INRICH: 3rd Annual Workshop Minutes

November 3-5, 2010

Instituto de Medicina Integral Professor Fernando Figueira (IMIP), Recife, Brazil

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Day I: November 3, 2010

8:30am
Introduction by Dr. Antonio Carlos Figueira (President of IMIP)

8:45am
Dr. Yehuda Benguigui
Child mortality in Latin America
Inequalities in Latin America and the Caribbean, which are the highest in the world, were presented. Mortality in children under 5 years are due to biological causes, delays in health care, and social determinants of health. Biological causes are extensively studied by doctors, but the other causes have received less attention. Infant mortality rates range from 23 to 60 per 1000 from the highest to lowest quintile. Other factors that influence health care include access to health care, rural vs. urban, health care expenditure, indigenous vs. non-indigenous, Human Development Index. Since 1995, reductions in child mortality have occurred, but there have not been reductions in neonatal mortality. There are interventions available for the biological causes of mortality, but social determinants prevent their delivery. It is important to make changes in literacy, empowerment, safety, healthy homes (underlying causes) so that we are not just treating the immediate biological problem and then sending children back into the same conditions.

9:30am
Dr. Malaquias Batista-Filho
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Child inequalities in health: A Brazilian perspective
A comparison of developed, developing (Brazil), and less developed countries. Brazil's ratio of 40% of poorest people to 20% of richest people is 9:61. Child mortality rates have dropped from 80 to 20 per 1000 people (1980 to 2006). Regional differences exist within Brazil, with north and northeast being less developed. Access to drinking water can be a problem in rural areas. Brazil currently has very high rates of vaccination.

10:00am
Dr. Leonor Pacheco
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Child health in Brazil: Evolution, perspective, and gaps in knowledge
High rates of immunization occur because "Immunization Days" have been implemented in Brazil. Their research team utilized these days to collect information from mothers and children ("Neonatal Day"). They collected information from 15 000 mother-child dyads. They assessed the quantity and quality of prenatal care. Of note, only half of mothers know in advance where they would deliver their baby and only half of births occur by vaginal delivery. Since 1974, a large drop in child malnutrition (measured by weight) has been observed across regions of Brazil, especially in North and Northeast regions. However, as malnutrition has decreased, excessive weight is on the rise, especially in low income groups. Prevention strategies for obesity include a public campaign against the advertisement of unhealthy foods and education on reading nutritional labels on food.

10:50am
Dr. Aluisio Barros
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Early determinants of cognitive function
This study was conducted in the urban Pelotas region. Children were followed longitudinally from birth to 7 years (ongoing), beginning in 2004. The emphasis was on development and mental health. Results were presented for 2 and 4 years of age. At 2 years, maternal education and stimulation predicted cognitive development; however the higher the stimulation score, the less important maternal education became. At 4 years, there was a linear effect of education and income on IQ.

11:30am
Dr. Maria do Carmo Leal
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The importance of social capital and support on the health of newborns
There are different definitions of socioeconomic status, as well as a distinction between a lack of goods and social inequality. There are also several definitions of social capital. This prospective cohort study of newborns in two municipalities (Petropolis, Queimados) examined the effects of social capital, social support, and social network on prenatal care, newborn care, and breastfeeding. Maternal education, age, and empowerment of mother (part of social capital) were significant predictors.

12:00pm
Discussion
- The issue of continuity of care to avoid sending children back to poor environmental conditions was raised. Although children who are saved from mortality may end up on the streets or involved in crime, it is important for the government to promote the well-being of its citizens so that there is hope for change. Medical schools in Latin American tend to focus on biology, with little attention paid to social determinants of health.
- Funding for malnutrition may diminish with the rise of obesity. With concerns that obesity will grow exponentially, it is important to promote healthy food and fight against advertisement of unhealthy foods. This issue may not be able to be resolved through education; a stronger stance may be needed to tackle this issue (similar to anti-smoking campaigns). Similar to the high cost of healthy food, building parks and other public spaces for physical activity are expensive.
- The role of virtual social networking and computers in reducing inequalities in child health was discussed. The internet may be optimized for use with these issues.

2:00pm
Dr. Nick Spencer
Intergenerational transmission of child health inequalities
The importance of intergenerational transmission is often neglected in life course epidemiology, although birth may be thought of as a continuum. There are several mechanisms of intergenerational transmission: social, socio-biological, socio-psychological. A conceptual model of intergeneration transmission of low birthweight and preterm birth was introduced. Empirical studies and policy implications were presented.

2:45pm
Dr. Lucie Laflamme & Marie Hasselberg
Tackling social inequalities in traffic injuries in childhood: A policy agenda
The role of injuries in mortalities was presented. Injuries have a cause and effect relationship with poverty. Traffic injuries vary by age and type of transportation, as well as by SES. It is important to realize that preventing injuries is different from reducing inequalities in injuries. Policies for preventing injuries include enforcement of speed control and alcohol, and road measures. Policies for tackling differential susceptibility include access to quality health care and product safety.

3:15pm
Discussion
- The relationship between income and asthma across countries was discussed. The hygiene theory stipulated that asthma was a disease of the privileged, but in Canada and the UK asthma is related to low income.

- The research on child abuse was compared to injury research and intergenerational transmission. Injury research involves only victims, while child abuse and neglect have clear intergenerational patterns. Abuse is related to poverty and parental coping, but may also be an artifact of social patterns (social workers may be more lenient towards wealthier families). In child abuse, the victim and the aggressor often have similar profiles.
- The first step is to document intergeneration patterns, but it is more difficult to attribute causal mechanisms when social and biological factors are so intertwined. At the present time, we can only speculate about environment vs. biological exposure. It is necessary to develop longitudinal studies that account for both the mother and the child's cohort (not just retrospective data).
- Medical training was discussed once again. It was suggested that it may be easier to change the teaching of knowledge vs. changing the curriculum. Medical students are often interested in diseases and systems, rather than environmental influences on health. At the University of Warwick, students have exposure to social medicine early in their training and hopefully this has a slow effect on their understanding. In Latin America, while the majority of the training is based on the hospital, many of the medical jobs are outside of the hospital. During a rural rotation, students are exposed to community problems, but do not have supervision. At IMIP, students get a more social model.

4:15pm
Dr. Michael Kramer
SES disparities inpreterm birth
The distinction between intra-uterine growth restriction, preterm birth, and low birthweight was made. Population-based change in preterm birth is not a good indicator of perinatal health because of differences in registration guidelines, compliance with guidelines, and exclusion of stillborns. Increases in preterm birth are due to late preterm births, primarily as a result of increased obstetric intervention (especially labour induction), but also from an increase in multiple births. In Latin American, the same trend is seen: a decrease in infant mortality but an increase in preterm birth.

4:45pm
Dr. Kate Pickett
Child health & wellbeing in rich nations: The role of income inequality
In developed countries, health/social problems show no relation to average levels of income but are strongly related to income inequality (ration of richest 20% to poorest 20%). Many indicators show this relationship: mental illness, infant mortality, overweight, imprisonment, bullying, social mobility, etc. Benefits of living in more equal society extend all the way to the richest group. Status differentiation had a direct effect on cognitive performance in en empirical study. In Latin America, only growth in economy and decrease in inequality is associated with better health. Visit www.equalitytrust.org.uk for more information.

4:15pm
Discussion
- The direction of the relationship between social inequalities and health was discussed. It does not seem to matter how equality is achieved, for instance, Sweden achieves more equality through income redistribution and Japan achieves more equality through smaller income differences and both these countries have some of the best health outcomes. Levels of inequality are not specific to countries or culture, since levels change over time. The length of time to have changes in health after policy changes depends on the health outcome (life expectancy vs. violent crime). Inequality may be related to corruption, but also to trust in government and civic responsibility.
- The relationship between pre-term births and caesarean sections was discussed. In Canada, the rise in pre-term births is likely due to increase inductions, rather than caesarean sections. However, in Brazil and Chile, the rates of caesareans is much higher. Increase in caesarean and induction may have contributed to the decrease in infant mortality, but there may be other adverse outcomes and decrease in mortality has permitted the continuation of pre-term births. The threshold of intervention for induction has decreased because of an increased ability to diagnose problems that could lead to stillbirth.

5:45pm
Dr. Jailson Correia
Closing and Thanks

Day II: November 4, 2010

8:30am
Dr. Michael Kramer
Problems in defining and classifying preterm birth
Preterm birth may be compared to premature death, as both are defined by time, rather than phenotype. Of the several current paradigms for classification of preterm birth (gestational age, clinical presentation, biologic pathway/pathology), each has its problems. Measurement problems include differences in registration guidelines, compliance with guidelines, inclusion vs exclusion of stillbirths, and late terminations. Population-based temporal trends in infant mortality, stillbirths, and preterm births were presented. Terminations have a large impact on infant mortality but less of an impact on the preterm birth rate. The rise in late preterm births is attributable to increased obstetric intervention (especially labour induction), but also to an increase in multiple births due to multiple births ovarian stimulation and IVF, and to an increase in maternal age. The duration of gestation among births birth at or after 37 completed weeks has decreased since 1990, so that 39 weeks is now the most common gestational age (vs. 40 weeks) in the United States. These findings suggest that preterm birth is difficult to use as a population health indicator.

Discussion
- The increase in size for gestational age in Canada was discussed. This occurred in Canada until about 2000, at which point it levelled off. Increases may be attributed to decreases in smoking and increases in maternal weight gain.
- The importance of understanding the changing nature of the measured outcome was discussed. Preterm birth is particularly problematic since it is defined by time and there are factors working in opposite directions. It is still unclear how to measure preterm birth in a way that has stronger meaning for population studies. It will be important to understand whether preterm birth itself is a risk factor or if it is the causes of preterm birth that lead to adverse outcomes. One suggestion was to focus on birth prior to 32 weeks, at which point there may be a stronger pathological phenotype. There may still be multiple phenotypes at this age and the proportion of preterm births before 32 weeks is small, therefore there would be a need for population-based data. However, this would likely advance understanding. To create a better phenotypic scheme, there is a need to classify babies retrospectively to see if better associations would be found and then to classify prospectively in new cases and to replicate findings. There exists some animal research trying to understand the phenotypes of preterm birth. In Canada, there has been a shift in funding away from epidemiology to basic science and there is some work on genome wide association.
- Once more homogeneous groups of preterm babies have been established, perhaps it may be determined whether the definition would be dichotomous/categories or continuous. Although 37-38 weeks gestational age is a risk factor, including these babies as pre-term would likely drown out the etiological factors.
- Maternal obesity as a risk factor for preterm birth is unclear due to mixed findings. Underweight in mothers is a risk factor for pre-term birth; obesity is a risk factor for caesarean and induction. Increased age of mothers is a relatively weak risk factor for pre-term birth. It is unclear how prenatal care affects pathways to adverse outcomes, since there are opposing influences (either prenatal care is not sought because everything is going well or because there are adverse social circumstances).
- The relationship between SES and preterm birth was discussed. This likely depends on health care systems, location, level of disadvantage.

9:40am
Dr. Anders Hjern (presented by Dr. Nick Spencer)
The combined influence of household class and preterm birth on health and social outcomes
This study investigated the effect of parent class mediated by social background on health and social outcomes. Social background was measured by household class, based on occupation (high, middle, low non-manual, skill manual, unskilled manual). Results showed that there was a large difference between low and high SES, but a gradient of gestational age remained for both groups. There was an interaction between class and gestational age, such that the negative influence of pre-term birth was larger for low SES, but only for moderate or early pre-term births (not very pre-term).

Discussion

- This is an impressively large, powerful dataset, which highlights the importance of social environment.
- Since Sweden has low inequality and good health outcomes, the gradients may be different in other countries.
- To understand what aspects of SES are influencing these outcomes, a different database may be necessary.
- Hospitalizations were used as a proxy measure of mental health problems, which had problems, but self-report of mental health problems is also problematic.

10:40am
Dr. Aluisio Barros
Early and contemporary determinants of cognitive function

The 2004 cohort study found an interaction between maternal education and stimulation score at 2 years of age for child development. High stimulation may compensate for low maternal education. A separate intervention study carried out by researchers in Penambuco State found significant difference between treatment and control groups, especially in those children who had lower initial scores. The intervention consisted of 14 contacts – initial visit, 3 workshops, and 10 reinforcement sessions. Measurement of prematurity – birth weight (very accurate measurement) vs. gestational age (using last menstrual cycle, not precise). At 4 years, strong effect of maternal schooling, income, and stimulation on IQ were found. With recent changes in Brazil, children go to school one year earlier, but it is unclear whether they are ready for school (especially those with low education mothers).

Discussion

- The idea that stimulation may compensate for maternal education was discussed. It seems promising that the stimulation dose is quite small and within capacity for change. The issue is what is behind the stimulation. It is easy to give a child a book, but this is unlikely to make a change. Rather, the stimulation score is a reflection of the overall environment in the household. However, the results from the intervention study are encouraging. A Montreal study found that reading a book to a child made a significant different in child's development, especially for low income. The mechanisms of change are not clear: reading may be important for cognitive development in terms of mental stimulation, quality mother-child time may be critical, interventions may give mothers a sense of empowerment. Maybe it does not matter – as long as it works!
- The idea that there may be reverse causation with stimulation and development was raised: a less developed child encourages less stimulation from parents. However, the stimulation items were so simple as to suggest that only a very delayed child would avoid this type of contact. It is possible to look at this relationship longitudinally from 2 to 4 years.
- The most common types of stimulation were visiting and watching TV; therefore perhaps the signal is coming primarily from other types of stimulation (ie., reading). Maybe the importance of each type of stimulation depends on the outcome measure.
- The role of maternal mental health in child cognitive development was discussed. This may act through quantity or quality of stimulation. The role of timing of maternal depression was also brought up.

11:45am
Dr. Lennart Kohler
A Child Health Index in a relatively disadvantaged part of a rich city in Sweden: Methods, results, and consequences

Goteborg is the second largest city in Sweden; it is highly segregated between the Northeast (poor) and the Southwest (rich). Dr. Kohler was asked to apply health indicators to give a picture of the Northeast area of the city in order to mobilize the appropriate resources to help equalize the city. 15 indicators in four domains were used. Results showed poorer health in children in the NE on most indicators, except hospitalizations and vaccinations (same) and smoking/drinking and mental health problems (better). This may be because of the large proportion of Muslim population and possibly better social support in immigrant groups.

Discussion

- Region-based interventions may seem like they are not working, but in fact there has been a change and people have moved out of the area and new people have moved in. This may be demoralizing for program staff unless proper measurements are done to understand the outcomes.
- The findings about superior mental health are similar to Canadian results in which new immigrants show fewer mental health problems in spite of greater poverty. This may be due to different meaning of poverty and a hope for the better outcomes in the future. It seems as though some ethnic group communities have protective effects, especially for psychotic disorders. For immigrants, we need to be cautious about conclusions before we understand reasons for immigration and cultural group differences.
- A question about how these results will inform action was raised. It is crucial to get the opinions of the people themselves, rather than having a completely top-down approach. We cannot convince people that they are at risk, this may cause resistance. An older model was to find the problem and to try to fix it, now the approach is to help people find the capacities to solve the problems themselves.

12:30pm
Dr. Jailson Correia

- 50th anniversary of IMIP – institute of comprehensive care, not just for mothers and children. Although Brazil has experienced improvement in economic development in past 10 years, it has lot to learn from other countries.
- The Brazilian Journal of Mother and Child Health, open-access journal, has been created. If you want to share a viewpoint, editorial, or research article from your experiences here, please submit to this journal. Readership includes health care workers and public health sector. They would be delighted to receive submissions.

1:30pm
Dr. Nick Spencer
Early poverty and physical health in early childhood: A systematic review

This review is a modified approach based on input from last year's workshop to systematically review child poverty and physical health outcomes in later childhood/adolescence. Inclusion criteria included prospective longitudinal studies in industrialized countries, a measure of poverty/low SES in first 5 years of life, and physical health outcomes in later childhood/adolescence. Health outcomes included asthma, overweight, general health status, infections, all limiting activity conditions, growth and hospitalization. Evidence for adverse effects, evidence for dose-response effect, evidence for sensitive/critical periods, evidence for interaction with other factors were all examined. There are plans to submit for publication and inform researchers to fill the gaps in knowledge.

Discussion

- Although the original protocol was to have a measure of poverty prior to 5 years and outcomes after 5 years, it was decided that both poverty and outcomes could be measures before 5 years, as long as there was a longitudinal temporal component.
- There were some suggestions that more studies may be found if the literature search was targeted to find databases that were known to exist. Also, it may be that information about SES was a part of a study, but it was not the focus and therefore not reported in the abstract. There are relatively few studies for this age group, many more exist for adult outcomes and mental health.
- Although there was no evidence for critical periods, maybe this could be found by looking at different health outcomes since the sensitive periods may be different. It is difficult to reply on the author's conclusion of evidence for or against critical periods. It is important o have independent definition of this effect, which should include a time x exposure interaction, such that the effect if different at one time point than at another and at least 3 time points are needed. Perhaps trying to make this claim makes too many demands on the data. On the other hand, since there may not be any studies with 3 time periods, maybe we can start with data that that is necessary but not sufficient for final criteria. Some of these questions may be answered using the Millenium cohort. The goal of the systematic review was to isolate important research questions that require further

investigation. Maybe comparing the results statistically using meta-analytic methods would help to understand them. Today's comments may help to inform the paper.

2:30pm
Dr. Louise Seguin and Dr. Jennifer McGrath
Health Equity from the Start: Elucidating social and biological pathways and policies to promote child health equity: An international perspective
Some explanations about the Canadian Institutes of Health Research and the programmatic grant and request for proposals were given. At last year's meeting, there was discussion about doing a collaborative project. This is an opportunity to make a coordinated programme of research by taking advantage of already existing cohorts. Cardiovascular risk factors is the current outcome of interest; this allows extra funding opportunities. Early childhood is currently defined as 0-5 years and later childhood as adolescence but there is room for change. The challenge will be comparability of measures across cohorts; this is why co-investigators were asked to send in information about their dataset. The goal is to understand the processes and then to involve knowledge users from the beginning so they will be motivated to act upon a solution. Policy was included in the programme of research for the LOI; however, this may be too much for this project and may be removed.

Discussion
- There are two European cohorts that may have materials that will be helpful in writing this grant.
- There were some concerns about the broad scope of the project and questions about what precisely will be done with the money in order to add value to the existing literature. The goal of the research programme is to coordinate between cohort studies to examine specific questions. It may be difficult to draw a tight connection between the policies of different countries. If this is not presented well, it could become a weakness rather than a strength. There was a consensus that it is important to find a common thread within the objectives that makes this programme's sum greater than all of its parts. Having cardiovascular disease as the primary outcome may be problematic if these outcomes are not measures in many cohorts. Outcomes that are more available in the datasets should be chosen. It is important to highlight the fact that cohort studies are being used. One of the differences of this study is the focus on child health outcomes rather than adults.
- In terms of policy project, it may be helpful to look at Margaret Whitehead's work on lone mothers in the UK and Sweden. Remember that policy analyses does not inform you about what actually happens in practice, how policies are implemented.
- There is a need for more nuanced questions to generate new knowledge – low SES and poor health has already been demonstrated.
- Still no word from CIHR regarding the letter of intent that was submitted. If the LOI is not accepted, the plan is to tweak the project and apply for a regular operating grant from CIHR.

Day III – November 5, 2010

9:00am
Dr. Jennifer McGrath
Stress, socioeconomic Status, and child Health
Some definitions of stress were provided. A study with macaque monkeys showed increased risk for cardiovascular disease when social hierarchy was disrupted – shows overlap with inequalities and stress. Stress may be a stimulus, a response, or a process. Stress as a stimulus may be measured by life events, daily hassles, and environmental stressors. The stress response system may be measured by heart rate variability, cortisol, and immune impairment. Stress is linked to unhealthy behaviours like eating higher fat and salt foods, getting less exercise, and smoking and drinking more. Stress may act as a mediator between SES and health (the MacArthur Network Model), although more research is needed.

Discussion
- There is some work done linking depression and anxiety to stress in children. The pathways to mental health outcomes may be different than physical health outcomes. However, the trajectories of these outcomes are interwined.
- There is some work linking infectious disease and exposure to stress.

- There are some animal studies that look at the intergenerational transmission of stress.

9:50am
Dr. Hein Ratt
Social disadvantage and health outcomes – The Generation R Study: SES, ethnicity, and overweight in preschool children
Rotterdam is the second largest city in the Netherlands; it is a working harbour city, with relatively low education and income. The Generation R study includes 10,000 pregnant women between 2002-06. Measures were taken during pregnancy, questionnaires at 2 mos, 6 mos, 1 year, 2 years, 3 years, 4 years, and a return to the clinic at 5-6 years. Mothers are 50% Dutch and father are 64% Dutch. SES measured by maternal, paternal education and income (in categories). Many PhD students work on this study; it requires a great deal of coordination and management.
For Dutch and other ethnicities, SES indicators did not significantly predict BMI or % overweight/obese. In Dutch-only children, lower BMI was found in low and mid-low maternal education compared to other SES groups. Previous work showed higher height in low maternal education children.

Discussion
- Reasons for the lack of relationship between BMI and SES were discussed. It is possible that some low SES children are underweight from malnutrition; this could be investigated by looking at the high and low ranges of BMI. The relationship between SES and BMI is not a universal finding in children.
- The height findings were surprising because there is usually less variability in height in relation to SES. ALSPAC studies found that SES trajectories for height were established at birth. Similarly, the opposite findings for height related to SES were found in the Hague.
- BMI is considered a crude measure of overweight and does not get at adiposity. The study will use a DEXA scan at the next data collection. There is currently one set of cut offs for BMI; this does not vary by ethnicity. Ethnicity was identified by country of birth. To be considered "Dutch," all four gradnparents had to be born in the Netherlands.
- One issue with the cohort is the limited information on income. Income is considered to be very private in the Netherlands, therefore there would be resistance to having a continuous measure of income.
- Environmental conditions, such as segregation, deprivation, nutrition, etc, will be linked to this dataset.

11:15am
Dr. Lucie Laflamme
Injuries in childhood: Patterns, knowledge on socioeconomic differences, prevention, and socioeconomic disparity reduction
An introduction to the research group and to the field of injury research was provided. The share of death by injuries increases with age from 1 to 17 years, as does the male to female ratio of mortality by injuries. Injuries are a heterogeneous outcome. Results from a new paper were presented (this paper is available to read if interested). This paper was a review of injury causes across Sweden, UK, Australia, Canada, US, and South Korea. Strategies to prevent injuries and mechanisms of health inequalities in injuries were presented.

Discussion
- The suggestion that the process of injuries may be compared to a disaster in that a chain of events must go wrong to achieve the outcome. Most conceptual models of injuries take a systems approach. If the system is changed, unanticipated outcomes are likely to arise.
- There are three categories of interventions: reducing exposure, educational, coercive. Exposure is different from coercion in that the environment is changed rather than telling a person to change.
- Safety promotion involves risk management. It is unrealistic to expect that injuries will not exist, but the hope is to reduce the risk.

12:00pm
Dr. John Lynch
A population health approach to interventions for supporting health and early child development

Work that is being done in South Australia was presented. The rationale to intervening in early childhood was explained. Michael Marmot's aspirational recommendations were presented – but the question remains: how do we do it? The interest is in the process of human capabilities. Although policy changes may occur, intervention implementaion is an issue. The framework of services in South Australia was presented. One part of service delivery is a home visit of new mothers to screen for additional services. Using multiple risk factors predicted poor outcomes better than just using age. Another study is ongoing to show that a less costly tool than home visits may have similar results. Home visits are very expensive and this is problematic. There is an effort to increase the flexibility of programs to fit better with the target population. A new data linkage study that uses nationally collected information was described. The information collected includes: pregnancy measures, birth outcomes, home visit, hospital visits, AEDI at age 5, standardized tests from age 7 on. These outcome measures will be used to determine whether the interventions are working. It is important for programs to be outcome-based, rather than simply focusing on money or outputs.

Discussion

- The EDI was created at McMaster University in Canada, the AEDI is the Australian version.
- Concerns were raised about the ability to understand the home environment through telephone screenings. However, the extreme cost of home visits, especially for those people who are clearly not at risk, may outweigh the benefits. The plan is to shift toward a clinic visit plus management instead of a home visit.
- In terms of interventions, it is critical to see where it is possible to intervene. There are some programs that are being implemented in the UK and the Netherlands, which may not have additional benefit. It will be important to determine which parts of programs are really useful in order to provide more tailored interventions. There may be problems with adopting an expensive program that was effective in another country, without knowing whether it works in practice in a different environment.
- Potential problems with data linkage and privacy were raised. The linkage unit is separate from the database as a precaution. In order to identify individual people, an intent to identify and external information are required. There are different regulations across states and countries.
- The natural experiment design may be limited by the outcomes being measured; there are other important outcomes. This is true; other research studies that look at specific outcomes are needed to link with the national findings.
- The idea that targeted services will have a limited effect if there is an inadequate social system (e.g., US has many programs but enormous inequalities remain). Social protection in general is very important. However, it is linked to health outcomes through various mechanisms. The current focus is on the mechanistic link between social gradient and outcome. This provides a way to help people in need, to do something other than just wait for the other type of change to come about. Progressive universalism is a way to help all families and provide extra help to disadvantaged families.

2:10pm
Final Discussion/Collaboration

- Clarification about methodological issues surrounding sensitive periods was provided. How do you know that exposure has a different risk at one time than at another? One way is to look at relative risk at different age points. However, this may be misleading due to extremely low risks at some age groups. Theoretical models include latent, cumulative, interaction. One framework is to use exposure pathways and compare relative risks.
- An a priori hypothesis about sensitive periods will help to determine limits and avoid reverse causation. What is the logic or reasons behind the hypothesized sensitive period?
- Remember that in real life, some of these trajectories overlap (e.g., smoking in pregnancy has a cumulative and critical period effect). Trajectories will be different for different outcomes.
- All presenters agreed to share the slides they presented at this meeting. There are some concerns about people outside of the network having access to the slides. It was decided that the slides will not go on the website. They will be sent to the group by e-mail as pdfs or read-only copies.

2:40pm

Future of INRICH and next meeting

- The next meeting will be held in Rotterdam – hosted by Dr. Hein Ratt. A discussion about the timing of the meeting was held. It seems as though November is a difficult time for North American researchers to attend a meeting and spring would be easier. We would like to include out American colleagues to have a richer experience. It is likely that a different group of people will be available spring, but we will try holding the meeting in the Spring of 2012. The exact timing will depend on availability at the site, as well as international conferences. March 2010 is a big grant deadline for Canadian researchers.
- The structure of the next meeting will be two days of INRICH, possibly preceded by an open day if local organizers would like this. The consensus is that three days is a little long – perhaps two long days or three shorter days? Perhaps a discussion by e-mail with more members will be helpful to plan the topics for the next meeting. It is possible to invite speakers, but adequate notice is needed. Some members prefer the current forum of discussions stimulated by presentations, rather than lectures. Members seem to enjoy a focused, methodological discussion about the research that we are doing and how we can make it better.
- Student participated was discussed. Perhaps if a few more students attend, there may be separate events for students to discuss challenges and share resources. In order for students to present their research, several possibilities were suggested: a poster session with allotted time for questions and answers, a research blitz of short student presentations, presenting findings instead of the supervisor. Student exchanges may also be arranged. There may be funds to help support this initiative.
- Finances were discussed, in terms of coverage of finances for attendees and contribution of universities. In terms of overall funding for INRICH network, the CIHR grant will give some financial stability. If anyone sees opportunities to get funds for the network, please advise. Money to set up web-inar would be helpful.
- Thanks for all members for participation and enthusiasm. Special thanks to Jailson for organizational efforts, as well as his sister and Danielle.