thornton, C.M., Wilson, A.L., Cutter, C., and Ding, D. (2015). Co-benefits of designing communities for active living: An exploration of literature. *International Journal of Behavioral Nutrition and Physical Activity*, 12: 30. DOI 10.1186/s12966-015-0188-2.

<http://www.ijbnpa.org/content/pdf/s12966-015-0188-2.pdf>

We are pleased to inform you that our key Coordinating Center staff member, Carrie Geremia, had her second baby in late December. Ruby Joy is the newest member of the IPEN team.



Translational Journal of the American College of Sports Medicine

American College of Sports Medicine announced the launch of a new official journal "Translational Journal of the American College of Sports Medicine". The journal will be an international, peer-reviewed, online journal designed to disseminate translational evidence-based science that is intended to inform researchers and practitioners. The journal will begin publication in 2016 and will be delivered online as a member benefit to ACSM Professional and Clinician members.

Requests

Please send your IPEN-related publications and citations to the Coordinating Center. These papers do not need to be directly from IPEN-affiliated studies. All papers related to physical activity environments and policies are welcome. We will list the citations on the website and share the pdf with interested investigators. Let us help disseminate your papers.

Please share photos of environments in your country that are both supportive and non-supportive of physical activity. We have comprehensive photo albums from IPEN Adult countries (see Methods and Measures). We ask all IPEN Adolescent investigators to create similar photo albums, so please start now. We welcome other investigators to send similar photo albums or just interesting shots, with brief explanations, so we can all continue to learn from each other.



IPEN: International Physical Activity and the Environment Network
ipenproject.org