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SUII Knowledge Exchange Programmes

**Towards a Sustainable Monitoring System to  
Address the Physical Fitness Crisis in Scottish  
Children: FitBack Scotland**

Final Report

December 2023



## A. Summary

### Context and Main Objectives

**Context.** Physical fitness of children in western countries is generally low: a slow decline in cardiorespiratory and muscular fitness over 20-30 years prior to the COVID-19 pandemic was followed by a more dramatic decline following COVID-19 restrictions. Fitness is important to current and future physical and mental health of children, and to their educational attainment. We have good systems for monitoring child public health in Scotland (e.g., Scottish Health Surveys), but fitness measurement is not included in these. In many European countries 'FitBack' programmes have been developed to monitor fitness based on measurements made in school physical education (PE) classes ([fitbackeurope.eu](https://fitbackeurope.eu)). The act of monitoring and identifying problems with child fitness in those countries has inspired policy and practice efforts—both in public health and education—to reverse the decline in child fitness.

**Objectives.** The overall objectives were to use the [FitBack principles](#) to develop a school-based fitness monitoring prototype in Scotland ('[FitBack Scotland](#)'), then explore how fitness monitoring based on the prototype could be scaled up across Scotland in the longer-term.

### Insights Resulting from the Programme

1. Engagement with key stakeholders—particularly teachers—during the programme confirmed the high importance to them of useful and accessible resources to support their measurement of fitness in PE classes. During the programme we identified the most appropriate and accessible platform to host the FitBack Scotland prototype: the *actify* website <https://www.actify.org.uk/home>
2. The prototype fitness monitoring system 'FitBack Scotland' is built, but will benefit from more experience of routine use in a few schools after the end of this SUII programme (this is going on in school year 2023-2024). This piloting of the FitBack Scotland prototype resource is recommended as on the the Fitback Ten Steps. Piloting in schools is needed to identify any necessary refinements to the prototype, to help build stakeholder advocacy for fitness monitoring in Scotland, and to help encourage adoption and scale up of fitness monitoring over the next few years. We will also reflect on the pilot experience with other project partners including Prof Tuija Tammelin who has experience of development, piloting, and scale up of fitness monitoring in Finland.
3. The project team, project partners (Public Health Scotland, FitBack EU, Youth Sport Trust) and key stakeholder organisations (Local Authorities, Scottish Association of PE Teachers) have not been able to identify funding to scale up the monitoring of fitness in schools in the short-term. There is no funding to expand child public health surveillance programmes in Scotland at the moment, and in the short-term reduced spending on surveillance is likely in view of public spending cuts. Piloting the FitBack Scotland prototype in the current school year will hopefully build advocacy for scale-up as noted above. We will also consider additional approaches to encourage scale-up. For example, [Citizen Science is promising](#), and Scottish schools have a good track record in related [Citizen Science projects](#).



## **Main Outcomes and (Expected) Impact**

### **Deliverables Listed in the Original Application**

**‘How To Monitor Fitness in Scottish Primary Schools’ Online Guide** showing teachers and other key stakeholders (e.g. Active Schools Coordinators, Secondary School Students) how to make the fitness measures (20 metre Shuttle Run, a measure of cardiorespiratory fitness; Standing Broad Jump, a measure of muscular fitness ; Supine Timed Up-and-Go, S-TUG, a measure of mobility ) in the upper primary school years, and how to incorporate the measures into PE lessons/map them onto the curriculum. **Completed – [FitBack Scotland Hub](#) on the actify website.**

**Data Monitoring System** linked to the online guide. This describes how and why to upload data from PE classes securely, meeting all data protection regulations. The data uploaded are stored securely at the University of Aberdeen Centre for Health Data Science. **Completed and described in the [FitBack Scotland Hub](#) on the actify website.**

**A National Action Plan for School-Based Fitness Monitoring**, hosted on the websites at the University of Strathclyde, University of Aberdeen, and linked to websites of Committed Partners. **Not Completed** - this will be more effective when we have more evidence of the use of FitBack Scotland in our piloting of FitBack Scotland during the 2023-24 school year, and so will be developed in the second half of 2024.

**Expected Beneficiaries: school children, teachers, public health practitioners, health and education policymakers in Scotland.** Practitioners and policymakers will learn the extent of the [childhood fitness crisis](#), currently largely unknown in Scotland due to the absence of fitness monitoring. They will also learn that many other European countries have used school PE-based fitness monitoring-based on FitBack Principles to identify that fitness had declined, and to take steps to increase it. Teachers will also learn the [value of fitness for child health and educational outcomes](#), that fitness measurement is practical in PE, and that fitness measurement is a useful tool for children to learn about many aspects of the curriculum. Establishing the national fitness monitoring programme we need in Scotland will take some years. In Finland, for comparison (but with a more favourable funding environment than Scotland), it took 6 years from the development of a fitness monitoring system to its adoption in all Finnish schools ([Move! – monitoring system for physical functional capacity](#)).

### **Key Recommendations for End User / Policy Communities**

1. Fitness monitoring in Scottish primary schools is feasible and can fit into primary school PE relatively easily, as in many other European countries. The FitBack Scotland prototype is freely available for use in fitness monitoring in schools. **We recommend that schools/local councils make use of the prototype in the school year 2023-2024, provide feedback on the prototype, and advocate for more widespread use across Scotland from school year 2024-2025.**
2. Sustained national or regional (e.g. council-level) fitness monitoring in Scottish schools will require a systematic scale-up of fitness monitoring, and funding to support the scale up and quality control measures. **We recommend that regional (e.g. councils) and national (Sport Scotland, Public Health**



**Scotland, Education Scotland, Scottish Government) stakeholders consider how funding can be made available to develop the kind of school-based fitness surveillance systems which are normal in many other European countries.**

### **Planned Follow up Activities**

1. Support for schools to pilot the FitBack Scotland prototype is being provided by the programme team during school year 2023-2024. This forms the piloting phase of the fitness monitoring prototype system which is recommended in the [FitBack Europe '10 Steps'](#).
2. National Meeting 2 and National Meeting 3. We disseminated the FitBack Scotland prototype at the Scottish Association of Teachers of PE (SATPE) national conference in September 2023, and at the Scottish Physical Activity Research and Practice Collaboration (SPARC) in November 2023.
3. In the second half of 2024 the programme team and programme partners will develop and disseminate (via social media and the website), an action plan for scale-up of FitBack Scotland, having taken account of the piloting phase in school year 2023-2024.