Physical activity in children admitted to the hospital

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The aim of this study is to objectively determine physical activity levels and to explore factors associated with the level of physical activity during hospital admission in hospitalized children between six months and 18 years old.

Ethical review	Not available
Status	Pending
Health condition type	Other condition
Study type	Observational non invasive

Summary

ID

NL-OMON57483

Source
Onderzoeksportaal

Brief title
Physical activity in hospitalized children

Condition

- Other condition

Synonym
Physical activity

Research involving
Human

Sponsors and support

Primary sponsor: Amsterdam UMC
Source(s) of monetary or material Support: Eerste geldstroom (geld van Ministerie van OC&W aan universiteiten)

Intervention

- Other intervention

Explanation

N.a.

Outcome measures

Primary outcome

Physical activity measured with an accelerometer

Secondary outcome

Secondary outcome of this study are the factors potential associated with the level of physical activity, i.e. delirium, level of functionality, level of disability, severity of illness, comfort, pain, analgesic/sedative treatment, presence of a urinary catheter or central venous catheter, supplemental oxygen therapy and mobility restrictions. In children admitted to the PICU there are more potential associated factors, namely: PICU length of stay, neuromuscular blockage, and mechanical ventilation.

Study description

Background summary

It is generally believed that physical activity contributes to well-being and recovery of hospitalized patients. Immobilization is considered unfavorable and, in hospitalized children, is associated with complications such as muscle weakness/loss, pressure ulcers, and venous thromboembolism that all may prolong length of stay. In order to increase physical activity levels of hospitalized children, (early) mobilization programs are implemented. Early mobilization in children admitted to the Pediatric Intensive Care Unit (PICU) has been shown to be safe and feasible, but its effectiveness in improving outcomes for critically ill children has yet to be demonstrated.

In order to evaluate the effect on physical activity levels and the potential benefits of (early) mobilization in hospitalized children, it is relevant to know their spontaneous levels of physical activity. Physical activity levels have been described in previous research in hospitalized children. Main issue with previous studies on physical activity is the methods of measuring physical activity. This was done either via self-constructed standardized forms, non-validated measurement tools, or based on chart review.

Accelerometers are a reliable and alternative method of measuring physical activity in children. This objective method allows for the continuous measurement of physical activity during several days. Additionally, this method enables the identification of factors associated with physical activity more objectively than in previous research. Understanding these factors can be helpful in identifying children at risk for low physical activity levels, enabling the development of tailored approaches to increase their activity levels.

Study objective

The aim of this study is to objectively determine physical activity levels and to explore factors associated with the level of physical activity during hospital admission in hospitalized children between six months and 18 years old.

Study design

Prospective cohort study

Intervention

none

Study burden and risks

-

Contacts

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Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age
Adolescents (12-15 years)
Adolescents (16-17 years)
Babies and toddlers (28 days-23 months)
Children (2-11 years)

Inclusion criteria

Children of 6 months and older, admitted to a pediatric ward, with an expected length of stay of 48 hours and longer.

Exclusion criteria

Children with any condition which affects the validity of the measurement of physical activity (i.e. epilepsia, dystonia or any form of unvoluntary movement) and, children with quadriplegia are excluded. Children with anorexia are also excluded.

Study design

Design

Study phase:	N/A
Study type:	Observational non invasive
Intervention model:	Single
Allocation:	Non controlled trial
Masking:	Open (masking not used)
Control:	Uncontrolled
Primary purpose:	Aetiology

Recruitment

NL

Recruitment status:	Pending
Start date (anticipated):	01-04-2025
Enrollment:	250
Type:	Anticipated

Medical products/devices used

Product type:	N.a.

IPD sharing statement

Plan to share IPD: Undecided

Plan description
N.a.

Ethics review

Not available

Date:	05-03-2025
Application type:	First submission
Review commission:	CCMO

Study registrations

Followed up by the following (possibly more current) registration

No registrations found.

Other (possibly less up-to-date) registrations in this register

No registrations found.

In other registers

Register	ID
Research portal	NL-009560