



Global Matrix 4.0 Location, Indicators, and Benchmarks Meetings: Summary

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Meetings details and groups

1) Group 1 (Americas)

Date: July 28th, 2020 from 9:00 am - 11:00 am (EDT)

Chair: Dr. Mark Tremblay (AHKGA President)

Co-chair: Silvia Gonzalez (AHKGA South America Representative)

Support: Evan Turner, Iryna Demchenko (AHKGA)

Participants:

- Brazil - Diego Silva
- Canada - Mark Tremblay, Leigh Vanderloo
- Chile – Nicolas Aguilar
- Colombia - Silvia Gonzalez, Olga Sarmiento
- Ecuador – Susana Andrade
- Mexico - Karla Galaviz, Juan Lopez y Taylor
- United States - Peter Katzmarzyk
- Uruguay - Javier Sayavera
- Venezuela - Marianella Herrera-Cuenca, Betty Méndez-Pérez

2) Group 2 (Europe 1)

Date: August 18th, 2020 from 12:00 pm - 2:00 pm (EDT).

Chair: Dr. John Reilly (AHKGA Europe Representative)

Co-chair: Dr. Javier Sayavera (AHKGA Communications Committee Chair)

Support: Evan Turner, Iryna Demchenko (AHKGA)

Participants:

- Guernsey - Alun Williams
- England - Martyn Standage
- Estonia – Evelin Mäestu
- France - David Thivel, Salome Aubert
- Hungary – Istvan Soos, Istvan Karsai
- Ireland - Angela Carlin, Lauren Rodriguez
- Israel – Sharon Levi
- Portugal - Jorge Mota
- Scotland - John Reilly
- Spain - Susana Aznar-Lain
- Spain (Basque Country) - Mikel Bringas
- Spain (Extremadura) - José Adsuar, Jorge Pérez-Gómez
- Spain (Region of Murcia) - José Francisco López-Gil
- Wales – Amie Richards



No representation: Jersey

3) Group 3 (Europe 2)

Date: August 20th, 2020 from 10:00 am - 12:00 pm (EDT).

Chair: Dr. John Reilly (AHKGA Europe Representative)

Co-chair – Jakub Kalinowski (AHKGA Fundraising Committee Chair)

Support: Evan Turner, Iryna Demchenko (AHKGA)

Participants:

- Czech Republic - Aleš Gaba
- Denmark - Danielle Johansen
- Finland - Tuija Tammelin, Katariina Kämppi
- Lithuania - Arunas Emeljanovas, Brigita
- Luxembourg—Claude Scheuer, Sandra Heck
- Montenegro - Bojan Masanovic, Stevo Popovic
- Poland - Jakub Kalinowski
- Serbia - Visnja Djordjic
- Slovak Republic - Peter Bakalar
- Slovenia - Vedrana Sember, Shawnda Morrison
- Sweden - Marie Löf, Christine Deslisle Nyström

No representation: Germany

4) Group 4 (Africa and Western Asia)

Date: Jul 29, 2020 08:00 - 10:00 AM Eastern Time (US and Canada)

Chair: Dr. Taru Manyanga (AHKGA Africa Representative)

Co-chair: Dr. Stephen Wong (AHKGA Asia Representative)

Support: Evan Turner, Iryna Demchenko (AHKGA)

Participants:

- Botswana - Dawn Tladi
- Israel – Sharon Levi, Liri Endy-Findling, Riki Tesler
- Kenya – Vincent Onywera
- Lebanon - Patrick Abi Nader
- Qatar - Bryna Christmas
- South Africa – Vicki Lambert
- United Arab Emirates - Tom Loney
- Zimbabwe - Taru Manyanga, Daga Makaza

No representation: Ethiopia, Mozambique

5) Group 5 (Asia and Oceania)

Date: July 28th, 2020 from 6:00 am - 8:00 am (EDT)

Chair: Dr. Stephen Wong (AHKGA Asia Representative)



Co-chair: Dr. Salomé Aubert (AHKGA Oceania Representative)

Support: Evan Turner, Iryna Demchenko (AHKGA)

Participants:

- Hong Kong - Stephen Wong and Wendy Huang
- Indonesia - Agus Mahendra, Dian Budiana, Gano Sumarno, Lukman Lubay, Ricky Wibowo, Mesa Rahmi Stephani
- Japan - Chiaki Tanaka
- Nepal – Susan Paudel, Narayan Subedi
- Singapore - Sophie Chen
- Taiwan - Cheng-Kang Chang, Ching-Lin Wu
- Thailand - Piyawat Katewongsa, Kornkanok Pongpradit, Dyah Anantalia Widyastari, Nattaporn Nilwatta
- Vietnam - Danh Na Phan

No representation: India, Australia, China, Republic of Korea, New Zealand

Meetings minutes

1) *Introductions*

- a) *Leader names and country*
- b) *Who we are: AHKGA*

The Active Healthy Kids Global Alliance (AHKGA) is a registered not-for-profit organization that operates with the goal of promoting physical activity of children and youth worldwide (More info at <https://www.activehealthykids.org/about/>).

- c) *Global Matrix: Background, methodology*

- 2014 - Global Matrix 1.0 – 15 participating countries and 158 experts from around the world
- 2016 – Global Matrix 2.0 – 38 countries/487 experts
- 2018 – Global Matrix 3.0 – 49 countries/513 experts

The Global Matrix is essentially the global Report Card that represents a collation of all of the respective participating country Report Cards. Since the Global Matrix 1.0, the Global Matrix initiative has grown both in the number of participating countries and the number of participating experts. It is likely that the Global Matrix 4.0 will show similar growth from the Global Matrix 3.0.

2) *Registrations*

- a) *Number of registered countries – regional/geographic breakdown*

Currently 55 registered countries/regions (including 6 incomplete registrations)

Americas (8)	Brazil, Canada, Colombia, Mexico, United States, Uruguay, Venezuela, Chile (inc)
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Europe (26)	Czech Republic, Denmark, England, Estonia, Finland (inc), France, Germany, Guernsey, Hungary, Ireland, Jersey, Lithuania, Luxembourg, Montenegro, Poland, Portugal, Scotland, Serbia, Slovak Republic, Slovenia, Spain, Spain (Basque Country), Spain (Extremadura) (inc), Spain (Region of Murcia), Sweden, Wales
Africa (4)	Botswana, Zimbabwe, South Africa (inc), Ethiopia (inc)
Asia (15)	China, Hong Kong, India, Indonesia, Israel* (inc), Japan, Lebanon, Nepal, Qatar, Republic of Korea, Singapore, Taiwan, Thailand, UAE, Vietnam
Oceania (2)	Australia, New Zealand

Note: inc = incomplete registration;

*Israel is grouped in the European region in the WHO and in all of the health related policies.

b) Opinions on leaving registration open to increase participation

As a result of the COVID-19 pandemic and associated issues (e.g. data collection, travel, etc.), the launch of the Global Matrix 4.0 is being delayed to mid-2022. Due to this delay, there is now more time for the development of the Global Matrix 4.0.

Registration for the Global Matrix 4.0 is now closed, however due to the delayed release there is enough time between now and the anticipated launch to reopen registration (e.g., for additional 3-4 months) and attempt to increase participation.

Opinions:

Group 1 (Americas)

- Marianella (Venezuela) – Agrees with the delayed mid-2022 launch and notes that having more time will be good for countries who want to create E-surveys or surveys that include items concerning COVID-19.
- Karla (Mexico) and Olga (Colombia) – Agree with the delayed mid-2022 launch and reopening registration. Karla notes that Guatemala is interested in participating in the Global Matrix 4.0.
- Mark (Chair) – Notes that if registration is reopened, then we will need to actively reach out to countries to try to facilitate registrations.

Group 2 (Europe 1)

- Istvan S. (Hungary) – States that his colleagues in Slovakia and Romania may be interested in participating in the Global Matrix 4.0, although registration may be an issue for these countries as they may be discouraged by the costs.



- Martyn (England) – Agrees with reopening registration and states that his contacts in Kenya, Nigeria, and Czech Republic may be interested in participating.
- Jorge PG (Extremadura) – States that he has colleagues in Peru (Paola who is a current PhD student in Extremadura) and a region from Portugal who would probably be interested in participating.
- Javier (Co-chair) – States that if Jorge provides him with these contacts, then he can contact them in Spanish to discuss participating in the Global Matrix 4.0.
- Salome (France) – Notes that reopening registration will not have any consequences and countries should use this as an opportunity to actively promote the Global Matrix and recruit additional countries. Salome states that countries should send their prospective contacts to Iryna. In addition, Salome states that having more countries involved in the Global Matrix will result in a more impactful initiative.
- John (Chair) – Notes that even if these new countries are unable to participate in the Global Matrix 4.0, it is still possible to recruit new participants for the next iteration of the Global Matrix.

Group 3 (Europe 2)

- Danielle (Denmark) – States that her group has been trying to reach out to Greenland to participate in the Global Matrix, so the registration extension will be helpful for reaching out again to their Greenland contacts.
- Visnja (Serbia) – States that she can reach out to her colleagues in Croatia and Bosnia and Herzegovina about possibly registering in the Global Matrix 4.0.
- John (Chair) – States that countries should try to approach their contacts and encourage them to join the Global Matrix 4.0 and/or share their prospective contacts with Iryna. John also notes that even if these new countries are unable to participate in the Global Matrix 4.0, it is still possible to recruit new participants for the next iteration of the Global Matrix.

Group 4 (Africa and Western Asia)

- Vicki (South Africa) – Dr. Nana Anokye from Brunel University, who is now Head of the ISPAH Council for LMICs, can possibly advertise registration to LMIC countries (on their website). Vicki states that she has also been working on a COVID-19 policy brief with other African countries (Kenya, Ghana, Cameroon, Mozambique, etc.) and can contact people on this mailing list about registering. Vicki also notes that we can advertise registration through the African Physical Activity Network's (AFPAN) website. In addition, Vicki states that for countries that are financially limited, it may be a good idea to pair these LMICs with High Income countries to help with financing.



- Taru (Chair) – States that he will connect with Vicki after the meeting about this. Taru recommends that if registration is reopened, we will need to actively reach out to contacts in other countries to try to increase participation.

Group 5 (Asia and Oceania)

- Stephen (Chair) – Recommends that country leaders reach out to their networks in Asian and Oceanic countries to increase participation in the Global Matrix 4.0.

3) Release Location

- a) *Options: China, Qatar, Slovenia (probably out if 2022), other*

We received a number of bids from partners interested in hosting the Global Matrix 4.0 launch predicated on a release in Fall 2021- there were bids from China, ISCA, Qatar, and Slovenia. ISCA's proposal was tied to a conference scheduled for 2021, however this would not work if there is a launch in 2022. In addition, Slovenia's bid was stipulated on the extra resources associated with their tenure as presidency of the Council of the EU in 2021. Therefore, Slovenia's bid may not be possible with a Global Matrix 4.0 launch planned for 2022. China and Qatar are able to provide significant resources, facilities, and grants; however, they are not without their own respective issues.

Additionally, there is the possibility of reaching out to conferences occurring in the Summer/Fall of 2022 to see if they would be interested in a partnership where the Global Matrix 4.0 launch is attached to their conference. In this case, we would ask the conference to provide us with free space/hospitality and there would be the possibility to host workshops and a debrief meeting. A prospective conference is the International Society of Behavioral Nutrition and Physical Activity (ISBNPA) 2022 Annual Meeting, which is occurring in June 2022 in Uppsala, Sweden (or possibly in Auckland, New Zealand). Furthermore, there are other potential meetings/conferences that could be approached to host the launch, such as the ACSM conference.

- b) *What each location has to offer*

Full details of each bid can be found in the "Member's Area" of the AHKGA website (<https://www.activehealthykids.org/2020/07/13/expressions-of-interest-to-host-the-global-matrix-4-o-release/>).

- c) *Results of survey*

In a survey inquiring about preferred Global Matrix 4.0 launch locations that was circulated through the AHKGA network, Slovenia was the most popular choice for the launch location, Qatar was second, and China was third. It should be noted that the survey had many respondents from Qatar.



d) Opinions of leaders?

Opinions:

Group 1 (Americas)

- Silvia (Colombia) – States that she likes the idea of merging the release with a bigger event. A larger event would mean that potentially more country leaders would be able to attend the release, as they would not need to choose between attending the release (held independently) or a larger conference occurring at the same time. Silvia agrees with the idea of attaching to ISBNPA or another similar event. Olga (Colombia) agrees with Silvia's comments.
- Marianella (Venezuela) – Agrees with the idea of attaching to a conference. She notes that having a bigger event is better and that such an event would reduce the amount of resources needed from us.
- Peter (USA) – Raises the question of whether or not Sweden would be an affordable place for the lower income countries to travel to.
- Marianella (Venezuela) – Notes that the greatest concern is being able to travel at all due to COVID-19. However, she notes that there are ways to save money and that Uppsala is a less expensive area.
- Susana (Ecuador) – States that airfare to China and Qatar is expensive, whereas travel to Europe is less expensive.
- Javier (Uruguay) – States that for South American countries, travel to Europe is cheaper than travelling elsewhere.

Group 2 (Europe 1)

- John (Chair) – States that a European launch could be useful as there are many European countries involved in the Global Matrix. In addition, John notes that there has yet to be a Global Matrix release in Europe (previously in North America, Asia, and Oceania).
- Jorge M (Portugal) – States that he likes a Europe release and supports the Slovenia bid. Jorge also states that attaching the release to a meeting would be nice and that it would likely result in greater involvement.
- Salome (France) – States that ISBNPA 2022 is possibly being held in New Zealand and not Sweden. In addition, she states that if the release is not attached to a meeting, then its timing may compete with other conferences. Therefore, an attached release may be able to attract more people compared to a stand-alone release.
- Martyn (England) – States that the Global Matrix launch has previously been both attached to existing meetings (Toronto and Bangkok) and held as an independent event (Adelaide). Regarding the launch in Adelaide, Martyn states that it was difficult to get a complete scientific program because of the narrower scope of the event. Martyn states that, out of the three bids, he prefers the Qatar bid as he is



confident that they have the resources and experience hosting large events to make the Global Matrix 4.0 launch a success. Martyn also notes that organizing a stand-alone event requires a lot of work and that he likes the idea of piggybacking on a conference.

- John (Chair) – Notes that many at this meeting like the route of joining an existing meeting in the summer/fall of 2022. John also adds that piggybacking may result in a reduction in financial support, whereas for the stand-alone bids, there are several bids from very enthusiastic groups who are able to provide resources for the launch. John notes that he is familiar with the group in Qatar and knows that they are very motivated to make the Global Matrix 4.0 launch a success.
- Mikel (Basque Country) – States that his group is working to reduce their environmental impact and that a launch in Slovenia (or another Europe meeting) would allow them to avoid flying to the launch. Mikel adds that given the potential lasting impact of COVID-19, he would also be open to attending the launch virtually.
- Istvan S. (Hungary) – States that choosing the area that is safest with regards to COVID-19 is important. Istvan notes that there is still lots of uncertainty, but that he is also open to doing an event online if it is not possible to travel.
- Sharon (Israel) – States that holding the launch with a larger meeting can make it more affordable to attend and can help to attract new members, which is more difficult to do at a stand-alone event.
- John (Chair) agrees and adds that that Thailand event allowed for the presence of and interaction with new countries not previously involved in the Global Matrix.

Group 3 (Europe 2)

- John (Chair) – States that it is possibly time for a Global Matrix launch in Europe given the past launches in Toronto, Bangkok, and Adelaide.
- Shawnda (Slovenia) – States that Slovenia has not withdrawn their bid, which was predicated on Slovenia's Presidency of the EU in 2021, and that she prefers to attach the Global Matrix 4.0 launch to another meeting. In addition, Shawnda states that she prefers a European launch and that the Slovenian team is happy to go forward with a launch in another European country that has supporting resources. Shawnda adds that the ethical implications of launching in certain countries is a major factor and that she supports what the group decides on the matter.
- Marie (Sweden) – Asks if a 2022 launch has been finalized, or whether the launch may be further delayed to 2023 if there are not improvements to the COVID-19 pandemic?
- John (Chair) – States that the launch is likely to be by the end of 2022 at the latest.
- Marie (Sweden) – States that ISBNPA 2023 in Uppsala, Sweden could be an option if the release is further delayed.



- Shawnda (Slovenia) States that she is concerned with the impact of COVID-19 on the physical activity of children. Shawnda asks if the AHKGA has an agenda or is able to provide guidance on promoting physical activity during COVID-19. Shawnda also suggests that it could be possible to do a mini conference related to COVID-19 confinement in Slovenia in 2021.
- John (Chair) – States that he would like to hold subgroup meetings, such as for countries who are concerned about a lack of data/data skews. John adds that a COVID-19 themed meeting could be possible, and discussions regarding this will be deferred to another meeting.
- John (Chair) – Asks if there is consensus for a European venue. All leaders agree on a European release. John also asks on thoughts regarding an attached or isolated meeting.
- Shawnda (Slovenia) – States that there are benefits to attaching to another meeting, such as exposing other groups to the initiative in a defined way.
- Tuija (Finland) – States that ECSS (June/July) and HEPA Europe (Sep, 2021) are potential meetings to attach the launch to, although she isn't sure about their timing.
- Jakub (Co-chair) – States that there are many European countries, all relatively close geographically, involved in the Global Matrix 4.0. Therefore, Jakub states that a launch in Europe may increase the likelihood of having representatives at the launch. In addition, Jakub states that he likes the idea of attaching the launch to a meeting, but also states that the independent Global Matrix 3.0 launch in Adelaide was good too.

Group 4 (Africa and Western Asia)

- Vicki (South Africa) - States that she is in favour of twinning with another meeting. She states that there are advantages associated with pairing with conferences.
- Tom (UAE) – States that he attended the releases in Bangkok and Adelaide and notes that a release paired with a conference would confer better coverage and participation. Tom notes that his preference would be to twin with a conference.
- Sharon (Israel) – States that twinning with a conference would also offer more funding opportunities and would allow the Global Matrix to reach other countries who have not yet participated in the initiative.

Group 5 (Asia and Oceania)

- There were no comments on this matter.

4) Timelines

- a) *Global Matrix 4.0 release - Summer/Fall 2022*



The release of the Global Matrix 4.0 is now being planned for the Summer/Fall of 2022. This delay is in part due to the COVID-19 pandemic, and it is hoped that this new release date will allow for an in-person release event.

- b) Development/update of the indicator benchmarks and grading rubric*
- c) Report Card development period*

In general, the AHKGA requires 6 months to prepare materials and Report Cards for the launch of the Global Matrix, and countries will require roughly 12 months to develop their Report Cards. In total, we estimate that 18 months is needed to develop the Global Matrix 4.0. Given a proposed release in June 2022, there are 22 months between now and the release of the Global Matrix 4.0. Therefore, there is some degree of flexibility in the timing for the development of the Global Matrix 4.0, which makes it possible to reopen registration and gives currently registered countries time to prepare their groups/data gathering plans and potentially collect data during the rest of 2020. Based on this timeline, countries should aim to have their grades sent to the AHKGA by the end of 2021.

Between now and the anticipated Global Matrix 4.0 release, there are a number of tasks that must be completed such as forming the Report Card working group, performing literature reviews/syntheses, grade assignment, and producing the short form Report Card Articles. Countries should now begin forming their working groups and we request that countries have national representation within their working groups. In general, Report Cards are intended to be national in scope, therefore it is important to have representation from individuals from throughout the country in the working group as opposed to having only representation from a single institution.

- d) Thoughts?*

Opinions:

Group 1 (Americas)

- All agree with delaying release to mid-2022.

Group 2 (Europe 1)

- Javier (Co-chair) – Notes that country leaders can choose to schedule their Report Card release for a different time than the Global Matrix 4.0 release, although they should aim to do so sometime in 2022. John (Chair) agrees.
- Salome (France) – States that Canada launches biennial Report Cards independent of the Global Matrix. Salome notes that Canada has well-established systems for producing/disseminating their Report Cards, but for countries short on resources, they might benefit from launching at the same time as the Global Matrix 4.0 to help with promotion. John (Chair) agrees.
- Salome (France) – States that in 2018, France used comparisons to the overall Global Matrix 3.0 as well as the rest of Europe to help generate media attention. Salome adds that the AHKGA is here to help support country leaders through the



Global Matrix development process (e.g. provide documents, answer questions), but at this time, country leaders should try to form their working groups. Salome states that working groups should be national in scope and it may be beneficial to also have government representation.

- John (Chair) – Adds that new countries can have a mentor if they would like one and reiterates that all countries should now form their working groups. John notes that a group of roughly 6 people to do most of the work would be a manageable size to coordinate. John adds that in Scotland, they also had a larger group of roughly 20 people in a stakeholder group who did less work and provided input on the Report Card.
- Javier (Co-chair) – States that leaders would also benefit from trying to arrange meetings with government officials to seek help with organizing a Report Card launch event. Javier also states that leaders should take advantages of congresses to promote the results of their Report Cards.
- John (Chair) – Adds that leaders can get examples of releases from those of previous countries.

Group 3 (Europe 2)

- There were no comments on this matter.

Group 4 (Africa and Western Asia)

- Vicki (South Africa) – Notes that not all countries have surveillance measures set up to assess each indicator, therefore the longer timeline can allow these countries to develop measures and collect data.

Group 5 (Asia and Oceania)

- There were no comments on this matter.

5) Indicators

a) Summary of indicators included in the Global Matrix 3.0

In the Global Matrix 3.0 the common indicators graded by all countries included overall physical activity, organized sport and physical activity, active play, active transportation, sedentary behaviours, physical fitness, family and peers, school, community and environment, and government. At the debrief for the Global Matrix 3.0, there was generally support for the common physical activity indicators.

In the Global Matrix 4.0, the age-range will likely be confined to children and youth aged 5-17 years, as very few countries have data on the early years.

b) Examples of additional indicators that previous countries have graded



Countries in previous iterations of the Global Matrix have chosen to include additional indicators (e.g. sleep, obesity, dietary indicators) in their respective Report Cards. These additional indicators will not be included in the Global Matrix 4.0, but they can be included in the country's Report Card.

c) Discussion of indicators suggested by leaders

Opinions:

Group 1 (Americas)

- Diego (Brazil) – Agrees with the proposed common indicators.
- Silvia (Colombia) – States that countries can still include younger age groups in their Report Cards. She also agrees with the proposed common indicators.
- Karla (Mexico) – States that Mexico included younger ages in the Mexico Report Card.
- Mark (Chair) – Notes that Hong Kong and the Netherlands both produced separate Report Cards for children with disabilities/illnesses.
- Javier (Uruguay) – Asks about the possibility of having grades separated by gender.
- Mark (Chair) – States that the Global Matrix will likely have combined grades, but countries are welcome to collect these data for sub-analyses and inclusion in their Report Cards.

Group 2 (Europe 2)

- Javier (Co-chair) – States that it would be nice to have information on sex differences.
- Salome (France) – Agrees with Javier and states that having information related to sex differences can be helpful for funding, as it is often important to highlight this in grant proposals. Salome also suggests that a sub-grade on children with disabilities/special needs could be a good idea; and although many countries may not have these data, no data is still relevant for highlighting the need for new data. Additionally, Salome notes that due to differences in national guidelines, for the PA and SB indicators specifically, there may be benchmark/grading differences between a country's Global Matrix grades and their Report Card grades.
- Susana (Spain) – States that obesity and sleep are important. Additionally, Susana states that information on the physical environment is important for making recommendations to policymakers. Susana also states that SES can be important to consider as well.
- John (Chair) – States that the common indicators represent a compromise and are based on what the AHKGA leadership believes that countries could/should grade (have data on). John notes that a physical environment indicator is challenging as there may not be suitable measures to assess it. In addition, John notes that there have been previous discussions regarding the inclusion of an obesity indicator,



although the consensus was that it would be difficult to grade. Regarding dietary indicators, John states that there have been differences in opinion about whether or not it should be included, as it might dilute the physical activity aspect of the Global Matrix and Report Cards.

- Sharon (Israel) – States that her group is interested in the Early Years and although she isn't sure if the data exists, her group will evaluate these data regardless.
- John (Chair) – States that many other countries would agree about the importance of the Early Years. John adds that in Scotland, the Report Card included grades with Early Years data. In addition, John states that previously the Early Years were left out of the Global Matrix because of a lack of international guidelines and a nearly universal lack of data, however this is not necessarily the case anymore.
- Sharon (Israel) – States that regardless of the inclusion of the Early Years in the Global Matrix, it would be helpful if the AHKGA leadership could provide guidance on grading this age group. In addition, Sharon states that work in this direction could then lead to the future inclusion of the Early years in the Global Matrix.
- John (Chair) – Agrees with Sharon and states that although the Early Years may not be included until the GM5, we can use the GM4 to prepare for this.
- Salome (France) – Suggests that the AHKGA can connect countries planning to include the Early Years to possibly harmonize the process.
- John (Chair) – Asks if leaders are in agreement with the current common indicators. All agree.
- Angela (Ireland) – States that it's better to keep the indicators consistent and that it's important to strike a balance, as including more indicators can end up diluting the individual indicators.

Group 3 (Europe 2)

- Shawnda (Slovenia) – States that sleep is an important indicator to include since it's part of the 24-hour movement behaviour paradigm. Additionally, Shawnda states that the Active Play indicator was difficult to grade. Danielle (Denmark) agrees.
- John (Chair) – States that Active Play is a problem for many countries and restates that even incomplete grades are still important for highlighting missing data.
- Marie (Sweden) – States that for the Sedentary Behaviour indicator, Sweden was only able to include its screen time data to grade the indicator, which is an issue. Marie suggests renaming the Sedentary Behaviour indicator to Screen Time to reflect the narrow scope.
- Shawnda (Slovenia) – States that the Sedentary Behaviour indicator should remain the same as many questionnaires and other data can include more information about sedentary behaviour than just screen time.
- Ales (Czech Republic) – States that sleep could be included as an optional (recommended) indicator for all countries.



- Tuija (Finland) – States that she would like to see a broader approach to the Sedentary Behaviour indicator. Tuija also states that sleep is a hard indicator to grade. Tuija adds that it would be helpful to have more details on how to grade additional indicators similarly in countries.
- John (Chair) – States that sleep should be relatively easy to grade for the Early Years since there are global guidelines, however this is more difficult for children and youth as they lack similar guidelines at the moment. John adds that there are good guidelines for other indicators and that it may be worth including 24-hour movement behaviours.
- Visnja (Serbia) – States that there are updates to the WHO physical activity recommendations that are not yet official, which includes minor changes from “60 minutes of daily physical activity” to “an average of 60 minutes of daily physical activity per week”. Visnja asks how this change will affect the Physical Activity indicator.
- John (Chair) – States that the changes are not that large, but that they are good changes and that they are consistent with the wording of the Physical Activity benchmarks.
- Danielle (Denmark) – States that for the Physical Fitness indicator, it is not clear what parameters of fitness should be included and that there were very specific requirements in terms of which data to use from each country. Danielle adds that the Danish working group had to use the Tomkinson normative values, however this was not sufficient for the Danish grading.
- John (Chair) – States that it is not ideal to only grade based on cardiorespiratory fitness, but that it is still a good measure. John asks whether other countries have had similar difficulties with the Physical Fitness indicator.
- Tuija (Finland) – States that she did not grade Physical Fitness in her last Report Card because of unclear benchmarks and not being sure about which parameters to use to grade the indicator.
- John (Chair) – Suggests holding a meeting in September to discuss the Physical Fitness indicator.
- Tuija (Finland) – Also states that it could be helpful to have examples for the indicators, such as measurements, tools, sample, and objective vs. subjective data.
- Shawnda (Slovenia) – Agrees with Tuija and states that Active Play has few examples. Shawnda adds that the benchmark of “being outdoors for at least 2 hours per day” seems like a large number and is difficult to grade.
- John (Chair) – States that he was surprised by the Scottish data that reported high amounts of 2-15 year-olds meeting the Active Play benchmark via self report data. John adds that the AHKGA can potentially refresh the rationale and justification for the benchmarks of this indicator.
- Christine (Sweden) – States that having a star system to indicate the quality of evidence for each indicator could be good.



- John (Chair) – States that in a previous meeting, there were comments regarding the Built Environment and vagueness of indicators. John states that we are looking into new measurement tools, such as for walkability, which can potentially be included in the Global Matrix 5.0.

Group 4 (Africa and Western Asia)

- Dawn (Botswana) – States that she likes the idea of having sleep, obesity, and dietary indicators.
- Vincent (Kenya) – States that based on his experience, he recommends continuing with the current common indicators and then countries can grade extra indicators in their own Report Cards. Vincent also adds that physical literacy could be an important indicator to look at, especially given the context of the COVID-19 pandemic. In addition, he adds that even a lack of data still counts as data and can be used as a catalyst to facilitate future work.
- Sharon (Israel) – Notes that possibly having a COVID-19-related indicator may be relevant.

Group 5 (Asia and Oceania)

- There were no comments on this matter.

d) Discussion on embedding disability data and creating sub-indicators (Boys/girls – behavioural indicators, children with special needs – all indicators)

Opinions:

Group 1 (Americas)

- Mark (Chair) – Notes that Hong Kong and the Netherlands both produced separate Report Cards for children with disabilities/illnesses.
- Mark (Chair) – States that the Global Matrix will likely have combined grades, but countries are welcome to collect these data for sub-analyses and inclusion in their Report Cards.

Group 2 (Europe 1)

- There were no comments on this matter.

Group 3 (Europe 2)

- There were no comments on this matter.

Group 4 (Africa and Western Asia)



- Vicki (South Africa) – Recommends including a crowdsourced sub-indicator where we get local youth to grade the indicators in order to compare how their views relate to the available evidence.
- Dawn (Botswana) – States that disability sub indicators could be done, but it may result in there being too many indicators.
- Sharon (Israel) – States that a child self-report sub-indicator could be interesting.

Group 5 (Asia and Oceania)

- There were no comments on this matter.

6) Benchmarks

a) Overview of current benchmarks

There are one or more benchmarks for each indicator that working groups will use to evaluate the evidence gathered from their literature reviews. A complete table of benchmarks used in the Global Matrix 3.0 can be seen in the following publication: <https://journals.humankinetics.com/view/journals/jpah/15/s2/article-pS251.xml>. In recognition of the diversity of available data, some indicators had several benchmarks that could be used to grade the indicator. In addition, to account for the complexity of some of the indicators (e.g. family and peers), in some cases benchmarks contain several components to grade against. Sometimes countries will come across conflicting data for each benchmark, therefore it is important for the working group to use their critical judgement to decide on what is the best quality evidence to use for grading.

b) Suggestions of updates and discussion of perceived issues

Opinions:

Group 1 (Americas)

- Karla (Mexico) – States that the grading breakdown used in the Global Matrix 3.0 is better than what was used in previous Global Matrices.

Group 2 (Europe 2)

- Susana (Spain) – In response to John asking about if there are new physical environment measures, Susana states that the neighbourhood scale of walkability is a possible measure for the indicator. Susana also states that data on the physical environment can also be used to assess poverty, and that the physical environment is a good target for interventions. Susana additionally notes that there may also be differences in grades by environment.
- John (Chair) – Asks Susana if she can send him the information related to measures of physical environment.
- Javier (Co-chair) – States that Susana can include physical environment in her Report Card, which can act as a test for inclusion in the Global Matrix 5.0.



- Salome (France) – Notes that the benchmarks are not ideal for the Government and Community and Environment indicators, however the AHKGA is working to improve this and will need to test updates for possible inclusion in the Global Matrix 5.0.
- Mikel (Basque Country) – States that 10 indicators is enough for his group to grade.
- Amie (Wales) – Asks a question regarding the inclusion of data pre/post COVID-19.
- John (Scotland) – States that Scotland’s working group seeks out the most recent data, which would likely be pre-COVID-19 data at this point. John adds that leaders may choose to discuss the effects of COVID-19 on physical activity in their Report Cards.
- Sharon (Israel) – States that it could be helpful to have recommendations for promoting keeping kids active during the COVID-19 pandemic coming from an international group of experts (AHKGA).
- John (Chair) – States that leaders have the freedom to choose the theme of their Report Cards. John states that Scotland will likely have a COVID-19 theme; and even if they don’t have data on the impact of COVID-19, it will be an important issue to highlight.
- Salome (France) – States that the current grading rubric seems to be good and works well for Global Matrix comparisons. Additionally, Salome notes that some countries in Latin America used a modified grading system for their own Report Cards.

Group 3 (Europe 2)

- Discussion covered in the indicators section.
- All leaders agreed with keeping the same grading rubric as the Global Matrix 3.0.

Group 4 (Africa and Western Asia)

- Vincent (Kenya) – States that the grading rubric makes sense and is understandable for policymakers in Kenya.

Group 5 (Asia and Oceania)

- Salome (Co-chair) – States that when a study’s data does not exactly fit the benchmarks, it is recommended that countries reach out to the authors/curators of the study/data to see if they are able to provide data that is in a more appropriate format.
- Agus (Indonesia) – Wanted to know if grades will take into account changes in physical activity due to COVID-19?



- Stephen (Co-chair) agrees that it could be interesting to look at physical activity before and after COVID-19.

7) Dissemination and Knowledge Translation Strategy

- a) *Overview of what was done in Global Matrix 3.0 (Global Matrix 3.0 main article, short-form Report Card article, poster presentations, book of abstracts, oral presentations, webpage on AHKGA website)*

In the Global Matrix 3.0, a main paper and short-form country Report Card articles were published in a special issue of the *Journal of Physical Activity and Health*. In addition, three regional papers (very high, high, and middle and low human development index countries) were also published in the *Journal of Physical Activity and Health*. Country leaders were co-authors on the main and regional articles, in addition to their respective short-form articles. There were also poster presentations for each Report Card, a book of abstracts, oral presentation, and a video of children from participating countries describing what physical activity means to them at the launch event in Adelaide. Lastly, countries were each provided with their own webpage on the AHKGA website to disseminate information related to their Report Card.

- b) *Discussion of Global Matrix 4.0 publication strategy*

The publication strategy for the Global Matrix 4.0 has still yet to be finalized. Due to the excessive costs, it will likely not be feasible for the AHKGA to support the publication of peer-reviewed manuscripts or short form articles for the Report Cards of each participating country. A different option could be the publication of a book, where each chapter contains the Report Card article of participating countries. Alternatively, it may be possible to publish several regional articles representing the Report Card articles of a number of countries in a peer-reviewed journal. Regardless, there will almost certainly be a main Global Matrix 4.0 article that will be published with all of the participating leaders/co-leaders as co-authors on the publication.

- i) *What would leaders like to see?*

Opinions:

Group 1 (Americas)

- Olga (Colombia) – States that it could be useful to send information regarding the Global Matrix to the WHO to highlight our global efforts. Olga also states that she supports including kids in dissemination materials (videos), as it can help to draw attention to our initiative and give representation to the population that we are supporting.
- Mark (Chair) - Agrees with Olga and adds that getting consent is important.
- Karla (Mexico) – Notes that it is difficult to get consent for videos. She also states that she thinks having a book is a good initiative, however it may not reach as far



as articles. Therefore, in this case, there would need to be active strategies to disseminate the Report Card results.

- Nico (Chile) – Raises a concern regarding the value of a book publication versus a journal publication. Nico states that journal publications carry more weight when faculty are being evaluated for promotion. In addition, Nico states that the Report Card and Global Matrix articles are impactful and are the most cited articles in the *Journal of Physical Activity and Health*.
- Karla (Mexico) – Notes that journals often waive fees for researchers from LMIC countries.
- Mark (Chair) – States that there are not the resources to publish manuscripts for all of the country's Report Cards. Although, he notes that the most impactful published articles are the main/regional papers, which we are likely to still have. Mark suggests that there could potentially be 8 papers to come out of the Global Matrix 4.0, which could include papers on gender, policies, age, and SES. Mark also notes that country-level reports are still important for talking to policymakers, although it is also important to compare results with those of other countries.
- Marianella (Venezuela) – Adds that there are Latin American journals who could possibly publish articles of regional interest for reduced/waved fees.

Group 2 (Europe 1)

- Javier (Co-chair) – States that the AHKGA makes a big effort to disseminate the Global Matrix and Report Cards with many resources dedicated to publications. Although, Javier states that countries also need to work hard to promote local dissemination and develop partnership with their local governments.
- Salome (France) – States that in the Global Matrix 4.0 there will probably be a similar publication strategy, however there may also be the possibility of publishing indicator-specific articles. Additionally, Salome states that several Asian countries in the Global Matrix 3.0 published their full length Report Card articles in a special issue of a Journal. Salome adds that it is the responsibility of countries to publish their own full length Report Card articles.
- John (Chair) agrees and encourages countries to publish their work outside of the Global Matrix.

Group 3 (Europe 2)

- Shawnda (Slovenia) – States that publications are one of the main reasons for Slovenia's involvement in the Global Matrix and that she would like to see the publishing of full journal articles. Shawnda adds that it is important to have an early publication strategy and that she would like to see a novel approach in terms of the topics covered by the publications. Shawnda states that there could be competition with other Report Card publications if all countries published their respective country Report Card articles again. Additionally, Shawnda states the she



would like to see the opportunity for every country to be able to publish 2 high quality papers, such as grouped papers on indicators.

- Visnja (Slovenia) and Marie (Sweden) – Agree with having group publications.
- Marie (Sweden) – States that in Sweden the dissemination of results is an issue, especially with regards to work by their home institution. Marie adds that people often don't see the Report Card findings as being novel. Marie suggests having workshops to guide dissemination as Sweden needs a better strategy. Marie states that she would like concrete tips and not simply resources.
- John (Chair) – States that it could be possible to hold workshops and/or have information on the website/E-blasts. John adds that it may be useful to have successful countries explain how they are able to succeed (e.g. Canada's work with its local media). In addition, John states that the AHKGA Board of Directors could help lead these discussions.
- Tuija (Finland) – Agrees with Marie and states that Canada has done well in terms of dissemination, therefore, they may have tips to share. Tuija also states that since different countries have different solutions to improve their Report Card grades, it could be helpful to hold a workshop where countries can share solutions that have been effective in their countries.
- John (Chair) – States that having different themes and extra grades can help to draw attention to country's Report Cards.
- Jakub (Co-chair) – States that having workshops is good, but it is also important to communicate and to have a good Report Card. Jakub adds that establishing partnerships with external organizations can help facilitate dissemination. Jakub requests that leaders contact him if they have any ideas for partners. Jakub also states that the AHKGA is increasingly trying to communicate via its social media, therefore, he requests that leaders send the AHKGA info regarding their work so that it can be promoted on its social media.
- Shawnda (Slovenia) – States that it is important for the AHKGA and participating countries to put out a statement regarding COVID-19 and physical activity. Shawnda suggests a statement published in JAMA or the Lancet by the country leaders as a group. Shawnda states that Slovenia has published guidelines on physical activity during the COVID-19 pandemic and that it would be good to consolidate this messaging with a global message.
- Visnja (Serbia) – States that when developing physical activity recommendations, we could possibly include research that we have done during the COVID-19 pandemic. Visnja adds that she is aware that many of the leaders have done some research on the confinement effects of the pandemic on physical activity.

Group 4 (Africa and Western Asia)

- Liri (Israel) – States that it is important to be able to bring results and recommendations to policymakers. She notes that it could be helpful to have



recommendations at the group level to effect change (e.g. comparing international data to European data).

- Dawn (Botswana) – Suggests that it could be possible to group indicators and then have more specific publications based on these groups. Vincent agrees with this idea.
- Patrick (Lebanon) – States that policymakers sometimes do not know what to do with the results of the Report Cards. Therefore, it is important to have resources that policymakers can then use to make changes.
- Vincent (Kenya) - Agrees with Patrick and states that Kenya's 1st Report Card working group came up with recommendations that they brought to the government, which then resulted in positive changes. Vincent also recommends writing policy documents in lay language that is easily understandable. Liri agrees.
- Taru (Chair) – States that there is a section in the Report Cards to write recommendations. Taru also states that possibly in the Global Matrix we can jointly make recommendations at the global level.

Group 5 (Asia and Oceania)

- Stephen (Chair) - commented that in the previous Global Matrix several Asian countries published a number of articles in a special issue of the *Journal of Exercise Science & Fitness*. Stephen added that it may be possible to do something similar with the Asian countries involved in the Global Matrix 4.0.

c) Communication/knowledge translation outside of the AHKGA (short/long form Report Card document, social media, publications, conference presentations, meetings with policymakers)

In order to maximize the impact of each country's Report Card, it is critical that country leaders communicate the results of their Report Card and employ knowledge translation tools outside of the AHKGA. For example, it is recommended that countries create short/long form Report Card documents that detail the summarized and/or full results of the country's Report Card. Depending on the choice of the respective country leaders, these documents may also include additional indicators, outside of the common indicators, that the country has decided to grade. In addition, leaders are encouraged to create social media accounts to promote their country's Report Card activities. The AHKGA also has a LinkedIn page (<https://www.linkedin.com/company/ahkga/>), which is an area where Global Matrix 4.0 activities can be promoted and where country leaders can connect. Moreover, leaders are strongly encouraged to present their Report Card findings at academic and public sector conferences/meetings. Furthermore, to help effect change at the policy/surveillance level, leaders are encouraged to communicate with policymakers in their respective countries to discuss the findings from their Report Cards. Leaders may also benefit from the creation of a website dedicated to their Report Card activities, which can be used to further promote their Report Cards. Lastly, we recommend that, if possible,



countries reach out to their respective institutional international/communication offices to request assistance with promoting the Report Card findings as well as highlighting the institution's participation in an internationally collaborative initiative.

d) *Copyright infractions*

It is imperative that when leaders include materials, such as images, in their Report Cards, they ensure that they possess the rights to use such materials. Country leaders are financially liable for any legal action that is taken against the AHKGA for illegal use of copyrighted materials in their respective Report Cards. This liability may include, but is not limited to, seeking legal counsel and paying associated fees/fines to resolve the copyright violations.

e) *AHKGA – country signed agreement*

An official contract outlining these responsibilities, in addition to other responsibilities of the AHKGA and country leaders, will be circulated and must be signed by all country leaders.

8) Communication with the AHKGA

a) *Means of communications – Zoom meetings, e-blasts, newsletters, individual emails, website “Member’s Area”, Twitter*

Country leaders can communicate with the AHKGA through various mediums. First, Global Matrix 4.0 country leaders will receive E-blasts, which contain information and directions that directly relate to Report Card development and the Global Matrix 4.0. In addition, the leaders of countries who have part in any of the Global Matrix iterations, including the Global Matrix 4.0, will receive a quarterly newsletter from the AHKGA, which contains more general information concerning childhood physical activity and the activities of the AHKGA. Be sure to check your junk/quarantine folders as emails from the AHKGA may accidentally get filtered there. As well, the AHKGA is looking into organizing several further thematic Zoom meetings with country leaders throughout the development of the Global Matrix 4.0. Relevant documents and materials will be posted on the AHKGA website in the “Member’s Area” and E-blasts will be sent to notify leaders when such materials have been posted. Moreover, the AHKGA has a twitter account (@activehealthyk1) that country leaders are encouraged to follow and interact with. Lastly, country leaders are welcome to communicate with the AHKGA by individual emails.

b) *AHKGA contacts*

The following AHKGA contacts are available for contact should you have any questions or concerns:

- Taru Manyanga (African Representative) – tarumanyanga@gmail.com
- Stephen Wong (Asian Representative) – hsswong@cuhk.edu.hk
- John Reilly (European Representative) – john.j.reilly@strath.ac.uk



- Salome Aubert (Oceania Representative) – saubert@cheo.on.ca
- Javier Brazo- Sayavera (Communications Committee Chair) – communications@activehealthykids.org
- Iryna Demchenko (Admin Support)– idemchenko@cheo.on.ca
- Mark Tremblay (President) – mtremblay@cheo.on.ca
- Peter Katzmarzyk (Vice-President, North-American Representative) - Peter.Katzmarzyk@pbrc.edu
- Silvia Gonzalez (Secretary and South American Representative) – sgonzalez@cheo.on.ca

9) Global Matrix and Report Card Evaluation

a) Three mandatory surveys for country leaders (baseline, late development, and post launch)

b) Collecting data on AHKGA website use and e-blast metrics

The AHKGA will be collecting data on AHKGA website use and E-blast metrics. Please make use of these resources as they require significant time and effort to create/maintain. Evidence that these resources are not being used may result in their discontinuation.

10) Next steps

In terms of next steps, first, country leaders should start to form their Report Card working groups. In the baseline leader survey, country leaders will be required to report the names of the members of their working group, therefore working groups should be formed as soon as possible. In addition, leaders can start the processes of conducting the various literature reviews for their report cards. Lastly, country leaders can start budget planning for their Report Card to anticipate and prepare for potential costs associated with its production and dissemination.



Discussion highlights

Registrations

- There was general support for reopening registration for a few additional months.
- Chairs recommended that countries should try to approach their contacts in other countries and encourage them to join the Global Matrix 4.0 and/or share their prospective contacts with the AHKGA (if the deadline is extended).

Release location

- Majority would prefer European release location.
- Majority would prefer attaching the Global Matrix 4.0 release to another big conference.

Timelines

- Mid 2022 is acceptable (and even preferred by most) for the release date.

Indicators

- Most leaders were in agreement with the current common indicators.
- Chairs reinforced that countries will be asked to provide grades for all common indications (could be “incomplete” if lack of data) for the Global Matrix, and are also welcome to do sub-analyses and include extra indicators of their preference in their country Report Cards.
- Examples of extra indicators proposed by participants: sleep, diet, obesity, physical literacy, child/youth self-report indicator, etc. Some teams are also planning to include data on yearly years, disability data, grades separated by gender, etc.

Benchmarks

- Most participants agreed with keeping the same grading rubric as the Global Matrix 3.0.
- Several leaders mentioned difficulties with grading certain indicators (e.g., active play, physical fitness, sedentary time (vs screen time), etc.).

Dissemination and Knowledge Translation Strategy

- Teams are very interested in journal publications.
- The most impactful published articles were the main/regional group papers.
- Leaders would like more information on successful dissemination/knowledge translation strategy used by other teams in the past (e.g., workshops).



Action items

(for further discussion at the AHKGA Board level)

1. Registration

- Reopen registrations until the end of 2020;
- Actively reach out to countries that are not yet part of the Global Matrix 4.0 in an attempt to increase participation.

2. Release location and timelines

- Explore opportunities for attaching the launch of the Global Matrix 4.0 to other conferences scheduled to be held in Europe in mid 2022.

3. Indicators and benchmarks

- Consider holding a meeting to discuss the Physical Fitness indicator;
- Consider refreshing the rationale and justification for the benchmarks of Active Play indicator;
- Consider including a crowdsourced sub-indicator where we get local youth to grade the indicators in order to compare how their views relate to the available evidence;
- Consider including other data (e.g., sleep, early years, grades separated by gender) into common indicators;
- Consider organising subgroup meetings, such as for countries who are concerned about a lack of data/data skews, COVID-19 themed meeting;
- Require assessing all common indicators by all participating teams for the Global Matrix 4.0 and advise adding extra indicators/sub-indicators/sub-grades based on the individual needs and availability of data.

4. Dissemination/knowledge translation

- Consider providing more information on successful dissemination/knowledge translation strategy used by other teams in the past (e.g., workshops);
- Consider providing guidance on how to bring results and recommendations to policymakers;
- Consider the possibility of different combinations of grouped publications (e.g., 24 hour movement behaviours, sources of influence);
- Consider creating a publication plan.